A01	08:45 - 10:00	Marie Curie B (1st floor)
	Fundamentals: space charges and local transport	**Chairman** A. Tarancon
08:45	The Consequences of Space-Charge Zones for Short-Circuit Diffusion along Extended Defects	**R. De Souza**
09:15	Understanding local mass transports at grain boundaries in perovskite oxide electrodes	**S. Skinner**
09:30	A molecular-dynamics study of oxygen diffusion in polycrystalline (La,Sr)FeO3	**A. Bonkowski**
09:45	Exploring space charge effects at SrTiO3|mixed ionic and electronic oxide heterojunctions	**C. Steinbach**

B1_01	08:45 - 10:00	Schweitzer (Ground floor)
	Smart Conversion Materials and Technology 1	**Chairman** C. Kupfer O. Plantevin
08:45	Effect of 1,3-disubstituted urea derivatives as additives on the efficiency and stability of perovskite solar cells	**J. Kruszynska**
09:15	Piezo-phototronic and Piezoelectric Energy Harvesting Using a Tin Halide Double Perovskite Nanocomposite	**Z. Mallick**
09:30	Efficiency Potential and Voltage Loss of Inorganic CsPbI2Br Perovskite Solar Cells	**M. Grischek**
09:45	Diverging expressions of anharmonicity in halide perovskites	**A. Cohen**

C01	08:45 - 10:00	Marie Curie A (1st floor)
	Polymers for Environment 1	**Chairman** V. Ambrogi
08:45	Polymer based hydrogels for water treatment	**D. Fragouli**
09:15	Novel multi-functional organic-polymer based hybrid photocatalyst as a potential disinfectant.	**M. Hazra**
09:30	Novel composite polymer membranes incorporated with nano-additives for water treatment and desalination	**V. Kochkodan**
09:45	The scale-up of CrioPurA via a more sustainable strategy	**A. Scamporrino**

F01	08:45 - 10:00	OPS (Ground floor)
	Plasmonics 1	**Chairman** Y.-K. Mishra S. Sharma
08:45	Silicon nanowires: synthesis and characterization of the plasmonic properties	**R.-A. Puglisi**
09:15	Microplasma-enabled silicon quantum dot-based nanogels (SiQDNG) for sensitive and selective biomolecular sensing	**Y.-H. Yeh**
09:30	Selective IR emiters based on plasmonic metasurfaces - design and fabrication	**D. Cristea**
09:45	Self-Assembled Au Nanoparticle Monolayers on Silicon in Two- and Three-Dimensions for SERS Sensing	**T. Bartschmid**

G01 08:45 - 10:00 — Londres 1 (Ground floor)

Session 1

Chairman
W. Knoll
S. Szunerits

08:45	Wearable organic biosensing on textiles	**E. Ismailova**
09:15	On-Skin Biosensors: Wearable Sweat-analytics for Healthcare (WISH)	**L. Yang**
09:30	Integration of flexible sensors with 3D-printed structures for the development of customized in vitro monitoring platforms	**D.-I. Sandoval Bojorquez**
09:45	Laser-based micro-Fabrication of stretchable neural probes for peripheral nerve stimulation	**M. Elmahmoudy**

H01 08:45 - 10:00 — Rome (Ground floor)

Bioinspired Materials

09:00	Supramolecular Broad-Spectrum Antivirals	**F. Stellacci**
09:30	Nanoparticle-enabled Laser Tissue Soldering	**O. Cipolato**
09:45	Bioinspired Nanomaterials for Drug-free Antipathogen Surfaces	**T. Shokuhfar**

J01 08:45 - 10:00 — Luxembourg (Ground floor)

Design of molecular-based nanoplatforms for nanomedecine

Chairman
S. Begin
N.-T.-K. Thanh

08:45	A study of the biological Fate of Polymeric and Supramolecular Carriers for Gene delivery	**S. Moya**
09:15	Leveraging Magnetic Hyperthermia by Means of Hybrid Polymeric Nanostructures	**B. Mai**
09:30	Structure switching molecules for biosensors and real-time imaging	**C.-H. Park**
09:45	siRNA incorporated nucleic acid micelles to suppress USE1 expression for lung cancer treatment	**H. Kim**

K01 08:45 - 10:00 — Berlin (Ground floor)

Bioelectronics and Green Electronics 1

Chairman
J. Labram
B. Lüssem

08:45	Inkjet-printed, deep sub-threshold operated integrated circuits for biomedical applications	**J.-R. Pradhan**
09:00	Ultraflexible Oganic Active Sensor Matrix for Tactile and Biosignal Monitoring	**C. Prietl**
09:15	Assessing carotenoids as renewable, natural-based materials for organic thin-film transistors	**A. Scaccabarozzi**
09:30	Scalable manufacturing of soft microelectronics for biomedical applications: materials, devices, and applications	**S. Zhang**

L01 08:45 - 10:00 — Etoile A (1st floor)

Industrial Laser Machining

		Chairman J. Bonse
08:45	Optical data writing in glass for the archival cloud storage	**M. Sakakura**
09:15	Advanced focal beam shaping in rotational and quadratic symmetry for improved laser material interaction	**U. Fuchs**
09:30	Multifunctional laser-induced nanostructures for highly demanding photonic applications	**P. Antonis**
09:45	Laser processing and analysis of hybrid lead halide perovskite solar modules	**Y. Jeong**

M01	08:45 - 10:00	Schuman (1st floor)
	Integration Challenges	**Session Chair** P. Pichler
08:45	Recent advances in 3D sequential integration	**L. Brunet**
09:15	Reconfigurable Field-Effect Transistor Technology via Heterogeneous Integration of SiGe with Crystalline Al Contacts	**L. Wind**
09:30	Engineering of HZO layer for the fabrication of ultimate 3D vertical transistors for Memory-in-Logic applications	**K. Moustakas**
09:45	Isotopically Enriched 28Si Substrates for Quantum Computers Produced Using Ion Implantation Layer Exchange	**J. England**

P01	08:45 - 10:00	Londres 2 (Ground floor)
	Materials Discovery	**Chairman** E. Ertekin V. Stevanovic
08:45	Employing Chemical Heuristics in Computational Materials Design of Functional Materials	**D. Scanlon**
09:15	Molecular Dynamics Simulations of the Structure and Dynamics at Catalyst-Ionomer Interfaces	**B. A. Davis**
09:30	Influence of Exchange-Correlation Functional on Descriptors for High-Entropy Protonic Ceramic Fuel Cells	**B. Sjølin**
09:45	The role of ‘ab initio’ computational studies in engineering of semiconductor materials optical properties	**P. Scharoch**

R01	08:45 - 10:00	Madrid 1 (Ground floor)
	Diamond Devices I	**Chairman** R. Jackman
09:00	Advances in diamond MOSFET technologies	**N. Tokuda**
09:30	Vertical pin diodes on large freestanding (100) diamond film	**M.-A. Pinault-Thaury**
09:45	Investigate the impact of the nitrogen doped layer on the electrical properties of diamond Schottky barrier diodes	**H. Kassem**

D1_01	09:00 - 10:00	Cassin (Ground floor)
	Batteries 1	**Chairman** D. Salazar
09:00	Developing polymer nanoparticles as high-capacity charge carriers in low-cost, aqueous redox flow systems	**J. Carretero Gonzalez**

	09:30	Porous Carbon Textile Decorated with VC/V2O3-X Hybrid Nanoparticles: Dual-Functional Host for Flexible Li-S Full Batteries	**S.-M. Lee**
	09:45	Bio-waste derived hard carbon for sodium ion batteries: a Small Angle Scattering study	**G. Greco**
D2_01	09:00 - 10:00		Boston (1st floor)
	Metal Halide Perovskites		**Chairman** F. Deschler P.-C. Ricci
	09:00	Halide Perovskite and Perovskite-Related Nanocrystals: Synthesis, Optical Properties, Heterostructures	**L. Manna**
	09:30	Exsolution of metal nanoparticles from perovskite oxides nanoparticles	**E. Fezai**
	09:45	Encapsulation of lead halide perovskite emitters in resonant silica spheres	**S.-A. Rigter**
I01	09:00 - 10:00		Bruxelles (Ground floor)
	Smart Nano-Materials and Systems Multifunctionality Strategy from Nature		**Chairman** G. Ciofani A. Erdem E. Stratakis M. Tanaka
	09:00	Introduction	**P. Siffert**
CB1	10:00 - 10:30		Exhibition area (Ground floor)
	Coffee Break		
A02	10:30 - 12:00		Marie Curie B (1st floor)
	High-temperature oxygen exchange kinetics		**Chairman** R. De Souza
	10:30	High-throughput screening of defect-mediated properties: ionic conductivity and surface exchange kinetics	**N.-H. Perry**
	11:00	Effect of transition metal impurities on oxygen exchange kinetics in mixed ionic and electronic conducting oxides	**I. Abdouli**
	11:15	Oxygen exchange kinetics of mixed conducting oxide ceramics covered by dendritic surface particles	**W. Preis**
	11:30	Interplay between surface chemistry, transport properties, and oxygen exchange kinetics in mixed conducting oxides	**A. Merieau**
	11:45	Modifying the surface exchange kinetics of Fe-substituted SrTiO3 via the infiltration of acidic/basic binary oxides	**G. Harrington**
B1_02	10:30 - 12:00		Schweitzer (Ground floor)
	Smart Conversion Materials and Technology 1		

10:30	Evolution with temperature of mixed cation mixed halide perovskite solar cells with two different architectures	B. Romero
10:45	Understanding the photophysical processes at interfaces between perovskites and hole-transporting self-assembled monolayers	O. Matiash
11:00	Towards an improved understanding of the reverse bias stability of perovskite solar cells	M. Mohammadi
11:15	A lateral heterojunction device as a tool to study perovskite-based solar cells	D. Regaldo
11:30	Investigation of the hysteresis effect in printed and flexible perovskite solar cells with SnO2 quantum dot-based electron transport layers	A.-N. Jumabekov
11:45	Spectrum on Demand Light Source (SOLS) for Advanced Photovoltaic Characterization	M. Casademont-Viñas

C02 10:30 - 12:00 — Marie Curie A (1st floor)

Air remediation

Chairman
J.-A. Byrne

10:30	New polymeric macroporous catalyst for CO2 conversion	C. Zagni
10:45	Efficient, Selective CO2 Photoreduction Enabled by Facet-Resolved Redox-Active Sites on Colloidal CdS Nanosheets	D. Lee
11:00	CO2 Reduction to Solid Carbon Using Liquid Metals	K. Zuraqi
11:15	Solar photothermo-catalysis for the air purification and the CO2 valorization	R. Fiorenza

D1_02 10:30 - 12:00 — Cassin (Ground floor)

Batteries 2

Chairman
O. Okhay

10:30	Challenges in the synthesis of sustainable electrode materials for sodium-ion batteries: controlling the oxidation state of iron or the side effects of carbon-based additives	B. Vertruyen
11:00	Highly Crystalline Ordered Macroporous Metal Organic Framework for Aqueous Aluminum Ion Battery: Effect of Redox Additives in Charge Storage	A. Chandra
11:15	Sulfur-rich carbons as sustainable cathode material for room-temperature sodium-sulfur batteries: from optimal structure towards maximum sulfur utilisation.	E. Senokos
11:30	Comparative study of kapok-based self supported composites with TiO2 or SiO2 usable in Li-ion batteries	J. Wagner
11:45	A novel close-loop method for recycling spent lithium-ion batteries using alginate hydrogel and deep eutectic solvent	Y. Wang

D2_02 10:30 - 12:00 — Boston (1st floor)

Metal Halide Perovskites and optical materials

Chairman
L. Manna

10:30	Bright Circularly-Polarized Photoluminescence in Chiral Layered Hybrid Lead-Halide Perovskites	F. Deschler
11:00	Progress in SrTi0.7Fe0.3O3-d as Interlayer in Perovskite-based Optoelectronic Devices	C. Yildirim
11:15	Holographic Imaging of Spin Dynamics in 3D Perovskites	J.-A. Gessner
11:30	Near-Infrared Organic photodiodes	S.-H. Oh

11:45	Thermally and electrically responsive single organic molecule: a new strategy in visible-to-near-infrared light trapping energy saving windows	**J.-M. Puguan**

E01 10:30 - 12:00 — Madrid 2 (Ground floor)

Sensors 1

Chairman
J.-F. Pierson
E. Sardella

10:30	Functional and responsive thin polymer films deposited from initiated chemical vapor deposition	**A. Coclite**
11:00	Preparation of bio-based carbon nanomaterials via plasma arc discharge and their application as humidity sensors	**R. Abbel**
11:15	The use of Carbon Black fillers in epoxy-based nanocomposites for moisture detection	**R. Fauche**
11:30	Developing novel conductive MOFs for chemiresistive greenhouse gas sensors	**I. Fort Grandas**
11:45	Sensing molecules with metal-organic framework functionalised graphene transistors	**S. Kumar**

F02 10:30 - 12:15 — OPS (Ground floor)

Plasmonics 2

Chairman
Y.-K. Mishra
R. Puglisi

10:30	Periodic Arrays of Epitaxially Aligned Atomically Flat Single-Crystal Gold Nanoplates	**S. Neretina**
11:00	Plasmonic nanoparticles growth in polymeric thin films in situ monitored by spectroscopic ellipsometry	**P. Kfoury**
11:15	Gold Nanorods Derivatized with Binary Surfactant Mixtures: How to Select the Secondary Surfactant to Optimize Shape and Size?	**C. Battocchio**
11:30	Probing into the plasmonic effect on surface reactions of Au clusters on CeO2 and UO2 single crystals and thin films	**H. Idriss**
11:45	Charge transport mechanisms in printed thin films based on two-dimensional materials	**F. Torrisi**

G02 10:30 - 12:00 — Londres 1 (Ground floor)

Session 2

Chairman
W. Knoll
S. Szunerits

10:30	Lab-on-a-thread for tissue embedded sensing and drug delivery	**S. Sonkusale**
11:00	Towards high performing self-healing electronics: hydrogen bonded conjugated polymers via Ureidopyrimidinone	**M. Westwood**
11:15	Integrated Enzymatic Bioelectrodes/Biopolymer-Microneedle Devices for Transdermal Electrochemical Sensing	**B. Darmau**
11:30	Field-Effect Transistor with a Plasmonic Gate Electrode as a Multivariable Biosensor Device	**R. Hasler**
11:45	Direct Recording of Action Potentials of Cardiomyocytes Through Solution Processed Electrolyte-Gated Field-Effect Transistors	**A. Kyndiah**

H02 10:30 - 12:00 — Rome (Ground floor)

	Smart Biohybrid Materials	
10:30	Bioactive glasses as multifunctional biomaterials for tissue engineering, drug delivery and biofabrication	**A.-R. Boccaccini**
11:00	Combining Liquid Crystal Networks and Protein Motors for Milli-Scale Mechanical Devices	**N. Pinchin**
11:15	Functional Shape-Morphing Hydrogels for Soft Robotic Applications	**N. Pinchin**
11:30	Versatile Ultra-Soft Electromagnetic Actuators with Integrated Strain Sensing Cellulose Nanofibril Foams	**M. Mohammadi**
11:45	Light-responsive azopolymer-based metamaterials as locally, anisotropically, and reversibly stretchable polymer substrates	**D. Urban**

I02	**10:30 - 12:00**	**Bruxelles (Ground floor)**
	Smart Nano-Materials and Systems Multifunctionality Strategy from Nature	
10:30	Design and Synthesis of Functional Biomaterials-Intermediate Water Concept for Medical Devices	**M. Tanaka**
11:00	Induction of neuroregeneration and functional neural network development in adECM/rGO scaffolds	**A. Ranella**
11:30	4D printed scaffolds composed of natural polymers for bone tissue engineering	**P. Daskalakis**
11:45	Effect of topography and statin-loaded biodegradable micropatterned polymeric replicas on osteogenic differentiation	**E. Kanakousaki**

J02	**10:30 - 12:00**	**Luxembourg (Ground floor)**
	Design of nanomaterials for biomedical applications - 1	**Chairman** S. Laurent S. Moya
10:30	Tuning nanomaterials for biomedical applications : it's all in the coating.	**G. Bruylants**
11:00	Plasmonic and Magnetic Nanoparticles for Biomedical Applications	**N.-T.-K. Thanh**
11:15	Synthesis of Gold Nanorods for targeted phototherapy of cancer cells	**M. Romain**
11:30	Development of a chelating polymer for a medical device designed for metal extraction: from concept to clinic with Mexbrain	**O. Tillement**

K02	**10:30 - 12:00**	**Berlin (Ground floor)**
	Bioelectronics and Green Electronics 2	**Chairman** B. Lüssem S. Zhang
10:30	Organic Integrated Bioelectronics and Artificial Neurons for Enhanced Biosensing and Biointerfacing	**F. Torricelli**
11:00	Copper Phthalocyanine Based Electrochemical Transistors for Future Edible Electronics	**A. Luzio**
11:15	Circuit implementations of thread-based organic eutectogel gated electrochemical transistors	**S. Sonkusale**
11:30	Wood Electrochemical Transitor	**V.-C. Tran**
11:45	Bacterial cellulose from Kombucha's SCOBY as multipurpose material for fully edible electronics	**F.-M. Ferrarese**

L02	10:30 - 12:00	Etoile A (1st floor)
	Laser Additive Manufacturing - I	**Chairman** I. Paun
10:30	3D nano-printing with light	**M. Farsari**
11:00	Laser sintering: A universal additive manufacturing method for sensing devices, automotive solutions and space applications	**M. Pervolaraki**
11:15	Sub Diffractional STED-Inspired Cationic Lithography	**S. Islam**
11:30	Assessment of a massively parallel non-linear polymerisation process using scalar light propagation simulation tools	**F. Ogor**
11:45	Compositionally gradient 3D multimaterial structures through laser metal deposition	**M.-J. Tobar**

M02	10:30 - 12:00	Schuman (1st floor)
	Simulation and Modeling I	**Session Chair** M.-A.-L. Marques
10:30	Modelling of Interfaces and Surface reactions	**M. Nolan**
11:00	First Principles Calculation of Alloy Scattering Parameters and their Effect on the Mobility of GeSn	**K. Sewell**
11:15	Metal-Dielectric Adhesion Improvement Using Germanium Incorporation	**E.-M. Bazizi**
11:30	Electronic properties of interstitial atom clusters in silicon and their impact on devices	**A. Jay**
11:45	Variability in Si Spin Qubits Due to Disordered Si/SiO2 Interfaces	**L. Cvitkovich**

P02	10:30 - 12:00	Londres 2 (Ground floor)
	Batteries	**Chairman** D. Scanlon
10:30	Identification of descriptors in battery research	**A. Gross**
11:00	Towards accurate computation of charged electrochemical interfaces at realistic reaction conditions	**R. Tesch**
11:15	Pre-Pilot line upscaling of Na-ion batteries using robotic assembly	**L. Nuss**
11:30	Catalysing the Performance of Li-Sulfur Batteries with Two-Dimensional Conductive Metal Organic Frameworks	**P. Bhauriyal**
11:45	Autonomous millimeter scale high throughput battery research system (Auto-MISCHBARES)	**F. Rahmanian**

R02	10:30 - 12:00	Madrid 1 (Ground floor)
	Diamond Devices II	**Chairman** N. Tokuda
10:30	Future prospect and challenges of Diamond power electronic devices: from deep depletion FETs to H-Terminated devices	**N. Donato**
11:00	Design and technology of Normally-off Diamond Reverse Blocking MESFET	**E. Gheeraert**
11:15	Recent developments in transfer-doping of diamond for electronic devices	**D. Moran**
11:45	Surface Transfer Doped Diamond Diodes with Metal Oxide Passivation and Field-plate	**R. Watkins**

LU1	12:00 - 13:30		Hall 5
	Lunch		

A03	13:30 - 15:00		Marie Curie B (1st floor)
	Catalyst exsolution		Chairman N.-H. Perry
		Printing wearable and bioelectronic sensors with microfibr	W.-A. Wang
	13:30	Control of Surface Cation Segregation through Strain Engineering	J.-W. Han
	14:00	Understanding the exsolution of Ni-Co-Fe alloyed nanoparticles in double perovskites electrodes by synchrotron-based in situ NAP-XPS and XRD	A.-J. Carrillo
	14:15	On the influence of pressure on multicomponent metallic exsolution	A. López-García
	14:30	Exsolution Catalysts as a Plaything of Atmosphere and Electrochemical Polarization	A.-K. Opitz
	14:45	Visualizing the Evolution of Exsolved Nanoparticles from Nanoporous Perovskites	P. Inangha

B1_03	13:30 - 16:00		Schweitzer (Ground floor)
	Smart Conversion Materials and Technology 2		Chairman M. Kato J. Kirchner
	13:30	Influence of morphologies in electrochemical performance	M. Qureshi
	14:00	Nickel Molybdenum Phosphide Nanosheets Engineered with Ruthenium Doping Supported on Nickel Foam as Bifunctional Electrocatalyst for Efficient Alkaline Sea Water Splitting	A. Gupta
	14:15	Ni-Foam-Graphene-CNTs-SnSe-P: An Efficient Electrocatalyst covering universal pH range and tap water splitting for Hydrogen evolution reaction	M. Pahuja
	14:30	Hybrid electrode materials containing carbon and perovskite-like oxides as effective and highly stable catalysts for water splitting	A. Ilnicka
	14:45	Nanostructure Design and Synthesis based on Earth-abundant Metal Elements-based Materials for Application in Water Splitting	J.-M.-V. Nsanzimana
	15:00	Functional Materials for Triboelectric Nanogenerator based Self-powered Applications	G. Khandelwal
	15:15	Beads-on-string Structured Nanofibers for Enhancing Output Performance of Triboelectric Nanogenerators	H. Yanqin
	15:30	High performance triboelectric nanogenerator via film capacitor-based charge carrier	S.-H. Chung
	15:45	Ultrahigh performance flutter triboelectric nanogenerator	D. Heo

C03	13:30 - 15:00		Marie Curie A (1st floor)
	Purification by using inorganic materials		Chairman R. Fiorenza
	13:30	Design and development of sustainable hybrid nanostructured materials for innovative and eco-friendly approaches in water remediation	M.-R. Plutino

14:00	Preparations and characterizations of low-cost porous ceramics for wastewater remediation and air cleaning	J.-H. Ha
14:15	Novel hybrid rare-earth metalorganic frameworks for water purification	F. Lo Presti
14:30	Design of zeolite-based 3D printed materials for environmental remediation	E. Luzzi
14:45	Design of silica nanoparticles from agricultural residue for metal adsorption in wastewater treatment	A. Rodríguez Otero

D1_03	13:30 - 15:00	Cassin (Ground floor)
	Batteries 3	**Chairman** P.-C. Ricci B. Verturyen
13:30	Effect of ammonium and tetraalkylammonium hexafluorophosphates additives on Lithium metal-electrolye interphase	G. La Carbonara
14:00	Effect of doping on Ni-rich layered cathode materials for low-Cobalt Li-ion batteries	A. Bano
14:15	Novel Organic Molecule Enabling a Highly-stable and Reversible Sodium Metal anode for Room-temperature Sodium-Metal Batteries	C.-B. Soni
14:30	Polyrotaxane-based networks as electrolytes and catholytes for all solid state lithium battery	S. Yan
14:45	New water-soluble binder for commercially relevant mass loadings of cobalt-free LiNi0.5Mn1.5O4 lithium-ion cathodes	Q. Li

D2_03	13:30 - 15:00	Boston (1st floor)
	Thermoelectric and optical materials 1	**Chairman** P. Tae Hyun
13:30	Novel high-performance organic thermoelectric materials	J. Anguita
14:00	Triplet-triplet Annihilation: for Photon Upconversion and Triplet Fusion-enhanced LEDs (FuLEDs)	L. Yang
14:15	Piezo-luminescence characteristic of Manganese doped ZnS microcrystals embedded inside PVDF matrix	P. Sharma
14:30	Investigation of the thermomechanical and elastocaloric properties of NiMnTi shape memory alloy for solid-state cooling applications	F. Villa
14:45	3D Printed Thermoelectret with Giant Piezoelectric Coefficient as Self-Powered Wearable Pressure Sensor and Futuristic Implementation for On-spot Bone Injury	D. Saini

E02	13:30 - 16:00	Madrid 2 (Ground floor)
	Monolayer and multilayer C-based materials	**Chairman** C. Bittencourt G. Schneider
13:30	From polycyclic aromatic hydrocarbons to two dimensional devices: nanopores, nanogaps and fuel cells	G. Schneider
14:00	Conductance of electrostatic wire junctions in bilayer graphene	L. Serra
14:15	Functionalization and exfoliation of graphite with low temperature pulse plasma in distilled water	S. Fontana
14:45	Influence of the functionalization treatment on thermal conductivity and stability of carbon-based nanofluids.	M. Pavía
15:00	Laser lift-off of ultra-thin films by CVD-grown graphene	S. Kang

15:15	Deformation response mechanism and transfer process of GO stack film under gradient humidity	**Y. Zhao**
15:30	Semiconducting Graphene Nanoribbons based on Edge-Directed Self-Assembly of Block Copolymer	**H.-M. Jin**
15:45	A novel and large-scale rapid green synthesis of few-layer and multi-layer graphene	**R. Nowduru**

F03 13:30 - 15:00 OPS (Ground floor)

Plasmonics 3

Chairman
D.-K. Avasthi
R. Puglisi

13:30	Smart materials based on metallic nanowires: a brief overview	**D. Bellet**
14:00	Plasmonic effect of aluminum nanoparticules elaborated by self assembling method	**I. Lachebi**
14:15	Bimetal Ag/Cu/PEG plasmonic nanofluids prepared by sputter-based gas aggregation cluster sources	**K. Biliak**
14:30	Nanostructured dielectric metasurfaces and plasmonic displays via controlled fluid Instabilities	**T. Dasgupta**
14:45	Rh in the Gap: Maximizing E-Field Enhancement Within Nanorod Heterodimers	**J. Piaskowski**

G03 13:30 - 16:00 Londres 1 (Ground floor)

Session 3

Chairman
A. Bonfiglio
E. Macchia

13:30	Chemical and physical sensing with low-dimensional materials	**P. Samorì**
14:00	A multi-scale mechanical behavior study of an electrical interconnection solution stretchable and removable for flexible electronic components for biomedical applications	**A. Despax-Ferreres**
14:15	Printed human machine interfaces using touchless interaction via magnetic fields	**E.-S. Oliveros Mata**
14:30	Biodegradable microneedle-based electrode interface for robust biopotential measurements	**I. Texier**
14:45	Optimisation of Aerosol-Jet Printed Silver for Bioelectronic Applications	**T. Wade**
15:00	PEDOT:Curcumin Electrodes in Neural Interfacing	**A. El Merhie**
15:30	Silk microelectrodes as deep brain implants	**H. Mousavi**
15:45	Thermal drawing of graphene-embedded PVDF fiber for improved performance in wearable triboelectric nanogenerator	**M. Ordu**

I03 13:30 - 15:00 Bruxelles (Ground floor)

Smart Nano-Materials and Systems Multifunctionality Strategy from Nature

13:30	Design and Fabrication of Biomimicking Radially Graded Scaffolds via Vat Photopolymerization for Bone Tissue Engineering	**Y. Wang**
13:45	Composite coatings for osteoblast growth attachment obtained by pulsed deposition techniques	**V. Grumezescu**
14:00	Biomimetic antioxidant nanomaterials in biomedicine	**G. Ciofani**
14:30	Co-delivery of chemotherapeutics by polydopamine based nanomaterials	**R. Mrówczynski**

14:45	Fast Light-Driven Motion of Polydopamine Nanomembranes	B. Graczykowski
15:00	Development of functional Si nanoparticles elaborated by laser method in liquid medium for non-invasive TPE-PDT biomedical applications	A. Al-Kattan
15:15	Versatile Phenol-Incorporated Nanoframes for In Situ Antibacterial Activity Based on Oxidative and Physical Damages	P. Liu
15:45	Engineering materials with DNA towards building nucleic acid sensors	Y. Kim

J03 13:30 - 15:00 — Luxembourg (Ground floor)

Polymeric nanoparticles designed for imaging

Chairman
G. Bruylants
O. Tillement

13:30	Fluorescent polymeric nanoparticles for diagnostics and bioimaging	A. Klymchenko
14:00	Covalent organic frameworks for fluorescent imaging of hypoxia	T. Skorjanc
14:15	Developing a FRET based device for RNA biosensing using CRISPR/Cas	H. Chen
14:30	Image guided triggered release nanoparticles	M. Thanou

K03 13:30 - 14:15 — Berlin (Ground floor)

Bioelectronics and Green Electronics 3

Chairman
B. Lüssem
C. Nielsen

13:30	Direct Recording of Action Potentials of Cardiomyocytes Through Solution Processed Planar Electrolyte-Gated Field-Effect Transistors	M. Caironi
14:00	Towards a materials design platform aimed at bioelectronics applications	Y. Al Yaman

L03 13:30 - 15:00 — Etoile A (1st floor)

Biological Laser Surface Engineering

Chairman
J. Heitz

13:30	Addressing icing with laser-assisted biomimicry and envisioning a waste-free surface functionalization process	A.-M. Kietzig
14:00	Laser Technologies to Generate Active and Passive Solutions for Anti-icing Surfaces	G.-F. De La Fuente
14:15	Laser Direct Write Bioprinting Enriched Cell Types in the Breast Tumor Microenvironment	D.-B. Chrisey
14:45	Production of bioactive glass nanofibers by laser spinning for wound healing applications	M. Fernández-Arias

M03 13:30 - 15:00 — Schuman (1st floor)

Substrate Technologies and Layer Synthesis I

Session Chair
K. Sawano

13:30	New Substrate Materials for Advanced Electronic Devices	I. Radu
14:00	Low temperature epitaxial SiGe:P for gate-all-around(GAA) nMOS devices	Y. Fujimoto
14:15	Deposition of Zr0.05Sn0.95O2 Thin Film using Mist Chemical Vapor Deposition and Its Application to Thin-Film Transistor	M.-Y. Hsu
14:30	CVD-Growth of Tellurium-Based 2D Materials	S. Ghomi

14:45	Direct growth of wafer-scale self-separated GaN on reusable two-dimensional material substrate	C.-H. Huang

P03	13:30 - 16:00	Londres 2 (Ground floor)
	Electrochemistry	Chairman E. Ertekin
13:30	Steps towards the understanding of the oxygen evolution reaction enigma by operando techniques supported by computational studies	E. Fabbri
14:00	Accelerating the Discovery of 2D MXenes for Hydrogen Evolution Reaction through Machine Learning Strategy	M.-A. Bokinala
14:15	Atomistic Study of the Impact of Oxygen Vacancy Defect on Catalytic Activity of Monoclinic Zirconia	S. Fazeli
14:30	Machine Learning Prediction of Surface Pourbaix Diagrams for the Electrochemical Stability of Metallic Nanoparticles	S.-S. Han
14:45	Sustainable Hydrogen Production A Computational Study	X. Liu
15:00	Autonomous Discovery of Near Room Temperature Oxide Ion Conductors.	A. Morin Martinez
15:15	A multiphysics model of a proton exchange membrane acid-alkaline electrolyzer: Implications on novel materials for improved performance	J. Ocon

H03	14:00 - 16:00	Rome (Ground floor)
	Biointerfaces at Electrodes	
14:00	Single impact electrochemistry onto ultramicroelectrode surface for bacterial sensing	E. Lebègue
14:30	On-bench Characterization and In-Vitro Biocompatibility of Nanowire-based Electrodes for Neural Interfaces	A. Arché-Núñez
14:45	Electric field mediated control of enzyme orientation for efficient electron transfer at bioelectrode surface	T. Yoon
15:00	Design and Characterization of Flexible and Wearable Low-Cost Stencil-Printing Electrodes for Enzyme-based Bioelectronics	A. Tricase
15:15	Ti based intermetallic thin films for a new generation of high performance wearable electrodes with enhanced biomedical sensing	C. Lopes
15:30	Kelvin probe force microscopy platform for antigen/antibody pair formation at a large electrode interface	C. Di Franco
15:45	Molecularly Imprinting of Cortisol onto Conductive Polymer-Coated 3D Printed Microneedles	Y. Mustafa

R03	14:00 - 16:00	Madrid 1 (Ground floor)
	Quantum devices I	Chairman C. Becher
14:00	Diamond-based quantum sensors for in situ monitoring of spin active chemical species in molecular structures and nanomaterials	M. Mather
14:30	All-Optical Nuclear Quantum Sensing using Nitrogen-Vacancy Centers in Diamond	T. Sjölander
14:45	Investigation of diamond-based quantum sensors in laterally overgrown hole arrays	N. Oshnik
15:00	Evaluation of NV0 defects in single-crystal diamond grown directly on Si substrate using Raman spectroscopy	S. Yamazaki

15:15	Interfacing diamond with silicon microtechnology for quantum applications	**J.-A. Smith**
15:30	Two-dimensional spin systems in PECVD-grown diamond with tunable density and long coherence for enhanced quantum sensing and simulation	**L. Hughes**

K04	14:15 - 16:00	Berlin (Ground floor)
	Manufacturing and Device Design 1	**Chairman** J. Labram A. Paterson
14:15	Development of high-performance Sn based halide perovskite transistors	**Y.-Y. Noh**
14:45	Flexible nanoscale organic thin-film transistors	**H. Klauk**
15:15	Vacuum-Processable & Photopatternable High-k Polymer Gate Dielectrics for Oxide Thin-Film Transistors	**S. Jang**
15:30	Rolled-up nanomembrane-based vertical organic field-effect transistors and sensors	**A. Nawaz**
15:45	Local Potential Mapping of Functional Electrolyte-Gated Transistors	**S. Tanwar**

A04	15:00 - 16:00	Marie Curie B (1st floor)
	Complex oxides for high and low temperature electrolysis	**Chairman** E. Fabbri
15:00	Low content Ru pyrochlores as efficient and stable electrocatalysts for PEMWE anodes	**M. Retuerto**
15:30	OER Catalysts derived from Ir double perovskites for PEMWE	**S. Rojas**
15:45	Ferrites for High-Performance Protonic Ceramic Fuel Cells	**F. Ciucci**

C04	15:00 - 16:00	Marie Curie A (1st floor)
	Photocatalysis 1	**Chairman** G. Impellizzeri
15:00	Photocatalytic nanomaterials for sustainable solutions of complex environmental challenges	**M.-L. Curri**
15:30	Hybrid Magnetic Imprinted Hydrogels for selective removal and degradation of pollutants from water	**R. Puglisi**
15:45	Influence of WO3 Doping on SnO2 Thin Films for Enhanced Photocatalytic Water Treatment	**V. Isahi**

D1_04	15:00 - 16:00	Cassin (Ground floor)
	Batteries 4	**Chairman** K. Halankar
15:00	Aerogel materials for capacitive electrodes in energy storage devices	**O. Okhay**
15:30	Impact of Lithiation on Si-anode/binder interfaces for next generation Lithium ion batteries	**R. Maji**
15:45	Investigation of Volatile Electrolyte Decomposition Products with Operando GCMS for Lithium-Ion Batteries	**J. Kahr**

D2_04	15:00 - 16:00	Boston (1st floor)
	Thermoelectric and optical materials 2	**Chairman** J. Anguita
15:00	Stretchable polymer ionic thermoelectric supercapacitors	**P. Tae Hyun**
15:30	Effective control of thermal transport with light in molecular materials.	**F. Rivadulla**
15:45	Structural Evolution and Nanostructure of Thermoelectric Materials	**N.-M. Nemes**

F04	15:00 - 16:00	OPS (Ground floor)
	Plasmonics 4	**Chairman** D.-K. Avasthi S. Sharma
15:00	Friend or foe: Unraveling the SiO evolution reaction and how it impacts silicon quantum formation	**J. Veinot**
15:30	Modulation of optical properties in self-assembled Carbon dot-Plasmonic functional nanohybrids	**M. Reale**

J04	15:00 - 16:00	Luxembourg (Ground floor)
	Design of biomaterials for nanomedecine	**Chairman** A. Klimchenko M. Thanou
15:00	Bio-inspired apatite particles: a multifunctional platform in nanomedicine	**C. Drouet**
15:30	Raman Spectroscopy as a possible alternative to Histology for bone evaluation in Oral / Regenerative Surgery	**E. Gatin**
15:45	Physiological polyphosphate as an effective biomaterial for chronic wound healing: Proof of Concept by in vitro studies and clinical applications	**W.-E.-G. Prof. Dr. Müller**

L04	15:00 - 16:00	Etoile A (1st floor)
	Laser Additive Manufacturing - II	
15:00	Heat accumulation study for low diameter own produced stainless steel powder particle fusion using femtosecond pulse laser	**I. Ramon-Conde**
15:15	Effect of Laser Parameters on the Microstructural, Electrochemical and High-Temperature Oxidation Properties of the CoNiCrAlY Cladding on Inconel through Direct Metal Laser Deposition	**R. Karmakar**
15:30	Expanding the toolbox for STED-inspired lithography	**G. Gvindzhiliia**
15:45	Pulsed laser deposited BN/VO2/BN architectured films with thermochromic properties at low transition temperature	**F. Bourquard**

M04	15:00 - 16:00	Schuman (1st floor)
	Metrology and Characterization I	**Session Chair** P. Eyben
15:00	Raman spectroscopy in Ge and GeSn: Temperature dependence	**D. Spirito**
15:15	Polarized Raman scattering of epitaxially grown GeSn layers with different Sn contents	**A.-A. Corley-Wiciak**
15:30	Coupling X-ray Beam Induced Current and X-ray Diffraction Imaging to characterize diamond plates used as semiconductor-based detectors	**F. Lafont**

	15:45	X-ray Nanobeam Mapping of Lattice Strain Modulations from CMOS-Processed TiN Gate Electrodes for Quantum Technologies	C. Corley-Wiciak
CB2	16:00 - 16:30		Exhibition area (Ground floor)
	Coffee Break		
A05	16:30 - 18:30		Marie Curie B (1st floor)
	Oxide catalyst for fuel production		Chairman A.-J. Carrillo
	16:30	Optimization of metal oxide catalysts for water splitting	Y. Tsur
	17:00	Mechanochemical route to novel high-entropy sulfides for rechargeable battery battery and electrocatalytic water splitting	L. Lin
	17:15	CeO2-promoted Cu2O-based catalysts for the electrocatalytic reduction of carbon dioxide to ethylene	A. Alarcón
	17:30	Insights into triple conducting oxides as cathodes for electrochemical nitrogen hydrogenation	M. Weiss
	17:45	Understanding Fluorite-Type Electrodes for CO2 Electrolysis: A Multi-Analytical Approach Employing Well-Defined Model Electrodes	K. Rath
	18:00	Electrochemical CO2 reduction with MgO support for methane production	Y. Wang
	18:15	Porous MgO stabilized ZrO2 plates from directionally solidified composites as supports of dual membranes.	R.-I. Merino
B_P01	16:30 - 18:30		Etoile (1st floor)
	Poster session 1		
		In-situ Grazing-Incidence X-ray Scattering and Photoluminescence Study of Cubic FAMAPbI3 During Vacuum co-Deposition	V. Held
		Solar hydrogen generation and successive battery power generation using iodine molecule encapsulation of single-walled carbon nanotubes	M. Umakoshi
		Optoelectronic, and Magnetic Properties of High-Purity Hematite/Magnetite Nanoparticles for Optoelectronics	M.-A. Akram
		Effect of Inserting Intrinsic Polysilicon Layer between Tunnel Oxide and Doped Polysilicon Layer in TOPCon Solar Cell	H. Lee
		Single phase “Cr” rich CrxIr1-xO2 alloy architectures with the boosted electron transfer kinetics for water splitting reaction	M.-H. Kim
		CuxNiCo Layered Double Hydroxide heterostructure nanosheets as an efficient and cost-effective electrocatalyst for overall water splitting	S. Kansal
		Experimental identification of structural and interface defects controlling the conduction through the ZnO/Si interface	L. Chabane
		ZnSnN2 thin films: Physical properties vs. technology	S. Vatavu
		An electrochemical-thermal multiphysics model for a nickel-iron battery	J.-A. Del Rosario
		Design of thin films of polymers derived from poly-EDOT by the spin-coating method for photovoltaic applications	M.-I. Rodriguez Tapiador
		Performance analysis of Lead-Free Perovskite-SnS Tandem solar cell using alternative hole transport and buffer layers	F. Djeffal
		Molybdenum sulfide modified with nickel nanoparticles as an effective catalyst for hydrogen evolution reaction	A. Ilnicka

	Fast thinning of germanium wafers for photo and thermopohotovoltaic applications	C. Sanchez-Perez
	Self-Assembled All Inorganic Metal Halide Perovskite on 2-Dimensional Bi2O2CO3 Petals for Efficient Photocatalytic CO2 Reduction	W.-S. Cho
	Study of the Effect of Ambient Temperature on the Output Performances of Triboelectric Nanogenerator	A. Mondal
	Improved Thermoelectric Performance of Polyaniline by Incorporating Liquid Phase Exfoliated Tungsten Disulfide Nanosheets	M. Singh
	Spectral Splitting Geometries for High Efficiency Multijunction Organic Solar Cells	M. Casademont-Viñas
	Investigation of cross-linkable hole transporting material as a donor in binary and ternary bulk heterojunction photovoltaic cells	R. Cepas
	Elastic, thin film thermolectric generator (TEG) produced by multisource magnetron sputtering for energy harvesting from heat exchanger waste heat.	A. Lewandowski
	Hierarchically structured quantum-dot films for highly efficient photovoltaics	D.-H. Ko
	Controlling the surface morphology and localized surface plasmon resonance of Au, Ag, and Pt, via solid state thermal dewetting process	A. Sinopoli
	Modelling excitonic effects in kesterite solar cells for improvement in solar cell technology	J. Grecenkov
	Synthesis of Ruddlesden-Popper manganites for hot polaron photovoltaics	C. Hausmann
	Copper–Cobalt Bimetallic Phosphides as efficient electrocatalysts for Overall Water Splitting and methanol oxidation reaction	D. Bandyopadhyay
	Solid-state Hydrogen Energy Storage Properties in Porous Silicon	P. Kale
	Floatable photocatalytic platform for practical solar hydrogen production	W.-H. Lee
	Flexible Nanogenerators based on Enhanced Flexoelectricity in Hausmannite Membranes	C. Chowde Gowda
	Effect of the heating temperature profile of monocrystalline FZ silicon seeds on dislocation dynamics studied in-situ by X-ray diffraction imaging	G. Regula
	Synthesis and Characterization of LaMnO3 Perovskite Epitaxial Thin Films Using Sputtering to Find the Possibility for Solar Cell Applications	H. Seo
	Nanostructured and porous antimony-doped tin oxide films as electrodes in thermo-electrochemical cells for the heat-to-electricity energy conversion	S. Castro-Ruiz
	Hierarchical Wrinkled Architecture with Ultrathin Plasma Polymer Fluorocarbon Film for Transparent/Conformal Triboelectric Nanogenerators	E. Cho
	Dual atom electrocatalysts for hydrogen oxidation and oxygen reduction reaction	M. Shanmugasundaram
	Combining doping by anion exchange and orientation by high temperature rubbing affords stable and efficient thermoelectric polymer films	S. Guchait
	Structural and electrochemical investigation of Co-doped NiFe2O4 for use in high performing supercapacitors	J. Halder
	Investigation of the unique capped carbon structures for high performing supercapacitors electrode material	S. Anshu
	Ultralow platinum loading for hydrogen bromine redox flow battery	K. Saadi
	Electrolyte Design on Thermally Regenerative Electrochemical Cycle for Low-grade Thermal Energy Harvesting	A. Wu
	TiO2 additive improving the performance of the sulfur composite cathode in Li-sulfur batteries	M. Zukalova
	Organic Polymer Dots in Bio-hybrid Systems for Photocatalysis	H. Tian

	Boosted Output Voltage of BiSbTe-Based Thermoelectric Generators via Coupled Effect between Thermoelectric Carriers and Triboelectric Charges	**J.-M. Baik**
	In-plane oriented AlN(0001)/Al(111)/Si(111) seed layers for Al0.7Sc0.3N(0001) thin films prepared by magnetron sputter epitaxy	**M. Raghuwanshi**
	Energy Harvesting from Mechanical Strain of Electrostrictive Polymeric Nanocomposites	**M. Patrini**
	Aging Mechanisms of a High-Temperature Solar Absorber Coating under Different Accelerated Aging Tests	**S. Hosseini**
	Illumination dependent hot polaron photovoltaics in strongly correlated perovskite oxides	**A. Dehning**
	Fabrication of plasmonics Au nanostructures on the surfaces of TiO2 thin films by a solid state thermal dewetting for solar cells applications	**B. Aissa**
	Small Hole and Electron Polarons in Cs2AgBiBr6 Halide Double Perovskites	**M. Baskurt**
	Accelerating Electrochemical Nitrogen Reduction through attached active site on Ni-based catalysts	**T.-Y. An**
	Nitrogen-frendly Surface Design of Catalysts for Electrochemical Ammonia Production	**A. Tae-Yong**
	MOVPE Grown Dilute Nitrides: Physical Properties vs. Growth Parameters Enabling Highly Performance Optoelectronic and Photovoltaic Devices	**M. Gabás**
	The effect of concentrated electrolytes on the dissolution rate of Fe electrode in aqueous redox flow batteries .	**H. Almalki**
	Enhancement of wettability and electrical conductivity through low energy nitrogen ion irradiation of MXene	**S. Patra**
	Tracking the in-Operando Charge Carrier Dynamics of Metal Oxide Heterojunctions – Studying the Effect of Glycerol for Enhancing Solar-Driven Hydrogen Production	**L. Li**
	All-Printed Wearable Triboelectric Nanogenerator with Ultra-Charged Electron Accumulation Polymers Based on MXene Nanoflakes	**K.-N. Kim**
	Silver telluride-nylon nanocomposite multifunctional flexible film designed for harvesting mechanical and thermal energy	**A.-K. Gautam**
	Parallel combination of electrically conducting materials and redox electrolytes for the heat-to-electricity energy conversion	**M. Solis De La Fuente**
	The Unified Theory for Triboelectric Nanogenerators: Sliding Mode vs Contact Mode	**R.-D.-I.-G. Dharmasena**
	Janus Nanomaterials—Design, Fabrication and Applications	**A. Lachgar**
	Activation of metal exsolution catalysts for the oxygen evolution reaction in aqueous medium	**M.-L. Weber**
	Thermoelectric Properties of Hot-Carrier Solar Cell Energy Selective Contacts	**I. Durán**
	Mixed metal sulfides (FeNiS2) nanosheets decorated reduced graphene oxide for efficient electrode materials for supercapacitors	**M. Miah**

C05	16:30 - 18:30	Marie Curie A (1st floor)
	Photocatalysis 2	**Chairman** P. Fernandez
16:30	Multicatalytic approaches for environmental challenges: simultaneous remediation of water pollutants and H2 production	**E.-M. Malannata**
16:45	Z-scheme ZnFe2O4@pDOPA-ZnO heterojunctions using polyDOPA as electron transfer layer for enhanced visible light photocatalytic activity	**D. Toloman**
17:00	Application of graphitic carbon nitride nanosheets as a multifunctional nanofiller in cryogels for wastewater treatment and quality monitoring	**K. Dziza**

17:15	Dopant mapping and distribution tailoring in nano-ZnO:Mn films. Spectroscopic insight	**D. Ghica**
17:30	Synthesis of spiky ZnO nanorods: The importance of tunning synthesis conditions to perform advanced novel materials for water treatment applications	**C. Sotelo-Vazquez**
17:45	Nb, N co-doped TiO2 nanoparticles for broad spectrum solar light activation photocatalysis	**Q. Xi**
18:00	Development and optimisation of spray pyrolysis-synthesised Bi2O3 thin films for photocatalytic applications2	**J. Sydorenko**

D1_05	16:30 - 18:30	Cassin (Ground floor)
	Batteries 5	**Chairman** G. La Carbonara
16:30	A prospective toward next generation lithium sulphur batteries	**K. Halankar**
17:00	Vitrimer-like, self-healing solid polymer electrolytes, facilitated by disulfide metathesis at room temperature, for lithium-ion batteries	**C. Barakat**
17:15	The improved lithium storage performance of low-temperature grown LiCoO2 cathode by dual-function modification	**Y. Zhang**
17:30	Developing Highly Stable Solid-State Organic Batteries Employing a Single-Ion Polymer Electrolyte	**Y. Shao**
17:45	Nanocomposite Carbon/TiO2 Inverse Opals as Lithium-Ion Battery with High Capacity Retention	**A. Carroll**
18:00	Lithium-sulfur battery operational at high C-rate achieved by an interlayer of 3D crumpled MoS2 nanosheets	**R. Paste**
18:15	A unique approach to control nitrogen doping in microporous carbon at ambient conditions for a stable reversible room-temperature sodium-sulfur battery	**S. .**

D2_05	16:30 - 18:30	Boston (1st floor)
	Magnetic Materials	**Chairman** B. Pichon D. Salazar
16:30	Fabrication of rare-earth free permanent magnets for energy harvesting : magnetophoresis assembly of Co nanorods	**L.-M. Lacroix**
17:00	Magnetic anisotropy engineering in onion-structured, doubly exchange-coupled, rare earth-free nanoparticles	**J.-A. De Toro**
17:30	Energy efficiency and economic comparison of different methods for recycling NdFeB permanent magnets	**A. García-Franco**
17:45	Oxygen vacancy-driven polarization imprint in ferroelectric BFCO thin films	**X. Henning**
18:00	Magnetic ordering through itinerant ferromagnetism in a metal–organic framework	**J.-G. Park**
18:15	Hydrogen Storage in Mg-CuNiCoFeV composite for hydrogen storage	**A. Gupta**

E_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Study of boron doped silicon nanocrystals embedded in amorphous SiNx Matrix	**H. Bouridah**
	Growth of high quality GaN-based LED on boron nitride nanotube as a heat sinking layer	**T.-H. Seo**

Nondestructive visualization of grain boundaries in monolayer two-dimensional materials by assembling and disassembling of stacked bilayer	J.-Y. Moon
Study of electrophilic surface functional groups on ageing amorphous carbon films using immersion IRRAS	V. Raev
Oxidation of Wear Resistant Multilayer Nanolaminate Coating Based on (TiAlCrSiY)N / (TiAlCr)N for cutting tools During dry cutting and Annealing	V. Vakhrushev
Features of tribooxidation of a high - entropy coating (AlCrZrTiTa)N during dry high-speed cutting	E. Konovalov
Tailored electrode architectures based on carbon nitride functionalized with cobalt and cobalt-iron oxides for water splitting applications	A. Gasparotto
Biocompatibility Experiments of Albumin & Fibrinogen on Conductive Metal Nitride Nanocomposites	T. Odutola
Graphene-manganite structures for magnetic sensors applications	Š. Jankauskas
The electronic and dielectric properties of SrTiO3 perovskite crystals with oxygen vacancies and nitrogen impurities: First principles simulations	L. Rusevich
Properties of Silver Nanoparticles Partially Imbedded Carbon Nanowalls	C. Kim
Highly Conductive and Printable Elastic Composite Films using Single-walled Carbon Nanotube-embedded Silver Nanoparticles	G.-W. Lee
Ti3C2Tx/TiO2/CuO nanocomposite-based gas sensors with high-performance ethanol sensing at room temperature	M. Ming Zhou
Cathodic arc synthesis of CrSiCN protective coatings used for stainless steel improved performance in industrial woodworking application	L.-R. Constantin
Reduced graphene oxide thin films thickness dependency for Chemical warfare agents detection	N. Bitri
Transient absorption spectroscopy quality study of graphene grown on a seeding layer of nickel	M. Monshi
Enhanced photoelectroactivity of hydrothermally annealed titania nanotubes covered with melamine derived C3N4 nanomaterial	A. Maszczak
Tuneable Plasmonic and Luminescent Properties of Laser-Synthesized Carbon-Based Nanocomposites	Y. Ryabchikov
Characteristics of high entropy alloy thin films grown by pulsed laser deposition	V. Craciun
A Microscopic and Spectroscopic Approach on the Inhibition of Fibrillation of Single Amino Acids and Amino Acid Derivatives in Presence of Cellulose Nanocrystals.	S. Layek
The prediction of coating microstructure in plasma spray process	K. Benoumsaad
numerical and theoretical study of different structures of the cis-trans transition of substituted octadecanona-ene by dft and mp2 (td-mp2) methods	Y. Bouzaher
Microwave electromagnetic properties of epoxy composites with nanocarbon/Co3O4 filler	L. Vovchenko
Melt growth of bulk tris(8-quinoline) aluminium single crystal	I. Avetissov
Chemical inhomogeneity Evaluation of PS-b-PMMA Thin Films by X-ray Scattering and s-SNOM Analysis	H. Ahn
The effect of solvent combinations on coating solution of epoxy-acrylate and SiNx deposited hybird film for moisture barrier properties	K. Kim
Ti3C2Tx MXene/cellulose nanocrystal (CNC) composite film for high-performance supercapacitors	S. Yuk
Large-scale Synthesis of 3D Nanonetworked Silica Film for Polymer-free Drug-eluting Stent	E. Jeon
Nanoscale morphology and sensor properties of a-CNx thin films deposited by magnetron plasma enhanced chemical vapor deposition	A. Nazarov
Solvent Driven Optical features variations of Selective Enrichment of Single Walled Carbon Nanotubes Dispersions by Flavin Surfactant	S. Hwang

	A novel multilayered surface-functionalized microneedle platform for local gene delivery	**P. González-Sáenz**
	Multi-Band Photoluminescence of Silicon Nitride Nanocomposites for Optical Nanothermometry	**Y. Ryabchikov**
	The use of a novel biographene for glucose detection in biological fields	**D. Gournis**
	Electrochemical detection of neurotransmitters using microelectrodes based on electropolymerized organic polymers	**I. Chilibon**
	Intra-architecture of molecular nanotubes	**S.-R. Krishnaswamy**
	Controlled molecular doping of artificial light-harvesting complexes for photoluminescence localization	**A.-V. Kuevda**
	DFT computational studies of interatomic interactions in cellulose-carbon nanocomposite materials	**S. Nedilko**
	Solidification dynamics of two molten droplets in plasma spray forming process	**K. Benoumsaad**
	Obtaining of gadolinium endofullerenes	**N. Akhanova**
	A novel reduced graphene oxide/carbon dots/graphitic carbon nitride (rGO/CDs/g-C3N4) nanocomposite for CO2 detection using microwave resonators	**A.-C. Obreja**
	Development of multifunctional coatings for dental implants	**S. Carvalho**

F05 16:30 - 18:30 OPS (Ground floor)

2D Materials

Chairman
D. Janas
Y.-K. Mishra

16:30	Liquid metals for harvesting low dimensional materials	**K. Kalantar-Zadeh**
17:00	Liquid metal-based synthesis of high mobility 2D semiconductors	**T. Daeneke**
17:15	Ternary Mixed Metal Thiophosphate (FexMnyNiz)2P2S6 (x + y + z = 1) - Study of structural evolution and tuning of physical properties.	**A. Chaturvedi**
17:30	Intrinsic ionic superlattices in two-dimensional DJ-phase oxide perovskites	**K. Cho**
17:45	De-wrinkling the 2D black phosphorus using electron beam irradiation	**M. Kaur**
18:00	First Principle Investigation of Strain Induced Electronic Properties of Janus MoSeTe Monolayer	**S. Singh**
18:15	3D-Heterostructuring via Mechanochemical Reshuffling of Layered and Non-Layered 2D - Metal Chalcogenides.	**V. Balema**

G_P 16:30 - 17:00 Etoile (1st floor)

Poster session

	Modification of properties of AMPS-based hydrogels prepared by electron-beam-initiated copolymerization with acrylic monomers	**S. Shin**
	Electrolyte gated organic field-effect transistor for point-of-care tests	**M.-J. Ortiz-Aguayo**
	Robust wireless power transfer system for implantable bioelectronics	**S. Yoo**
	MoS2-embedded polyvinylidene fluoride flexible nanocomposite fibers for triboelectricity generation via thermal drawing technique	**M. Ordu**
	Optimizing Electrode Design for Flexible and Stretchable Displays: A Stress Analysis Study	**A.-Y. Park**
	Kinematic Reliability Evaluation of Sport Motion for Knitted E-textile Sensor at Joint	**J. Lee**
	A Porous Microneedle Electrochemical Aptamer-Based Sensor for Continuous and Real-Time Creatinine Monitoring	**T.-C. Liu**

	Intelligent colorimetric sensor for kidney failure assessment in veterinary practice	I. Chilibon
H_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Polydiacetylenes-Based Colorimetric Sensors for Detecting Various Biohazard Metal ions	S. Yang
	Study on Two-Photon Excitation Photodynamic Therapy and Fluorescence Bioimaging with Heavy-atom-free Photosensitizers based on Carbazole and Imidazole Conjugates.	J. Han
	Unraveling the unexpected behavior of polypyrrole artificial muscles	A. Maszczak
	Design rules for remote controlled biology: Acoustic activation of synthetic cells using nanoparticle organelles	Z. Li
	The structure of collagen-chitosan assemblies for bone tissue engineering studied by X-ray Photoelectron Spectroscopy	G. Iucci
	Long-term antibacterial properties of ZrN-Cu coatings deposited by industrial reactive magnetron sputtering	S. Behrangi
	Engineering ECM-like hydrogels with Schiff-base dynamic covalent cross-links	M. Sacchi
	The role of texture in governing the in-vitro bio-corrosion behaviour of Mg-4Zn-0.5Ca-0.8Mn alloy	D. Bairagi
	Mesoporous Silica as the Carrier of Hydrophobic Drugs	S. Iqbal
	Current state of the art and next-generation of materials for a customized IOL according to a patient-specific eye power	M. Vacalebre
	3D-Printed ZnL2-BPs Composite Bone Scaffolds with Dual Antibacterial and Osteogenic Capabilities Aided by Mild Photothermal Regulation	Y. Wu
	Zein based biomaterials for active wound healing	C. Gnocchi
	Rheological studies of a 3D Printable Sodium Alginate/Vitreous Humos Ink for cartilage regeneration	C.-A. Martinez Pérez
	An integrated bioaerosol sampling and detection platform for on-site monitoring of airborne viruses	I. Lee
	A highly sensitive magnetic SERS detection of hemozoin biomarker for rapid malaria diagnosis	S. Yadav
	Reactive Oxygen Species Mediated Theranostic Materials	C.-K. Lim
	Application of natural para rubber as a functional biodegradable-reinforced material for road reinforcement	S. Chaiyaput
	All-Organic Nanomedicine for Photothermal (PTT)/Photodynamic (PDT) Combination Therapy	A. Urazaliyeva
	Metal and Ceramic 3D printing for the fabrication of dental metal-ceramic restoration	K. Dimitriadis
	Functional Porous Glass-Ceramic biomaterials from Eggshell Waste for Biomedical Use as Prosthetic Eyes	J. Ayawanna
	Colloidal AgBiS2 Quantum Dots in Cellular Environments	A. Onal
	NIR Signal-based Sensor Platform with Wireless Data Transmission System for Detection of infectious disease Virus	S. Kim
	Antibacterial activity of PDMS-Aminosilanes organic-inorganic hybrid coating	Y. Park
	Folate receptor beta targeting pH-sensitive drug delivery system for non-small cell lung cancer therapy	S. Nah
	Facile fabrication of self-cleaning powder coating through surface-modified biogenic silica	Z. Nazarlou
	Characterization of the viscoelastic properties of different gels and ex vivo animal tissues for ultrasound-guided imaging	D.-J. Quinagoran

Study of the development of bacterial resistance to silver-chitosan nanocomposites and cross-resistance to common antibiotics	**M. Sihtmäe**
Multilayer structures based on Si-doped metal oxynitrides used for biological applications	**C. Vitelaru**
Facile synthesis of whiskered gold nanosheets with low percolation threshold for stretchable bioelectrodes	**C. Lim**
Reprocessable and Weldable Shape Memory Vitrimer Enabled by Controlled Formulation for Extrusion-Based 4D Printing Applications	**S. Park**
ZrCuCa- based quaternary thin films metallic glasses used for medicine	**I. Pana**
pH Sensitivity and amino acid dependent interaction on the Aggregation Induced Emission of Surface Ligand Controlled Gold Nanoclusters.	**N. Bera**
Development of a SERS-based lateral flow immunoassay for detection of penicillin in milk via direct writing of functional materials	**A. Russo**
Hemocompatibility studies of PTFE coated TiO2 thin film for application in mechanical heart valves.	**S. Mishra**
Deformation-diffusion model of the CdSe-core / ZnS/CdS/ZnS-shell quantum dot with an electrically neutral impurity	**O. Dan'kiv**
Fabricating Mycelium-Agrowaste 3D Composite Materials for use in Building Construction Insulation	**K.-B. Bonga**
Sweat droplet evaporation: implications for human body health	**M. Beigtan**
Photodithazine-nanoclay composites to improve antimicrobial activity	**P. Targon Campana**
Studies on the Development of Titanium Foam for Bioimplant Application	**D. Dutta Majumdar**
Mesoporous and Nano-Flowers (ZnO2) via Hydrothermal Technique for Dye Removal and Antibacterial Applications	**A. Al Naim**
Process window for electron beam melting of Ti–42Nb wt.%	**G. Irina**
Zwitterionic coatings on Polydimethylsiloxane Surface for biological application	**V. Dinca**
Nanoprobes for intracellular imaging:testing reproducibilty in the nanobiosciences	**M. Said**
NIR-induced drug release from liposomes entrapped with gold nanoparticles for synergistic cancer therapy	**P. Budime Santhosh**
New polyphenols-enriched excipients from grape processing waste to develop spray-dried matrix for buccal tablets useful to treat oromucosal diseases	**E. Belfiore**
Composition impacts the structural, magnetic, and heating features of MnxFe3-xO4 MNPs	**S. Del Sol-Fernández**
Digital light 3D printing of robust, self-healing and recyclable polymer composite with tailorable mechanical properties	**W. Huang**
Exploring the Size Effect of Silver Nanoparticle on Structural Properties of Coatings	**B. Abakeviciene**
Hybrid bio-platforms engineered by laser based method with tailored antibacterial and antitumor activity	**L. Rusen**
The effect of heat treatment on the mechanical behavior of an ASTM-F2063 nitinol stent intended for venous application.	**A. Sallami**
Mesoporous Silica Nanocarriers: Dual Therapeutic Approach for Triple-Negative Breast Cancer	**S. Ilyas**
Development and Evaluation of the Bioinspired pH-responsive Sericin-Chitosan Based Hydrogels for the Controlled Colonic Delivery of PETase; Harnessing the PETase Triggered Degradation of Microplastics	**A. Ullah**
Adipocyte-targeting Type I AIE Photosensitizer for Obesity Treatment via Photodynamic Lipid Peroxidation	**M.-S. Lee**
A Ratiometric Theranostic System for Visualization of ONOO– Species and Reduction of Drug-Induced Hepatotoxicity	**H.-C. Chau**
In situ characterization of the structural changes induced by acidity fluctuations in hydrated collagen hydrogels	**O. Bronner**

	Stimuli-responsive collagen-based thin films from Stichopus cf. horrens body wall	**K.-M. Sisican**
	Reduction-responsive and bioorthogonal carboxymethyl cellulose based soft hydrogels cross-linked via IEDDA click chemistry for cancer therapy application	**I. Ali**
	Formation and Properties of Oxidized Metallographene-NSAID Nanoparticles	**D. Radziuk**
	Multiphysics computational modelling of the dynamic interface between on-chip microneedles and skin layers	**A. Mohizin**
	Structural, mechanical and degradation properties of Mg doped hydroxyapatite deposited on AZ31B alloys	**C. Vitelaru**
	Antibacterial and antifungal efficacy of novel chitosan-silver nanocomposites	**K. Kasemets**

I04	16:30 - 18:00	Bruxelles (Ground floor)
	Smart Nano-Materials and Systems Multifunctionality Strategy from Nature	
16:30	Recent Applications of Electrochemical Nucleic Acid Biosensors based on Carbon Nanomaterials	**A. Erdem**
17:00	Cuprous Oxide Nanoparticles Decorated Fabric Materials with Anti-biofilm Properties	**A. Gupta**
17:15	Development of a glucose electrochemical biosensor based on scribing laser induced graphene on natural biopolymer platforms	**H. Hamidi**
17:30	Carbon materials chemistry and processing for multi-functionality: from graphite to fullerenes-tubes-graphene	**P. Scharff**

J05	16:30 - 18:30	Luxembourg (Ground floor)
	Gel-based Nanomedicines and analysis approaches	**Chairman** C. Drouet T. Pellegrino
16:30	Stimuli responsive covalent nanogels: a chemically versatile drug delivery platform	**N. Kamaly**
17:00	Design of magnetic hydrogels for AC-field hyperthermia: towards high efficiency and reproducible performance	**K. Nigoghossian**
17:15	Theranostic Polymeric Nanocarriers Administered to the Brains and Lungs	**A. Roig**
17:30	Au nanoparticles loaded hydrogels for advanced wound care	**A. Foti**
17:45	The effect of microscopic calcifications containing Zn on the malignancy of thyroid nodules	**L. Gotnayer**

K_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Temperature effect on the charge transport mechanism in nanocomposite dielectric-based organic field-effect transistors	**S. Mallik**
	Atomistic simulations of an ionic liquid/WSe2 interface for next generation nanoelectronics and energy storage applications	**K. Ishisone**
	A Facile and Easy Way to Enhance the Performance of Organic Phototransistors Using UV Treatment:	**S. Shaharukh,**

	Development and optimization of polymer gate dielectrics for reliable and flexible field-effect transistors	**H. Park**
	Improvement of poly(3-hexylthiophene-2,5-diyl) electron mobility through complete elimination of regioregularity defects	**A. Nawaz**
	Ion-Exchange Doping of Single-Walled Carbon Nanotubes	**A. Hawkey**
	Hysteresis-free MoS2 negative capacitance transistors using 5 nm P(VDF-TrFE)-brush ferroelectric layer	**H. Cho**
	Double-bond Contained PVDF-based Fluoropolymer Gate Dielectrics for Low-Voltage Operating Organic Transistors	**S.-M. Ryu**
	Fiber-shaped organic ferroelectric transistor memories for wearable artificial synapse applications	**M. Kang**
	Security Key Generation by Circularly Polarized Light Detection based on Chiroptical-Conjugated Polymer Devices	**H. Ju**
	Mixed solvents treated poly (methyl methacrylate) (PMMA) gate dielectric based organic field effect transistors (OFETs)	**S.-K. Sangwan**
	Solution-processed copper (I) thiocyanate (CuSCN) film as a hole injection layer for organic light-emitting diodes (OLED)	**E.-J. Jang**
	Solution-processable and photo-patternable polyurea gate dielectrics for organic thin-film transistors	**S. Yoo**
	A Study on Securing Light and Bias Reliability through Surface Control of High Mobility Oxide Transistors	**J.-W. Kim**
	Structural analysis of DPP-based organic thin films for photodetector applications	**C.-C. Fynbo**
	On the electrical characteristics and reliability of electrolyte-gated transistors based on reduced-graphene oxide aiming sensing applications	**R. Furlan De Oliveira**
	Bioelectronic devices and deep learning imaging for the prediction of KRAS alteration.	**M. Caputo**
	Molecular imprinted polymer for low-trace food contaminants detection	**A. Tricase**
	Single Molecule Transistor and ultrasensitive immunoassay array: a comparison of two technologies	**C. Scandurra**

L05 16:30 - 18:30 — Etoile A (1st floor)

Laser-induced Periodic Surface Structures - I

Chairman
S. Gräf

16:30	Formation of laser-induced periodic surface structures observed with extreme temporal and spatial resolution	**J. Bonse**
16:45	Nano-scale dots, grids, ripples and heterostructures on PET by UV laser processing	**J. Heitz**
17:00	Laser induced surface nanostructures in ferroelectric polymers	**E. Rebollar**
17:15	Modification of Kapton wettability by laser nanostructuring	**P. Martínez-García**
17:30	Comparison of LIPSS structures generation on plastic parts by direct laser texturing and injection molding	**C. Concheso**
17:45	Tailoring surface topographies on solids with Mid-IR femtosecond laser pulses	**S. Maragkaki**
18:00	Comparison of laser inscribed micropillars on flat versus tilted substrates	**D. Aboud**
18:15	LIPSS for secondary electron yield reduction: influence of spherical and cylindrical lenses	**J. Jj Nivas**

M05 16:30 - 18:30 — Schuman (1st floor)

Advanced Doping Technologies

Session Chair
M. Bauer

16:30	Novel Processes for Advanced Nanoelectronics Devices	**S. Sharma**

17:00	Title of abstract: Study on the electrical properties of ultrathin in situ Boron-doped strained Si0.7Ge0.3 layers annealed by nanosecond pulsed laser	R. Daubriac
17:15	Study on structural and electrical properties of Si:P and Si:As films treated by RTA and NLA	K. Lee
17:30	Sb heavy doping of Ge1-xSnx epilayers by Pulsed Laser Melting	D. Fontana
17:45	Evolution of carrier mobility and carrier density of femtosecond laser sulfur hyperdoped silicon after different post-processing treatments	S. Paulus
18:00	Impact of Nanosecond Laser Annealing on the Structural and Electrical Properties of Heavily in-situ B-doped SiGe Epitaxial Films	C. Jo
18:15	Phosphorus monolayers formation on Ge: towards a reliable monolayer doping	F. Sgarbossa

P04	16:30 - 18:30	Londres 2 (Ground floor)
	2D Materials	Chairman A. Gross
16:30	Topological Phases of MoS2 Diperiodic Crystal Phases	I. Milosevic
17:00	From Enhanced Sampling to Design – Exploring the Combined Powers of Classification and Molecular Dynamics Simulations	D. Mendels
17:15	First-principles Perspectives on Selected Functional 2d Materials	A. De Sarkar
17:30	Exploration of 2D ferromagnetic materials induced by hole doping	R. Meng
17:45	DFTB study on mixed functionalized MXene	T. Sakhraoui
18:00	Transitions in Xenes between excitonic, topological and trivial insulator phases: influence of screening, band dispersion and external electric field	O. Pulci
18:15	Electronic Consequences of 2D Tilt Layer Formation in Halide Perovskites	Y.-K. Jung

R_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Correlated micro-Raman, scanning spreading resistance and Kelvin-probe mapping of dislocations etch pits and sectoral boundaries in boron-doped HPHT-diamond	A. Nikolenko
	Temperature dependence of growth-sector-dependent Raman spectra of boron-doped HPHT- diamonds	I. Danylenko
	Temperature dependence of the Raman spectra of various multi-sectoral HPHT diamond plates	I. Danylenko
	Diamond nanowire transistor with high current capability	R. Moors
	First principles calculations of the electronic, vibrational and dielectric properties of defective diamond	L. Rusevich
	Investigated performance of AlHfGaO UVC phototransistors deposited by vapor cooling condensation system at low temperature	C.-T. Lee

T_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Diffraction study on magnetic thin films for spintronics	H. Himanshu
	Hexagonal Close-packed Palladium Hydride in liquid cell TEM by Radiolysis Engineering	D.-W. Chun

Atomic structure of partially reduced nickelate films	**C. Yang**
Time-resolved TEM of nanomaterials with nanosecond electron pulses	**M. Picher**
Development of a Surface-Modified Quartz Crystal Microbalance Technique to monitor Hydroxyapatite Film Growth in situ	**B. Murphy**
Engineering the magnetic properties of dual-phase high-carbon steel by controlling the microstructure(Developing a non-destructive method for microstructural characterization)	**N. Sarmadi**
Automatic and on-demand synthesis of AgAu alloy nanoboxes by PID control	**H.-K. Bui**
Diffraction-limited hyperspectral mid-infrared micro-ellipsometry	**A. Ebner**
A new compact SEM detector for Reflection Energy Loss Spectroscopy (REELS) and Elastic Peak Electron Spectroscopy (EPES) with imaging capability	**P. Staib**
Temperature Effect on the Nucleation and Crystallization of Formamidine-based perovskite	**Y. Wang**
Unraveling the Crystallization Process in Mix Halide Wide Bandgap Perovskite by In-situ Dynamic Optical Probing	**Z. Zeng**
In situ growth of cyclodextrin-based metal organic framework air filters for reusable SO2 adsorbent applications	**J. Kim**
Transmission electron microscopy and X-ray diffraction studies on tin antimony sulfide nanopowder	**N. Khemiri**
Effects of electron beam irradiation in the all-inorganic halide perovskite, CsPbI3	**S. Bose**
From Research to Development: Innovative multi-layer polypropylene-random pipes for heating-cooling systems with high dimensional stability	**G. Vourlias**
In-Operando Raman Spectroscopy during Electrochemical Ageing of Mn Oxide Thin Films in Aqueous Electrolytes	**A. Macrelli**
Investigation of in-situ Scanning Electron Microscopy Technique for Microstructural Evolution of Li-ion Batteries	**H. Ryu**
HERFD XAS study double-atom catalysts for the oxygen evolution electrocatalysis	**Y.-F. Liao**
Initial stages of crystals nucleation at the metal electrode – melt interface	**T. Stesyuk**
In-situ synchrotron X-ray diffraction analysis of pearlitic steel subjected to shear deformation	**C. Alves Da Silva**
In-situ study of diameter control, composition and growth dynamics in Au-seeded GaSb nanowires	**M. Marnauza**
Unraveling the multilayer growth behavior of InGaAs nanowires using In-situ TEM	**R. Sjökvist**
In situ Transmission Electron Microscopy (TEM) study of the reduction of TiO2 to TinO2n-1 magnéli phase	**L. Schmidt**
Pump-probe cathodoluminescence microscopy for material dynamics and coherent electron-light interactions	**N. Van Nielen**
Electron beam effects on the oxidation of Cu nanoparticles in environmental scanning transmission electron microscopy	**A. Ziashahabi**
Electron microscopy investigations of nanostructures transformation under e-beam illumination	**M.-C. Spadaro**
In situ (S)TEM characterization of bimetallic atomic cluster catalysts	**D. Balalta**

PLEN 01	08:45 - 09:45		Schweitzer (Ground floor)
	Plenary session 1		
	08:45	Multifunctional Hybrid Interfaces for Energy and Medical Applications	M. Prato
CB3	10:00 - 10:30		Exhibition area (Ground floor)
	Coffee Break		
A06	10:00 - 12:00		Marie Curie B (1st floor)
	Sustainable routes in electrochemical storage		Chairman R. Jimenez
	10:00	Sustainable battery design	E. Kendrick
	10:30	The Effect of Configurational Entropy on Acoustic Emission of P2-Type Layered Oxide Cathodes for Sodium-Ion Batteries	S.-L. Dreyer
	10:45	The route matters: effect of liquid-phase processing on bulk properties of high-capacity cathode materials	B. Gadermaier
	11:00	Development of fast Li conductor halides with non-critical elements	R. Artal
	11:15	Novel hybrid solid electrolytes based on metal organic frameworks	I. Hanzu
	11:30	Rechargeable oxide ion batteries based on mixed conducting oxygen insertion electrodes	A. Schmid
	11:45	Magnetic Thermally-Chargeable Textile Supercapacitor: Synergy Between CNT@MnFe2O4 Hybrid Electrodes & Glow-in-the-Dark Solid-gel Electrolyte	J.-S. Teixeira
B1_04	10:00 - 12:00		Schweitzer (Ground floor)
	Smart Conversion Materials and Technology 3		Chairman N. Khansur A. Martin
	10:00	Electromechanical response in multilayered materials from non-ferroelectric polymers – Toward piezoelectric and triboelectric generators	A. Sutka
	10:30	Piezo-phototronic Aided Photodetector and Piezoelectric Nanogenerator Based on Perovskite Interfaced Polymer	B. Mondal
	10:45	Piezoelectric bimorph beam for simultaneously harvesting thermal and vibration energies	R. Yamamoto
	11:00	3D printed flexible thermoelectric generators0	M. Massetti
	11:15	Quantum advantage in a molecular spintronic engine that harvests thermal fluctuation energy	T. Zafar
	11:30	Perovskite oxides for photovoltaic applications	J. Hlinka
	11:45	Perovskite-inspired materials for indoor photovoltaics devices application	H. Zhu
B2_01	10:00 - 12:00		Dresde (1st floor)

Advances in wide band-gap semiconductors 1

Chairman
N. Lobo
K. Rho
E. Zhang

10:00	Development of wide-bandgap perovskite materials for high-efficiency and stable photovotaics	**H. Shen**
10:30	Strategies to manipulate AVT and PCE in wide bandgap perovskite solar cells for BIPV	**F. Matteocci**
10:45	Enhancing photon upconversion in large-area amorphous films via suppression of energy back-transfer	**S. Raišys**
11:00	Designing spectral conversion layers for enhancing photosynthesis in algae growth	**I. Flaucher**
11:15	Ultra thin Zr-doped Indium Oxide as Transparent Electrode for Si-based solar cells	**A. Lo Mastro**
11:30	Influence of temperature on the film properties of aluminum nitride thin films prepared by magnetron sputter epitaxy	**B. Sundarapandian**
11:45	Ferroelectric-Photocatalyst Nanocomposite Thin Films for Enhanced Photoelectrocatalytic Activity	**J. Briscoe**

C06 10:00 - 12:00 — Marie Curie A (1st floor)

Polymers for Environment 2

Chairman
P. Cerruti

10:00	Synergistic effects in composite materials for environmental remediation: dream or reality?	**M. Salzano De Luna**
10:30	Polydopamine Modified Graphene Oxide Nanocomposite Membranes for Efficient Dye Removal from Water	**S. Gahlot**
10:45	Sulfonated Pentablock Copolymer used as Antimicrobial Coating for Innovative Multifunctional Water Filters	**S. Simona Filice**
11:00	Removal of organic dyes from aqueous solution using stimuli-responsive copolymers	**G. Gomez Dayala**
11:15	Ultrasonic Activation of ZIF-based Nitrogen-Carbon Materials Confining Single-atom Calcium Dipoles With PVDF Membranes For Piezocatalytic Water Decontamination	**Q. Zhao**
11:30	Functional PES based electrospun mats for adsorption and photodegradation of pollutants in water	**M.-E. Fragala**
11:45	Natural polyphenol-inspired sequential interpenetrating polymer network membrane using PVDF-polyaniline-polypyrrole for improved cationic and anionic dye removal from water	**S. Dutta**

D1_06 10:00 - 12:00 — Cassin (Ground floor)

Batteries 6

Chairman
P.-C. Ricci

10:00	Edible Triboelectric Nanogenerators and Supercapacitors	**L. Lamanna**
10:30	Stretchable and Biodegradable Plant-based Organic Battery Using 3D Porous Scaffolds	**A. Rahmanudin**
10:45	High-Capacity Inverse Opal Tin Oxide Electrodes for Lithium-Ion and Sodium-Ion Energy Storage	**A. Grant**
11:00	Smart Design for Sustainable High Mass Loading Organic Battery Electrodes	**K. Shi**
11:15	High-Performance Li-S Batteries Through Advanced ZIF-Derived Carbon Decorated with 2D MXene	**R. Yuksel**

11:30	The Effect of Ge-Substitution on Electronic and Lattice Vibration Properties of the Thermoelectric Semiconductor FeGa3	C. Martin

D2_06	10:00 - 12:15	Boston (1st floor)
	Photocatalysis and photocatalytic materials 1	Chairman S. Porcu
10:00	Developing extended visible light responsive polymeric carbon nitrides for photocatalytic and photoelectrocatalytic applications	S. Mondal
10:30	Recovered transition metal phosphates as functional materials for electrocatalysis	S. Karafiludis
10:45	Tandem Photocatalysis for Non-oxidative Coupling of CH4 to C2H4	H. Huang
11:00	Organic pi-conjugated donor-acceptor-based oligomers for photocatalytic H2 production	E. Cloutet
11:15	Enhanced Photocatalytic water-splitting of C-based TiO2 nanocomposites for H2 production	S.-K. Sharma
11:30	High Stability Molybdenum Sulfide Catalysts for the Hydrogen Evolution Reaction	H. Johnson
11:45	Two-dimensional Semiconductive Ni3TeO6 for H2 production applications	J. Fernández Catalá
12:00	Unconventional photocatalysts for the H2 production by solar photoreforming	R. Fiorenza

E03	10:00 - 12:00	Madrid 2 (Ground floor)
	Nitride thin films & nanomaterials	Chairman S. Tamulevicius
10:00	Non-reactive magnetron sputtering of Ti-Al-N coatings	B.-I. Hajas
10:15	Sputter-based preparation of plasmonic and photoluminescent ZrN nanofluids	A. Choukourov
10:30	Ge nitrides as perspective cheap host materials for other thin film nitrides: Growth, chemistry and properties	S. Cichon
10:45	Effect of the substrate temperature on the depth concentration profile of reactively sputtered ZnGeN2 thin films.	J.-F. Pierson
11:00	Correlation between crystallization and oxidation process in ScN films, effect on microstructure, optical and vibrational properties	J. More-Chevalier
11:30	Using the cluster route to prepare nanometric transition metal nitrides and carbides	F. Tessier
11:45	Fabrication of High-Quality Refractory Titanium Nitride Nanostructures	S. Panos

F06	10:00 - 12:00	OPS (Ground floor)
	Electronic Applications 1	Chairman R. Puglisi S. Srivasatava
10:00	2D materials in back-gate field effect transistors: electric transport and photoresponse	A. Di Bartolomeo
10:30	Electrical Transport in Monolithic Al-Si/Al-Ge Heterojunction based Nanowire Schottky Barrier Field-Effect Transistors	M. Sistani
10:45	Integrated photodetectors for compact Fourier-transform waveguide spectrometers	M.-J. Grotevent
11:00	Reconfigurable Silicon Transistors with Single-Elementary Metal Contacts for Complementary and Combinational Logic	R. Behrle

11:30	Tin-based phases distribution along silicon nanowires matrix	P. Liu
11:45	Excellent Ferroelectric and Long Retention Response in ß-PVDF thin film Prepared by Direct Heat-Controlled Spin Coating	P. Malik

H04 10:00 - 12:00 — Rome (Ground floor)

Functional Biomaterials

10:00	Tailoring Collagen Piezoelectricity	B. Rodriguez
10:30	A synergy of laminin and strain-stiffening in hydrogels promotes directed migration of neural cells	A. Naghilou
10:45	Fabrication of uniaxially oriented DNA based hydrogel by controlling monomer diffusion	J. Kim
11:00	Oleogel: a new thermoplastic-like material for bioengineering application	L. Lamanna
11:15	Polyethylene glycol diacrylate / poly (epsilon L-Lysine) hydrogels for preventing bacteria and fungi infections	E. Lebaudy
11:30	Ex vivo detection of anal sphincter defects using a sensorised surgical glove	C. Salvadores Fernandez
11:45	Smart functional pH-sensing scaffolds for extracellular pH mapping in in vitro tumor models	V. Onesto

J06 10:00 - 12:00 — Luxembourg (Ground floor)

Design of theranostic nanoplatforms-1

Chairman
T. Pellegrino
N.-T.-K. Thanh

10:00	Designer therapeutic and diagnostic tools: From cancer to chemical weapons	G.-L. Davies
10:30	Stimuli-responsive platforms for in vitro cell growth and cancer therapy: towards precision medicine	S. Forciniti
10:45	Study of the influence of Mn2+-insertion in Prussian blue nanoparticles on their photothermal properties	S. Sene
11:00	Design of Iron Oxide Nanoparticles for imaging and active targeting: theranostic in one formulation	M.-D.-L.-A. Ramirez
11:15	DMSA-Coated Cubic Iron Oxide Nanoparticles as Potential Therapeutic Agents	N.-T.-K. Thanh
11:30	Advances in the mechanistic understanding of iron oxide nanoparticles' radiosensitizing properties	D. Stanicki
11:45	Chemical design of Ga0.9Fe2.1O4 system as nanoparticles and thin films	A.-Z. Mesaros

K05 10:00 - 12:00 — Berlin (Ground floor)

Device Theory, Transport, and Circuits 1

Chairman
K. Kang
C. Nielsen

10:00	Electrochemical Transistors: A Platform for Exploring Carrier Transport and Ion-Carrier Correlations at High Charge Densities in Organic Semiconductors	D. Frisbie
10:30	Simulations-guided device design for high-performance, low-cost organic field-effect transistors	O. Jurchescu
11:00	Understanding Scaling Laws of Organic Electrochemical Transistors	M. Skowrons
11:15	Organic magnetoresistance in conjugated polymers	E. Orgiu

11:30	Reconfigurable Physically Unclonable Functions Based on Organic Thin-Film Transistors with Multiscale Polycrystalline Blends	**S. Im**
11:45	Electrical Conductivity of DNA Origami	**B. Demir**

L06 10:00 - 12:00 — Etoile A (1st floor)

Laser-induced Periodic Surface Structures - II

Chairman
J. Bonse

10:00	Competition between the laser-induced chemical reactions and periodic surface structures (LIPSS)	**E. Gurevich**
10:15	Formation of laser-induced periodic surface structures on Zr-based bulk metallic glasses with different chemical composition	**S. Gräf**
10:30	Role of Machining and Exposure Conditions on the Surface Chemistry Modification of Ultrafast Laser-Machined Copper Surfaces.	**N. Joy**
10:45	The role of surface roughness on the regularity of LIPSS generated in metals with femtosecond lasers	**D. Gallego**
11:00	Effect of initial surface roughness on LIPSS formation and its impact on cell and bacteria attachment on metallic surfaces for bone implant applications	**G. Sarau**
11:15	Impact of plasmonic modes and metal thermophysical properties on the formation of self-organised nano-patterns in thin films	**E. Stratakis**
11:30	LIPSS formation on complex oxide thin films: the case of Yttrium Stabilized Zirconia	**W. Karim**
11:45	Influence of femtosecond laser repetition rate on the formation of Laser Induced Periodic Surface Structures on thin films of Poly (ethylene terephthalate)- expanded graphite nanocomposite.	**J. Prada-Rodrigo**

M06 10:00 - 12:00 — Schuman (1st floor)

Simulation and Modeling II

Session Chair
M. Nolan

10:00	Machine-learning-assisted determination of the global zero-temperature phase diagram of materials	**M.-A.-L. Marques**
10:30	Ground and excited state properties of meta-stable allotropic forms of 2D Tellurium from first principles approaches	**S. Grillo**
10:45	Charged intrinsic defect states in amorphous Si3N4	**C. Wilhelmer**
11:00	Multiscale modeling of ultrafast transformations and structural disorder in laser annealed SiGe nanostructures	**G. Calogero**
11:15	Functionality of polycrystalline-Si channel: insight from first-principles and multi-scale modeling	**R. Maji**
11:30	A Multiscale Modeling Approach for Revealing Defects Relevant in Charge Trapping Related Phenomena	**D. Waldhoer**
11:45	Kinetic Monte Carlo simulations of heated boron implantation and non-melt laser annealing in Si and SiGe layers	**S. Mundinar**

P05 10:00 - 12:00 — Londres 2 (Ground floor)

AI-Accelerated Materials Discovery I

Chairman
A. Tkatchenko

10:00	Active materials exploration and characterization with Bayesian optimization	**P. Rinke**
10:30	Overlooked design parameters for efficient thermoelectric devices	**D. Music**
10:45	Concepts for Predicting Phase Transition	**M. Graml**

11:00	How quantum crystallography can aid materials design	**S. Grabowsky**
11:15	Lessons learned from an international Materials Acceleration Platform	**M. Vogler**
11:30	Accurate estimation of diffusion coefficients and their uncertainties from computer simulation	**B. Morgan**
11:45	Machine Learning small datasets: The good, the bad and the average	**D. Vanpoucke**

Q01 10:00 - 12:00 — Amsterdam (Ground floor)

Fundamentals, methods & diagnostics of Pulsed deposition processes I

Chairman
J. Gonzalo
S. Konstantinidis

10:00	Temporally modulated vapor fluxes: a tool for controlling morphology and atomic arrangement in thin films	**K. Sarakinos**
10:30	Steps for decoupling the effects of the kinetic and potential energy of ions for pulsed filtered cathodic arc deposited (V,Al)N thin films	**Y. Unutulmazsoy**
10:45	New High Power Impulse Magnetron Sputtering (e-HiPIMS) with a multi-level high power supply	**J. Zgheib**
11:00	High Uniformity Thin Films Deposited on Large Areas by PLD	**M. Sopronyi**
11:15	Pulsed Laser Deposited Nanostructured Manganese Oxides Thin Films: Decoupling Morphology and Phase for a Rationally Designed Material	**A. Macrelli**
11:30	Deposition inside silicon trenches and porous substrate using bipolar high power impulse magnetron sputtering	**S. Atmane**
11:45	Synthesis of functional crystalline oxides by digitally processed DC sputtering synchronized with oxygen gas pulsing	**H. Isshiki**

R04 10:00 - 12:00 — Madrid 1 (Ground floor)

Detectors and Sensors

Chairman
P. Bergonzo

10:00	Design of innovative diamond detectors for beam monitoring in highly radiative environment for applications in nuclear and medical physics	**M.-L. Gallin-Martel**
10:30	Diamond detectors for pulse resolved intensity measurements at European XFEL	**U. Boesenberg**
10:45	Diamond Sensor for XFEL Beam Diagnostics at the European XFEL	**W. Freund**
11:00	An electrochemically assisted system based on heterojunction silicon/diamond sensor for natural uranium detection in liquid solutions	**M. Pomorski**
11:30	A diamond/graphene/diamond sandwich structure electrode for waste water treatment	**N. Yang**
11:45	Nitrogen-doped carbon nanowalls/diamond films as efficient electrocatalysts toward oxygen reduction reaction	**C. Zhang**

T01 10:00 - 12:00 — Varsovie (Ground floor)

Liquid TEM, Batteries, and Fuel Cells

Chairman
J. Arbiol
M. Hugenschmidt

10:00	Accessing the radiation chemistry at nanomaterials/water interfaces using electron microscopy and spectroscopy	**P. Abellan**
10:30	Understanding Zn Dendrite Growth in Different Aqueous Electrolytes by in situ liquid cell TEM	**Y. Yuan**

10:45	Understanding the role of the solid-electrolyte interphase in Li and Na batteries by operando transmission electron microscopy	A. Robertson
11:00	In situ Raman spectroscopy to study phase transitions in La2NiO4+d	A. Adeel Riaz
11:15	Shining a light on batteries: introducing a novel light scattering technique for the study of Li-ion dynamics and characterisation of battery electrode materials	C. Langley
11:30	In-situ TEM Obeservation of Phase Transformation of Materials at Nano Scale	Y. Huang
11:45	Characterizing Self-Assembled Nanoparticles in Liquid: Importance of Native environment for Electron Microscopy.	D. Arenas Esteban

G04 10:15 - 12:00 — Londres 1 (Ground floor)

Session 4

Chairman
S. Szunerits
S. Sonkusale

10:15	Single-molecule bioelectronic sensor: improving reliability with machine learning approaches	E. Macchia
10:30	Electrolyte-Gated Field-Effect Transistors for sensing an Alzheimer's disease biomarker	S. Ruiz-Molina
10:45	On-Textiles Organic Microfluidic Biosensing via Additive Manufacturing	M. Galliani
11:00	A Fully Recyclable and Self-healable Thermoelectric Hydrogel for Human Machine Interface	J. Yang
11:15	Molecular Layer Deposition of Flexible Hybrid Materials	M. Nolan
11:30	Organic and flexible X-ray detectors for medical dosimetry and diagnosis applications	C. Martinez-Domingo
11:45	Large area flexible conductive cardiac scaffolds by direct laser writing	N. Farid

I05 10:30 - 12:00 — Bruxelles (Ground floor)

Young Investigators Forum - Grown the Biofuture

Chairman
K. Nozawa

10:30	Keynote Introduction	P. Siffert
10:40	An ingenious tool for building molecules	B. List
11:30	Development of Topical Drug Formulations for the Treatment of Ocular Neovascularization	A.-A. Yetisgin

LU2 12:00 - 13:30 — Hall 5

Lunch

I06 13:00 - 16:00 — Bruxelles (Ground floor)

Young Investigators Forum - Grown the Biofuture

13:00	High carrier mobilities in polycrystalline germanium layers for flexible electronics	K. Nozawa
13:15	2D hybrids of palladium nanozymes and graphene oxide as a new multimodal theranostic platform	C. Satriano

13:45	Development and characterization of FusionRed variants	S.-T. Hung
14:00	Thermoelectric application of Ge-based group IV semiconductor layers	S. Maeda
14:15	Epitaxial growths of Mn4-xGaxN films and their X-ray magnetic circular dichroism spectra	A. Hatate
14:30	Current generation by direct electron pumping by Escherichia Coli to Au electrode	S. Mondal
14:45	Heparin Release and Sustained Delivery of Ionic Dissolution Products for Quick Endothelialization in 3D Printed Vascular Grafts	S. Chen
15:00	CART: Carrier-based Actuatable and Reprogrammable Transport	N.-K. Mandsberg
15:15	Nitrogen-doped graphene quantum dots as versatile carriers for nanomedicine	L. Zajickova
15:30	Machine learning techniques for analyzing time evolution in microscope images	T. Ishiyama
15:45	Kuramoto-Model-Based Data Classification Using the Synchronization Dynamics of Uniform-Mode Spin Hall Nano-Oscillators	N. Garg

A07 13:30 - 15:00 — Marie Curie B (1st floor)

Solid state electrolytes for secondary batteries

Chairman
F. Ciucci

13:30	Lithium-fluoride garnets and their potential application in solid-state batteries	D. Rettenwander
14:00	Overscreening and underscreening: the emergence of oscillatory space charge layers in solid electrolytes	S.-W. Coles
14:15	Ionic diffusion in the argyrodite-type Li6PS5Br: Influence of Br/S site-exchange and grain boundaries	M. Sadowski
14:30	Influence of the powder preparation method on the Self-diffusion coefficients obtained by 7Li PFG (Pulse Field Gradient) NMR spectroscopy in polycrystalline Li1+xTi2-xAlx(PO4)3 (0.2 = x = 0.4) samples.	R. Jimenez
14:45	Lowering the sintering temperature of garnet electrolytes for Solid-State Batteries by cold sintering process	A. Pesce

B1_05 13:30 - 16:00 — Schweitzer (Ground floor)

Smart Conversion Materials and Technology 4

Chairman
C. Brabec
T. Hayakawa

13:30	Pulsed laser annealed Ga or B hyperdoped poly-Si/SiOx passivating contacts for high-efficiency monocrystalline Si solar cells	E. Napolitani
14:00	Monolithic perovskite/silicon tandem solar cells using transparent conductive polymer PEDOT:PSS/n-Si hybrid heterojunction device as a bottom cell	H. Shirai
14:15	Raman amplification for trapped radiation in crystalline single Si nanoparticle	M. Condorelli
14:30	Improvement of photoluminescence from GaAsPN/GaP alloys by electron irradiation and rapid thermal annealing	E.-M. Pavelescu
14:45	Highly radiation tolerant ultra-thin GaAs solar cells for space power systems	A. Barthel
15:00	Optical determination of the seebeck coefficient in InGaAsP single quantum well	T. Vezin
15:15	Understanding the effect of cross diffusion in GaAs/Ge heterojunctions grown by MOVPE on photovoltaic devices performance	V. Orejuela

15:30	Novel concept for an optimal solar cell based on self-assembling organic molecules	**S. Kraner**
15:45	Molecular doping of fully printed flexible organic solar cells using F4-TCNQ additive	**A. Paliagkas**

B2_02	13:30 - 16:00	Dresde (1st floor)
	Advances in wide band-gap semiconductors 2	**Chairman** S. Heping
13:30	Effects of polishing on carrier recombination in TiO2 and SrTiO3 single crystals	**M. Kato**
14:00	Defects mediated high Seebeck coefficient and power factor in transparent thermoelectric thin films	**P. Murmu**
14:15	A CMOS Compatible Al/Silica Multilayer Selective Emitter for Use in A Thermophotovoltaic System for Medium Grade Waste Heat Applications	**M. Masood**
14:30	Facial synthesis of p-p heterojunction composites: Evaluation of their electrochemical properties with photovoltaics-electrolyzer water splitting using two-electrode system	**K. Kannan**
14:45	Ferroelectric-enhanced photoelectrodes: Improvement of photogenerated hole lifetime, population and photocurrent upon poling a ferroelectric BaTiO3 photoanode	**C. Forrester**
15:00	Giant photostrictive actuation in free-standing ferroelectric membranes	**S. Ganguly**
15:15	Molybdenum oxide as alternative hole selective contact for Silicon Hetero-Junction Solar cells	**S. La Manna**
15:30	Synthesis of metal-doped self-supported nickel nitride as efficient electrocatalysts for hydrogen evolution reaction	**C. Luan**
15:45	Linking cation site distribution to the photoelectrochemical performance of spinel ferrite photoelectrodes for green hydrogen production	**A. Rashkovskiy**

C07	13:30 - 16:00	Marie Curie A (1st floor)
	Catalysis for environment	**Chairman** A. Morrisey
13:30	Transparent Polypropylene Jerrycans for Solar Disinfection of drinking water; antimicrobial properties, durability, and human toxicity	**S.-C. Pillai**
14:00	Plasmonic Catalysts for the Green Capture and Conversion of SF6 and CO2 Greenhouse Gases	**M. Losurdo**
14:15	Structural and compositional characterization of AgXCu100-X bimetallic NPs deposited on Si micropillars as advanced photocathodes for PEC CO2 reduction	**H. Chaliyawala**
14:30	Materials for electrochemical nitrogen reduction leading to a new catalysts design strategy	**M.-C. Toroker**
15:00	Catalytic conversion of nitroaromatic pollutants mediated by metal-cryogels hybrid nanostructured catalysts	**S. Scurti**
15:15	Combating Indoor Pollution: The Efficacy of Hybrid Organic-Inorganic Photocatalytic System	**S. Porcu**

D1_07	13:30 - 15:00	Cassin (Ground floor)
	Batteries 7	**Chairman** L. Lamanna
13:30	Potassium salts of Schiff Bases as anodes in Potassium ion based batteries	**E. Castillo-Martinez**

14:00	Flexible and binder-free efficient supercapacitor electrode using vertical array of MoS2 with transition metals	**S. Saseendran**
14:15	Polyaniline/VS2 Composite with Nano-wired Morphology for All-solid-state Supercapacitor and Zinc-ion Battery Applications	**S. Zafar**
14:30	Poly(2-ethyl-2-oxazoline) binder for low-cost and high heat resistant lithium rechargeable battery applications	**Y.-S. Park**
14:45	Triflate anions enabled good rate capability and long-term stability of aqueous aluminum ion batteries	**X. Li**

D2_07 13:30 - 15:00 — Boston (1st floor)

Photocatalysis and photocatalytic materials 2

Chairman
S. Mondal

13:30	Metal based transparent electrodes for energy applications: a brief overview	**D. Bellet**
14:00	Theoretical and Experimental Investigation on Solar driven Hydrogen production Capacity of new Janus Coupled Photocatalyst	**A. Edathirinji Sudheer**
14:15	Visible-light-driven photocatalytic hydrogen production using intercalative hybrid composite of CdS nanoparticles and N-doped TiO2 nanosheets	**T.-W. Kim**
14:30	Low-cost and high throughput synthesis of ZnO nanostars for Energy Storage applications.	**G.-M. Di Mari**
14:45	SrTiO3 thin films photoanodes deposited by a combinatorial chemical beam vapor deposition: study of the mono- and co-doping with nitrogen and tantalum to enhance the visible light activity	**V. Rogé**

E04 13:30 - 15:00 — Madrid 2 (Ground floor)

Carbon nanomaterials

Chairman
C. Bittencourt
E. Sardella

13:30	Mitigation of the impact of carbon nanomaterials through surface chemistry modifications	**E. Flahaut**
14:00	Highly selective partitioning of complex mixtures of single-walled carbon nanotubes	**D. Janas**
14:15	Selforganization of carbonaceous nano-particles over polymer interface	**J. Sarkar**
14:30	Probing the electrical properties of graphene and hexagonal boron nitride multi-layers at nanoscale via Scanning Probe Microscopy techniques	**A. Klasen**
14:45	In-situ Synthesis of Nanodiamond on polyester fabric Surface	**K. Chandrakar**

F07 13:30 - 15:00 — OPS (Ground floor)

Electronic Applications 2

Chairman
R. Puglisi
S. Sharma

14:00	Green Electrically Conductive Textile with Tunable Piezoresistivity and Transiency	**P. Cataldi**
14:15	Molecular Engineering Improves Thermoelectric Performance of Carbon Nanotubes/p-Conjugated Organic Small Molecule Hybrids	**T.-H. Kim**
14:30	Controlling Liquid Crystal Topological Defects on Fixed Boojum Colloidal Arrays via Capillary-Assisted Particles Assembly	**H.-S. Yun**

G05 13:30 - 16:00		Londres 1 (Ground floor)
Session 5		Chairman W. Knoll T. Weil
13:30	From disposable to wearable bioelectronics using paper-derived laser induced graphene	T. Pinheiro
13:45	Printing wearable and bioelectronic sensors with microfibr	W.-A. Wang
14:00	Multimodal machine learning enables improved label-free biosensing: COVID-19 diagnostics	J. Yunda
14:15	Capacitive BaTiO3-PDMS hand-gesture sensor and its signal classification using machine learning	F.-D. Fernandez
14:30	Capacitive Coupling Phenomenon in Multi–Conductive Layer Bioelectronic Devices	R. Cornuejols
14:45	MXene-Fluoropolymer nanocomposite fibers as piezoelectric nanogenerators	M.-M. Hasan
15:00	Microfluidic Device Integrated Electrochemical Sensor for Detection of Peroxynitrite Anion	V. Kumar
15:15	Aerosol-jet printed stretchable micro-scale strain sensor	D. Zhang
15:30	Colorimetric pH sensing via onsite fiber spinning	M.-Y. Shui

J07 13:30 - 16:45		Luxembourg (Ground floor)
"Drug delivery session" driven by SFNanomedicine french association		Chairman G.-L. Davies M. Thanou
13:30	Elastin-like polypeptides-based nanoparticles: strengths and weaknesses for drug delivery applications	E. Garanger
14:00	Novel liposomal nanoformulation targeting NLRP3 inflammasome for treating hepatocellular carcinoma: synthesis, characterization, in vitro and in vivo studies	R. Mastrogiacomo
14:15	Elaboration of Crystalline Nanoparticles for Theranostic and Drug Delivery Applications	Y. Corvis
14:30	Design of a viral-inspired nanoparticle for translational studies in infectiology and cancer	P. Fender
15:00	Magnetic nanoparticles-conjugated E. coli as a potent drug delivery agent for multimodal therapy of pancreatic cancer	T. Kaur
15:15	Escherichia coli adhesin protein-conjugated thermal responsive hybrid nanoparticles for photothermal and immunotherapy against cancer and its metastasis	J. Hwang
15:30	Evolution of Chameleon Nanocarriers: RNA Transfer at Ultra-low Picogram Dose	E. Wagner
16:00	The proton sponge trick for tuned disassembly of nucleic acids delivery systems upon sensing endosomal pH: toward nano carriers with in vivo therapeutic potential	G. Zuber

K06 13:30 - 15:00		Berlin (Ground floor)
Device Theory, Transport, and Circuits 2		Chairman O. Jurchescu J. Labram
13:30	Strategic Molecular Doping and Defect Passivation in 2D Ruddlesden-Popper Phase Metal-Halide Perovskites	K. Kang

14:00	Doping Effect of MoO3 Encapsulation Layer on DNTT-based Organic Transistors and their Application to Unipolar Inverter Circuits	**Y. Jeon**
14:15	Solution-Processed Complementary Inverters Using p-type Copper Iodide: Improving Stability with Passivation Layers	**K. Lee**
14:30	Multivalued Logic Circuits based on Vertically Integrated Organic Transistors	**H. Yoo**
14:45	From Key Generation to Destruction of Physical Unclonable Function Using a-IGZO-based Transistor Doped with PVDF-HFP and Its Randomly-Tunable Electrical Properties Depending on the Phase Transition	**S. Lee**

L07 13:30 - 15:00 Etoile A (1st floor)

Ultra-short and Ultra-high Power Laser Interaction with Matter - I

Chairman
T. Derrien

13:30	Subcycle dynamics of plasma formation in fs laser irradiated solid dielectrics	**A. Mermillod-Blondin**
14:00	Time resolved mid-infrared absorption in silica: a new approach to study the electron-phonon coupling in glassy dielectric materials	**V. De Michele**
14:15	Analysis of ultrashort laser-induced plasma anisotropy in Zinc Telluride, by using terahertz probe pulses	**D. Zhang**
14:30	Characterizing Solid State Sensors for Particle Detection at High Spatial and Temporal Resolution Using Wavelength-Tunable Two-Photon Photocurrent	**N. Al Amairi**
14:45	Ultrafast laser 3D processing of semiconductor materials using burst-mode irradiation strategies	**P. Sopena**

M07 13:30 - 15:00 Schuman (1st floor)

Power Devices I

Session Chair
W. Schustereder

13:30	Virtualization of processes, metrology and maintenance for advanced SiC-based device manufacturing	**D. Pagano**
14:00	Growth of thick GaN layers on Si (111) for vertical power devices	**S. Michler**
14:15	Investigation of electron mobility in AlGaN channel heterostructures with different Al content	**J. Bassaler**
14:30	Novel Energy-Filtered Field Stop Technology for IGBT Power Devices	**R. Koch**
14:45	Single step of µs UV laser annealing for Si IGBT back-side activation	**Z. Chehadi**

O1 13:30 - 15:00 Churchill (1st floor)

High energy detection

Chairman
G. Grancini
A. Petrozza

13:45	Radiation tolerance and stability of deep levels in PEA2PbBr4 2D perovskite crystals	**A. Ciavatti**
14:15	Mechanosynthesis and wafers-shaping of 2D and mixed 2D/3D hybrid perovskites for designing new X-Ray detector with improved stability and performance	**Y. Cai**
14:30	Wide-Band Gap Perovskite based on bromide halide: Impact of light, thermal and X-Ray Irradiation stresses on semi-transparent perovskite solar cells and detectors	**F. Matteocci**
14:45	Mitigating effects of ion migration for stable perovskite image sensors	**S. Tsarev**

P06 13:30 - 16:00 — Londres 2 (Ground floor)

High-entropy and Disordered Materials

Chairman
H. Stein

13:30	Alchemical machine learning for high-entropy alloys	**M. Ceriotti**
14:00	Explore diffusion in high-entropy alloys through machine learning based kinetic Monte Carlo	**S. Zhao**
14:15	Effects of disorder in the electronic properties of monolayers and nanoribbons MoS2	**P. Castenetto**
14:30	High-Entropy Alloys for Catalyst Discovery	**C.-M. Clausen**
15:00	ULtrahigh TEmperature Refractory Alloys (ULTERA) Database and Data Quality Assurance	**A. Krajewski**
15:15	Materials for quantum computing : Magnetic impurities embedded in superconductors from first principles	**D. Antognini Silva**
15:30	Ab-initio simulations in HfNbTiVZr high-entropy alloy: electronic structure and defects	**L. Casillas Trujillo**
15:45	Vacancy-ordered double perovskites Cs2BI6 (B = Pt, Pd, Te, Sn): an emerging class of thermoelectric materials	**P. Bhumla**

Q02 13:30 - 15:00 — Amsterdam (Ground floor)

Fundamentals, methods & diagnostics of Pulsed deposition processes II

Chairman
A. Caillard
M. Nistor

13:30	Creation of Material Libraries by Pulsed Laser Deposition – History and Recent Developments	**H. Von Wenckstern**
14:00	Dependence of the ZrO2 growth on the crystal orientation: growth simulations and pulsed magnetron sputtering	**J. Houska**
14:15	Growth and unusual epitaxial relations of NiO and CrN thin films on r-Al2O3	**F. Alijan Farzad Lahiji**
14:30	Tunning the properties of oxide thin films grown by pulsed laser depositions via plasma diagnostics tools	**S. Irimiciuc**
14:45	Developing a method with optical emission spectroscopy to control thin layer in R-HiPIMS deposition process	**D. Boivin**

T02 13:30 - 15:00 — Varsovie (Ground floor)

3D techniques and Catalysts

Chairman
S. Bals
M.-C. Spadaro

13:30	Investigating nanoparticle restructuring and nanoparticle – support dynamics using advanced operando electron microscopy	**K. Jenkinson**
14:00	In-Situ High-Temperature Gas and Vacuum 3D Electron Diffraction for Studying Structural Transformations upon Redox Reactions	**D. Vandemeulebroucke**
14:15	In situ transmission electron microscopy study on the restructuring of Au-Pd core-shell catalysts	**M. Perxés I Perich**
14:30	Unraveling the diffusion at the atomic scale in 3D: heat-induced alloying in single-crystalline and pentatwinned Au@Ag nanoparticles.	**M. Mychinko**
14:45	Operando proton-transfer-reaction time-of-flight mass spectrometry of carbon dioxide reduction electrocatalysis	**H. Ren**

H05 14:00 - 16:00 — Rome (Ground floor)

	Bioelectronics and Bioelectrochemical Systems	
14:00	Multifunctional bandages as potential strategy for chronic skin wound management	**S. Szunerits**
14:30	Development of nanoprobe array technology for high resolution electrophysiology of brain-on-chip.	**E. Belot**
14:45	Electric Field Tunability of Photoluminescence from a Hybrid Peptide–Plasmonic Metal Microfabricated Chip	**J. Rice**
15:00	Graphene-MoS2 heterostructure for promising detection of diabetes through acetone and glucose biomarkers	**S. Kapoor**
15:15	Multimodal machine learning in chronic wound management: A bright future for biomaterials and soft materials	**S. Melinte**
15:30	Ultrasensitive Detection of Aromatic Water Pollutants Through Protein Immobilization Driven Organic Electrochemical Transistors	**S. Sahu**

R05	**14:00 - 16:00**	**Madrid 1 (Ground floor)**
	Growth and Characterisation	**Chairman** E. Gheeraert
14:00	Two-Inch High Quality Diamond Heteroepitaxial Growth on Sapphire for High-End Applications	**S.-W. Kim**
14:30	Development of new carbon solvent compositions for HPHT-growth of boron-doped large diamond single crystals for applications as electronic device substrates	**T. Kovalenko**
15:00	Diamond growth on non-diamond substrate: A zeta potential preview	**S. Mandal**
15:15	Vertically Three-Dimensinal Diamond-Graphene Nanohybrid Films: Preparation, Characterization and Application	**Y. Xiong**
15:30	A review of key developments and challenges in CVD diamond materials for sensor and detector applications	**I. Friel**

A08	**15:00 - 16:30**	**Marie Curie B (1st floor)**
	Solid state batteries development	**Chairman** E. Kendrick
15:00	Solid-state architectures based on ultra-thin NASICON electrolytes and oxide-based anodes	**J.-C. Gonzalez-Rosillo**
15:15	Rapid screening of materials and interfaces for high rate capability in energy storage and conversion	**S. Adams**
15:30	Solution-phase synthesis of Li metal protective interlayer for stable anodic interface in all-solid-state batteries	**S.-G. Lee**
15:45	High Performance Solid State Lithium Batteries by Ultrathin In-situ-cured Composite Solid Electrolytes	**S. Adams**
16:00	Predicting the ionic conductivity of superionic conductors	**A. Carvalho**
16:15	Monolithically-stacked thin-film cells for high-power solid-state batteries	**M.-H. Futscher**

D1_08	**15:00 - 16:00**	**Cassin (Ground floor)**
	Batteries 8	**Chairman** P.-C. Ricci
15:00	Aqueous Eutectic Electrolytes for Zinc Metal Batteries	**R. Bouchal**
15:30	A quasi-solid state polymer electrolyte for long life sodium-metal batteries	**V. S.K.**

15:45	Effect of precursor concentration on the electrochemical properties of carbon composite nanofibers of zinc phosphide as anode materials for lithium-ion batteries	**Y. Sagynbayeva**

D2_08	15:00 - 16:00	Boston (1st floor)
	Photocatalysis and photocatalytic materials 3	**Chairman** D. Bellet
15:00	Post-annealing treatment of Cu2ZnSnS4-based multilayer photocathodes for enhancing photocurrent stability during photoelectrochemical water reduction	**R.-A. Wibowo**
15:30	Study of Enhanced Catalytic Properties of Multi Component Alloy and Stablized Oxide Composites	**D. Park**
15:45	Co3O4 nanopetals layers for photoelectrochemical degradation of organophosphate pesticides	**P. Ragonese**

E05	15:00 - 16:00	Madrid 2 (Ground floor)
	Hybrid materials	**Chairman** E. Flahaut
15:00	Trimetallic Oxides/GO Composites Optimized with Carbon Ions Radiations for Supercapacitive Electrodes	**A. Alshoaibi**
15:15	Preparation of atomic layer deposition alumina/graphene porous hybrids with high adsorption capacity of Congo red	**B. Vigolo**
15:30	Novel SiOxNy protective coatings with aligned carbon nanotubes network	**E. Shmagina**
15:45	Thermal and light-induced electrical properties in nanocomposites of reduced graphene oxide and silver nanoparticles	**S. Gurung**

F08	15:00 - 16:00	OPS (Ground floor)
	Nanomaterials growth	**Chairman** D. Janas Y.-K. Mishra
15:00	Square Tin Dioxide Nanotubes: Synthesis, Structure, and Devices	**M. Allen**
15:30	Optical and electrical properties of magnetron sputtered CrN films for thermoelectric devices	**J. Bulir**
15:45	Improved low temperature sinter bonding using Ag nanocube superlattices	**J. Gougeon**

K07	15:00 - 16:00	Berlin (Ground floor)
	Materials, Structure, and Additives 1	**Chairman** C. Nielsen A. Paterson
15:00	Development of semiconducting polymers for organic electrochemical transistors	**I. Mcculloch**
15:30	Mixed conduction in conjugated polymers: structure-property relationships	**A. Salleo**

L08	15:00 - 16:00	Etoile A (1st floor)

Laser Beam Engineering for Surface Processing

15:00	Periodic structures created by laser interference irradiation	**P. Simon**
15:30	Well-defined periodic pattern fabrication on biomaterial surfaces using direct laser interference patterning	**B. Voisiat**
15:45	Dual lasers self-alignment system for materials processing	**Y.-P. Lan**

M08 15:00 - 16:00 Schuman (1st floor)

Silicides and Germanides I

Session Chair
D. Mangelinck

15:00	Optimization of the contact engineering processes in the frame of advanced semiconductor devices development.	**M. Gregoire**
15:30	Effects of roughness variation on the electrical and structural properties of Ni silicide ohmic contacts formed by UV laser annealing	**P. Badalà**
15:45	Investigation of the formation of nickel silicides on vertical silicon nanostructured channel for advanced electronics	**J. Müller**

O2 15:00 - 16:00 Churchill (1st floor)

Devices and stability 1

Chairman
G. Grancini
A. Petrozza

15:00	MXenes for Stable Halide Perovskite Solar Cells	**M. Lira-Cantu**
15:30	Elucidating the role of surface state in stability of perovskite solar cells using NiOx hole transport layer	**H.-R. Jung**
15:45	Opportunities for the commercialization of stable perovskites based solar cells	**A. Bouich**

Q03 15:00 - 16:00 Amsterdam (Ground floor)

Functional oxides & TCO's I

Chairman
N. Laidani
K. Sarakinos

15:00	Tungsten oxide for chemical sensorsTungsten trioxide thin films fabricated by pulsed laser deposition, high power impulse magnetron sputtering and DC hollow cathode discharge for chemical sensor	**J. Lancok**
15:30	Unraveling the H and O incorporation in EuOOH thin films prepared by pulsed laser deposition	**R. Serna**
15:45	Crystallization kinetics of TiO2 thin films deposited by reactive High Power Impulse Magnetron Sputtering	**D. Fernandes**

T03 15:00 - 16:00 Varsovie (Ground floor)

Structure-Property relations

Chairman
S. Bals
M.-C. Spadaro

15:00	Revealing Structure-Property Correlations in Memristive Devices	**L. Molina-Luna**
15:30	Mechanisms of deformation processes in NiTi shape memory alloys determined by in situ study of texture evolution combined with post mortem analysis of martensite variant microstructures in TEM.	**P. Sittner**

	15:45 Infrared imagery: an advanced tool to characterize in-situ nanomaterials	D. Bellet
CB4	16:00 - 16:30	Exhibition area (Ground floor)
	Coffee Break	
A_P01	16:30 - 18:30	Etoile (1st floor)
	Poster session 1	
	Clarification of Li Deposition Behavior on a Porous Interlayer Anode in Li-free All-Solid-State Batteries	D. Jun
	Modulating the electronic conductivity of hematite (a-Fe2O3) via biaxial mechanical strain: A density functional theory study.	S.-N. Abdulmutalib
	Stability of high-temperature electrical and acoustic properties of congruent and near stoichiometric single crystalline lithium niobate-tantalate solid solutions	Y. Suhak
	Modelling of oxygen vacancy diffusion in acceptor doped barium titanate: a molecular dynamics approach	W. Preis
	New solid-state electrolyte based on 2-adamantanone for sodium all-solid-state batteries	J. Budde
	Understanding quantum phenomena in multiferroic A2CoB2O7 (A = Sr, Ba; B = Ge, Si) single crystals	R. Dutta
	A molecular dynamics study of oxygen diffusion in brownmillerite Sr2Fe2O5	S. Ambaum
	Insight into the Transport of Li Polysulfides in Solid Polymer Electrolytes	E. Ahiavi
	A general expression for the statistical error in a diffusion coefficient obtained from a solid-state Molecular-Dynamics simulation	A.-L. Usler
	A novel sample cell for the detection of protons in ceramic materials by an in-situ combination of laser induced breakdown spectroscopy and electrochemistry	M. Weiss
	An oxide ion all-solid-state synaptic transistor with efficient energy consumption for low temperature applications	P. Langner
	Understanding seed layers for lithium metal plating in all-solid-state batteries with 3D microscopy	A. Müller
	Polyether based Polyhydroxy urethane Network as Polymer Electrolyte Solid-state Lithium Metal Batteries	A. Raj
	Electrical and Optical Properties of SrTi0.7Fe0.3O3-d Perovskite-Type Oxide	C. Yildirim
	Diffusion of cobalt ions in strontium titanate	Q. Ma
	Depth-dependent characterization of (Ag,Cu)(In,Ga)Se2 by X-ray absorption spectroscopy	M. Babucci
	Coupling of an experimental and numerical study on high performance oxygen electrodes for micro-Solid Oxide Cells	S. Panisset
	Solid-state Li metal battery with hybrid electrolyte: An overview of the Horizon Europe SEATBELT project.	T. Boulmier
	Understanding the structure, ionic conductivity and transport mechanisms of A2ZrCl6.	K. Barker
	Computational Study on the Effect of Inactive Fillers in Hybrid Electrolytes using Empirical Molecular Dynamics	J. Martin Dalmas Cea
	Dendritic growth study by coupling phase filed equations and Poisson Nernst Planck equation for Li metal batteries	M.-K.-S. Worthemphy
	In-situ impedance spectroscopy to identify mechanisms in cold sintering process of Li1-xAlxTi2-x(PO4)3 (LATP) solid electrolyte	N. Vicente-Agut

Interstitial segregation has the potential to mitigate liquid metal embrittlement in iron	**A. Ahmadian**
Solid polymer electrolytes via click chemistry for all solid state lithium batteries	**N. Halttunen**
Novel mesoporous carbon supports for sustainable PEMFC catalysts	**E. Perrin**
Mixed Ion-Electron Transport in Composite Electrodes	**C.-C. Chen**
Analysis of interfacial defects in InGaZnO TFT using nonlinear optics	**H. Hyunmin**
Influence of Sm doping on structural, ferroelectric, electrical, optical and magnetic properties of BaTiO3	**A. Alshoaibi**
Effect of Sm3+ Substitutions on the Lithium Ionic Conduction and Relaxation Dynamics of Li5+2xLa3Nb2-xSmxO12 Ceramics	**A. Alshoaibi**
Enhancement of Optical Activity and Properties of Barium Titanium Oxides to Be Active in Sunlight through Using Hollandite Phase Instead of Perovskite Phase	**A. Alshoaibi**
Colossal Permittivity Characteristics of (Nb, Si) Co-Doped TiO2 Ceramics	**A. Alshoaibi**
Multi-ferroic glass properties of cubic Sm-doped ceria	**A. Lavie**
Investigation of Chemical Bath Deposited Transition Metals/GO Nanocomposites for Supercapacitive Electrodes	**A. Alshoaibi**
Prediction of Sodium Ion Transport in NaSICON Materials by DFT and Monte Carlo methods	**S. Neitzel-Grieshammer**
Performance of NaSICON electrolytes in anodeless sodium solid-state batteries	**C. García**
Tuning Ionic Conductivity and Stability of Superionic Solid-State Electrolyte	**S. Kc**
Nanostructured air electrodes for reversible solid oxide fuel cells via crystallization-assisted infiltration	**L. Seung-Bok**
Three-Layer Structured Garnet Dominative Composite Solid Electrolyte for All solid-state Batteries	**D. Kim**
Physically Transient Devices Based on Biological Materials with Agarose as an Active Layer for Nonvolatile Memory Application	**T.-H.-V. Nguyen**
Interface studies in solid lithium metal batteries based on halide hybrid electrolytes	**N. Stankiewicz**
Pulsed laser deposition of epitaxial Li4Ti5O12 thin films as an all-solid-state microbattery anode	**J. Žuntar**
First principles calculations of oxygen vacancies and protonic defects in Sr2FeO4+/-d	**Y.-A. Mastrikov**
Enlargement of band gaps on thermal wave crystals by using heterostructures	**G. Morales-Morales**
Composite coating for suppressing undesirable interfacial reactions in sulfide-based all-solid-state batteries.	**Y.-J. Ji**
Optimization of Thermoelectric n- & p-type Bismuth-Tellurium and Antimony-Tellurium Based Alloys through Mechanical Alloying, Hot Pressing and Hot Deformation	**G. Vourlias**
Prolongating Cycling Lifetime of Lithium Metal Batteries with Monolithic and Inorganic-Rich Solid Electrolyte Interphase	**J. Yang**
Synthesis of Thermoelectric Copper Selenide Compounds by High Energy Ball Milling and Pack Cementation	**G. Vourlias**
Control of local thermal conductivity in oxide thin films through ionic manipulation	**N. Varela-Domínguez**
Synthesis of silver selenide for thermoelectric applications via Pack Cementation and Ball Milling	**L. Malletzidou**
Preparation and analysis of EVA-ZnO composite for solar cell encapsulation	**P. Pathi**
Partial pressure dependence of the space charge between SrTiO3 and mixed conducting La0.6Sr0.4FeO3, La0.65Sr0.35MnO3 and La0.9Sr0.1CrO3	**C. Steinbach**

	Theoretical insights into the monolayer adsorption and characterization of HB238 merocyanine on Ag(100) surface	R. Tomar
	Unleashing the potential of solid-state thin film electrolyte with pulsed laser deposition (PLD)	J. Chen
	Effect of deposition regime on the microstructure and electrochemical performances of reactively sputtered VOxNy pseudo-capacitive thin films	J. Barbé
	Grafted MXenes Based Electrolytes for 5V-class Flexible Solid-state Batteries	Z. Chen
	Investigation of Proton Diffusion in Nanostructured TiO2 with H2O/D2O Isotope Exchange by In Situ Raman Spectroscopy	Z. Zhao
	Properties of the ALD Zn1-xSnxOy/Cu2Zn(GexSn1-x)S4 interface relevant for earth abundant thin film solar cells	N. Martin
	Screening mixed conducting oxide storage electrodes via chemical capacitance measurements	B. Wagner
	Magnetic Phase Transition in MoS2 detected with AFM	A. Gupta
	Cation and oxygen vacancy ordering in BaLnCo2O6-d double perovskites revealed by atomic-resolution analytical TEM/STEM	C. Ghica
	Microtubular solid oxide electrolytes for high temperature fuel cell applications	A. Nõlvak
	Ionic conductivity in the hexagonal LiBH4–LiI–LiBr solid solution	A. Mazzucco
	The Achilles heel of Li10GeP2S12: determining the rate limiting diffusion steps in ultrafast solid electrolytes	K. Hogrefe
	Low dimensional Li+ diffusion in halide electrolytes	F. Stainer

B1_08 a	16:30 - 17:15	Schweitzer (Ground floor)
	Defects in Perovskites 3 a	Chairman C. Brabec
16:30	Enhancing High-Pressure Conductivity through Redox-Active Molecules in an Expanded Halide Perovskite Analog	R. Matheu
16:45	Simulating the transient luminescence of perovskite light-emitting diodes under pulsed operation	M.-A. Torre
17:00	Hydrothermal synthesis and optical characterizations of eco-friendly Bi-based halide perovskites	H. Hashimoto

B_P02	16:30 - 18:30	Etoile (1st floor)
	Poster session 2	
	Study and characterizations of Langmuir-Schaefer films of low bandgap polymers	M.-S. Borro
	Multiquantum band-to-impurity optical transitions in CdTe luminescence and phonon-plasmon replicas	A. Varzari
	Features of beyond bandgap emission of Cu2ZnSnS4 kesterites	R. Redko
	Transient Photocurrents and Defect States in Hierarchically Structured ZnO Nanowires	R. Schwarz
	Development of direct bonded InGaP/GaAs/Si material for solar optoelectronic conversion that combines light concentrating and non-concentrating	H.-J. Kim
	Impact of silver nanoparticles on crack growth in silica glass coating	H. Momma
	Role of Oxygen Vacancy in Visible Light Absorbing Ferroelectric Perovskite Oxides	S. N V

Minimization of the escape cone losses in tandem and lateral luminescent solar concentrators	**A. Shkrebtii**
Influence of solvents on the morphology and optoelectronic properties of Langmuir and Langmuir–Schaefer films of poly(fullerene)s	**C. Olivati**
Gallate Spinel Oxides as Promising Cathodes for Photocatalytic Fuel Cells	**M. Can**
Wet-chemical Synthesis and Catalytic Properties of Metal Nanomaterials with Unconventional Crystal Phases	**Y. Chen**
Fabrication of color glass for building integrated photovoltaic by polymer solution process	**S. Lim**
A study on EVA-free lamination process and high transmittance colored glass using pearlescent pigment and optical adhesive	**H.-S. Ahn**
A Tunable Structural Family with Ultralow Thermal Conductivity: Copper-Deficient Cu1-x?xPb1-xBi1+xS3	**K. Maji**
Optimization and Efficiency Improvement of Photovoltaic Solar Cell Device Using Inorganic ETL and HTL	**B.-S. Jeong**
Switching of photocurrent polarity in electrochemical cells with light via an excited state proton transfer mechanism	**A. Yucknovsky**
Effect of thiolate monolayers on CO2 photoreduction using CuPt nanoparticle decorated TiO2 nano-ellipsoids	**N. Chaulagain**
Enhancement of photocatalytic performance of Cu2O by decreasing oxygen vacancy density	**F.-S.-S. Chien**
Investigation of the physical properties of copper oxide CuxO in thin film: Application to the detection of ethanol	**F. Chaffar Akkari**
Near-infrared sensitized Z-E photoswitching of azobenzene derivatives in bioplastics	**L. Naimovicius**
Nanostructured semiconducting oxide (SnO2 , FTO) thin films for thermoelectric energy harvesters	**D.-A.-K. Karuppiah**
Investigation of Li3PS4·2THF solvato-complex formation, impact of solvent reactivity on the reaction mechanism	**R. Poirier**
Phase Transition Behavior and Enhanced Piezoelectric Properties of (Bi0.97Sm0.03)ScO3-PbTiO3 Textured Ceramics using BaTiO3 Templates for High Temperature Piezoelectric Device Applications	**Y. Jeong**
The influence of Fe on the Ni electrocatalytic activity for the urea oxidation reaction: operando FT-IR spectroscopy investigation	**V. Zemtsova**
Main-chain poly(fullerene xylene)s – new materials for optoelectrical and biomedical applications	**R. Hiorns**
Germanium incorporation routes for CZTS solar absorbers	**M. Naylor**
Structural Investigation of (1-x)Bi(Mg2/3Sc1/3)O3 – (x)PbTiO3 Near the Morphotropic Phase Boundary Region	**A. Padmanaban**
Nanoscopic characterisation of ferroelectric materials under external stimuli	**S. Pal**
Building 3D-organized Nanocrystallites to Harness Grain-boundary Defects	**M.-H. Oh**
Coating of Ti1-xNbxO2 thin film on stainless steel separators for polymer electrolyte fuel cells by mist chemical vapor deposition	**H. Xu**
Average and local structure analysis of near-infrared reflective black pigments by using synchrotron radiation X-ray	**R. Oka**
Tuning of CoFe2O4 nanostructured electrode material for electrochemical performance under magnetic field	**D. Mandal**
Synthesis and characterization of novel oxyfluoride LaSrCrO4F2	**S. Vasala**
Enhanced thermoelectric efficiency in Bi-substituted La0.95Sr0.05CoO3	**D.-P. Dubey**
Ground-state electronic structure of LaSrCoO4 potential catalyst in energy conversion systems	**S.-C. Haw**
Electrostrain properties of (1-x)BaTiO3-xSrSnO3 Pb-free ceramics and interpretation of their hysteresis behavior using simple mathematical functions	**Y.-S. Lim**

	Design of well-defined grain boundary in nanocrystal for CO2 conversion reaction.	**S. Kim**
	Multivalent metal ion additive assist ultra high performance aqueous zinc ion batteries	**Z. Wu**
	Design and preparation of high k polymer nanocomposite for thin film capacitors for control circuit of active-matrix display	**M. Wang**
	Effect of TiO2 protection layers on the efficiency of Si-based PEC devices	**R. Khan**
	Thermoelectric performance of nanostructured Si/SiGe superlattices	**J. Julia Burmester**
	Influence of field-induced phase transformation on the photoferroelectric response of Sn-doped BaTiO3	**V. Kraft**
	Study for relaxor polymer matrix for piezoelectric nanocomposite energy harvesters	**C.-K. Jeong**
	Influence of Al2O3 on the electrical properties of lead-free Na0.5K0.5NbO3 ceramics	**A. Martin**
	Electric and Atomic Structure Analysis of Oxide / GaN interface	**H. Tomita**
	The influence of 3D printing methods and materials on the response of printed symmetric carbon supercapacitors	**M. Ferguson**
	Influence of Scandium concentration on crystallographic and functional properties of a-plane AlScN films	**A. Nair**
	Enhancing electrochemical performances of spinel NiCoS nanowire arrows	**A. Markhabayeva**
	All-Additively-Fabricated Microsupercapacitors: Fine-Tuning Chemistry to Maximize Performance	**A. Hodaei**
	Silver Nanoparticles Decorated Carbon Nanotubes-based Thin film Supercapacitors for Flexible and Wearable electronics applications	**P. Tiwari**
	Carbonized foam-red mud /paraffin composites as Phase Changing Materials (PCMs) for thermal shielding applications.	**C. Salmas**
	Preparation and study of advanced building components: paraffin-PCMs/activated carbon composite gypsum boards	**M. Karakassides**
	Photoexcited charge carrier and spin dynamics in methylammonium lead bromide doped by magnetic transition metals.	**S. Bodnar**
	MOF-derived Fe-Zn-N-C Catalysts as Non-Noble Metal Oxygen Reduction Catalysts for High Performing Anion Exchange Membrane Fuel Cells	**P. Elsaesser**
	Structural and optical characterization of 2D pristine and hydrogenated In2Se3 nanolayers for photovoltaic applications	**A. Shkrebtii**

C_P01	16:30 - 18:30	Etoile (1st floor)
	Poster session 1	
	pH and thermo-responsive copolymers for the removal of anionic and cationic dyes from aqueous solution	**P. Cerruti**
	Al and Ga co-doping of ZnO nanowires grown by chemical bath deposition	**E. Appert**
	Selective and Continuous Ion Recovery Using Flow Electrode Capacitive Deionization with Polymer Multilayers functionalized Ion Exchange Membrane	**Y. Cho**
	Nano-devices based on Fe3O4 coated by meglumine ligands for the adsorption of metal anions from water	**S. Dattilo**
	Novel, environmentally friendly dynamic system based on titanium dioxide photocatalysts, for the elimination of Escherichia coli bacteria from water	**G. Pezzotti Escobar**
	Multifunctionalized silver nanoparticles for arsenic ions removal from water	**I. Venditti**

Growth of metal-dopped MoS2 nanostructures toward catalytic applications	**H.-W. Shiu**
Interaction of newly synthesized Dipeptide Schiff bases with mild steel surface in aqueous HCl: Experimental and theoretical study on thermodynamics, adsorption and anti-corrosion characteristics	**S. Satpati**
Effect of the nature of both cations and anions substitution on the structural symmetry of Li-rich 3d-metal chalcogenides electrodes	**J. Louis**
Sponges for emerging pollutants removal	**G. Curcuruto**
Effect of the heterocyclic group on the anti-corrosion performance of heterocyclic Schiff bases of benzothiazole for mild steel in 1 M aqueous HCl	**A. Suhasaria**
Kinetic and comparative study of the isomerization reaction of substituted dodecahexaene by ab-initio and dft method	**F. Mechachti**
Investigation of the interactions between water and mesoporous functional metal oxides	**F. Colombo**
Reconstruction-induced copper/nickel-based catalysts for Highly-Efficient Ammonia Electrosynthesis	**D. Yin**
Silica based hybrid coatings for writing surfaces - whiteboards	**J.-C. Almeida**
Visible-light absorption of In2O3 thin films and nanorods by incorporation of Bismuth for visible light-responsive photocatalyst	**Y. Taniguchi**
Preparation and optical properties of ß-Ga 2 O 3 /ZnO nanocomposite as a photocatalyst for the efficient degradation of organic compounds under the action of ultraviolet radiation	**M. Girtan**
Heterogeneous ion-exchange membranes containing aligned ion-exchange resin particles and ionomer binder	**J.-M. Lee**
Interlocking structured bipolar membranes with highly durable bipolar junction	**M.-S. Kang**
Molding Analysis of GIS Spacers Using Cure kinetics and Reactive Viscosity Models of Bio-Based Epoxy Composites	**C. Lee**
UV and Visible light photocatalysis of methyl orange dye using titanium dioxide/ graphene nanocomposites	**S.-A. M**
PVD coating on chromium (III) as a viable solution for the replacement of decorative chromium (VI)	**X.-L. Pinheiro**
Porphyrin based Cryogel for water remediation	**G. Mercorillo**
Physical and chemical decoration of graphene-based materials by metal nanoparticules for the developpement of gas sensors dedicated to sulfur-containing pollutants	**A. Ndiaye**
Intrinsic impacts of Graphene oxide entrapped Polystyrene (GO@PS) nanohybrid inferred toxicological effects on embryonic zebrafish (Danio rerio)	**A. Sinha**
Low cost copolymer for the removal of heavy metal from water	**E.-F. Mirabella**
Chitosan-based Laser-induced Graphene Sensors for VOC Detection	**C. Larrigy**
Oxidation kinetics of Sm2(Co, Fe, Cu, Zr)17 alloy powder: Enhanced activation energy barrier at high oxidation temperature	**R. Mittireddi**
Multi-solvent method for doping oxide thin films in solution-based techniques	**S. Vatavu**
Non-stoichiometric amorphous titanium dioxide nanoparticles for efficient dye-degradation	**R. Roy**
Morphology changes of zeolite formed using a waste material: preliminary data on the action of laser beam	**S. Orlando**
Femtosecond Laser Patterned Graphene Oxide based SERS Platform for Dye Detection	**S. Joshi**
kinetic and comparative study of the isomerization reaction of substituted tetradecahepta-ene by ab-initio and dft method	**Y. Ahmane**
Ab initio calculations of OH- group adsorption on TiO2 surface	**E. Neilande**
A chemiresistive methane gas sensing properties of nanorods of hexahydroxytriphenylene-based metal-organic frameworks	**S.-T. Navale**

	Plasmon Resonance Variations of Quasi-Spherical Gold Nanoparticles for Environmental Ion Detection	**R.-K. Raguindin**
	Boosting the kinetics with graphene quantum dots functionalized MoS2 wrapped ZIF-67 derived Co3O4 for efficient photodegradation of norfloxacin	**D.-H. Kim**
	Unveiling the mechanistic reaction pathway of selective photocatalytic CO2 reduction over 2D ZnIn2S4	**A. Sabbah**
	Tailoring High Entropy Oxides (HEOs) as emerging radiative materials for green energy saving buildings	**C. Borghesi**
	Piezo-Photocatalytic Effect of ZnO-MoS2 Heterostructures on the Efficiency of Catalytic Degradation of Methyl Orange	**J.-A. Narvaez**
	Porous polymer membrane modified with pure and copper-doped titanium dioxide for filtering and light facilitated bacteria sterilization	**D. Bocharov**
	Robust CA-GO-PTFE membranes for azithromycin photo-degradation in wastewaters	**B. Mitu**
	Advanced functionalisation of Borophene/graphitic carbon nitride as a photocatalyst for textile wastewater treatment application	**S. Emadian**
	Conception and optimization of heterojunction between TiO2 “sol-gel” and g-C3N4	**C. Mary**
	NO and CO capture by titanium- and copper-decorated two-dimensional carbides	**L.-A. Pérez**
	Design and synthesis of calixarene-based cryopolymers for air pollutant treatment and sensing	**T. Mecca**
	Innovative solutions to monitor and to mitigate plastic and microplastic pollution in REMEDIES project	**M.-C. Cocca**
	Electrospun nanofiber membranes for sustainable wastewater remediation: eco-friendly design and development	**G. Rando**
	Synthesis of Metal Oxide and Carbon Materials from Metal-Organic Frameworks (MOFs) and Its Applications	**H.-J. Lee**

D_P01	16:30 - 18:30	Etoile (1st floor)
	Poster session 1	
	One-step Electrochemical Synthesis of Ni-Fe-S/Nickel foam for Efficient Electrocatalysts of Water Splitting	**D. Choi**
	3D characterization of nanocatalysts for energy conversion application	**T. Kim**
	Electrical properties of inorganic hybrid PP-based ternary blends for power cable	**H. Se Won**
	Oxidation and hot corrosion properties of Rene-N4 and FSX-414 superalloys used for turbine applications	**M. Ahmad**
	The heterojunction strategy with work function-tunable graphene for efficient photoelectrochemical water-splitting in WO3-based photoelectrode	**A.-Y. Cho**
	Time resolved photo-driven charge transfer of BiVO4 thin films for photoelectrochemical water splitting	**N. Ottinger**
	Excited state calculations of two-dimensional nanostructured transition metal dichalcogenides for water-splitting applications	**I. Isakovica**
	Study of earth abundant and non-toxic transparent conductive oxides for solar cell applications	**N. Khemiri**
	Ionogels as promising anti-icing surfaces	**S. Bahal**
	Development of sustainable high energy density lithium-sulfur batteries	**K. Halankar**
	Architecture design of Two-Dimensional/Three-Dimensional MoS2-PbS Hybrid Material for High-Performance Supercapacitor Electrode Material	**N. Chaudhary**

Green Supercapacitors Based on Electrodes Fabricated by Single-step Visible Direct Laser Writing of Chitosan film	**J. Islam**
Lattice Engineering of Noble Metal-based Nanomaterials through Inserting Light Elements towards Enhanced Catalytic Applications	**P. Han**
Flexible and stretchable Li ion battery using origami scale based structure	**S. Hyun**
Electrophoretically deposited 2D V2C/Carbon fiber composite as an efficient potential anode material for flexible asymmetric supercapacitors	**A. Rafique**
Phloroglucinol as a Promising Precursor for Carbon Dots: Synthesis and Characterization for LED Applications	**C. Olla**
Raman Spectroscopy for Monitoring Residues in Copper-based Redox Flow Batteries	**S. Porcu**
Thin Films Quaternary materials for photovoltaic applications	**M. Ben Rabeh**
Nanostructured iron oxides for efficient H2 production via thermochemical water splitting	**J. Matthews**
Optimization of Solid Electrolyte Interphase in Diatom Derived Silica Anodes	**W. Hua**
Study and characterization of non-fulerene nanostructured films for application in photovoltaic devices	**M.-E. Medina**
Investigation of the charge dynamics of BiVO4 for water splitting by absorption spectroscopy techniques	**S. Li**
New film scintillator based on 8-hydroxyquinolate lithium	**I. Avetissov**
Novel BGO/PVA composite material for gamma-scintillation	**I. Avetissov**
Effect of solvents polarity on quantum yield of the fluoralkylated carbon nanodots	**A. Nazarov**
WS2 nanosheets/vertically aligned Fe2O3 nanoflakes as a 2D heterojunction for efficient photoelectrochemical water splitting.	**G.-C. Behera**
Synthesis of cadmium sulfide nanowires in an ion track template	**A. Akilbekov**
Two-Dimensional Materials for the Permselectivity in Electrochemical Devices	**R. Flack**
Novel Recycling Method of Spent Li-Ion Batteries for the Synthesis of Spinel Co3O4 Nanoparticle	**H.-S. Kim**
Environmentally sustainable direct recycling of spent lithium-ion batteries	**K. Kim**
Sodium transition metals sulfates as modish electrode materials with electrochemical properties in hybrid metal-ion batteries	**D. Marinova**
Zinc-manganese dioxide battery with immobilized pH gradient electrolyte	**A. Zukuls**
2.4 V Open-Circuit Potential Aqueous Zn-MnO2 Rechargeable Battery with pH gradient electrolyte	**R. Durena**
Fabrication of 2D MoS2 nanosheets based binder-free electrodes for electrochemical applications	**J. Mannayil**
Oxygen Redox Reaction at Elevated Temperature for Layered Na2/3Mg1/3Mn2/3O2 Oxides with three and two-layer stacking	**R. Kukeva**
Formation of metal oxide-polyaniline nanohybrids by plasma-driven electrolysis for efficient energy storage devices	**A. Radomtseu**
Synthesis and Characterization of Magnetron Sputtered SnO2 and its application as Electron Transport Layer	**Y. Zakaria**
Extensive ex-situ infrared and Raman studies of low-temperature electrochromic vanadium oxide films in different states	**A.-K. Surca**
First Principle investigation of multi-interstitial defects in germanium	**A. Abdurrazaq**
Fabrication and characterization of oxysulfide Y2Ti2O5S2 photoelectrode thin film for solar water splitting	**N. Fukatani**
Zinc Oxide/Carbon Hierarchical Nanostructures Fabricated by Liquid Mediated Laser Ablation in Applied Electric Field as Material for Electrodes of Supercapacitors	**N. Tarasenka**

	A new method to produce redox active porous carbons for electrochemical energy storage	**I. Petsagkourakis**
	Electrochemical properties of sodium iron phosphate cathodes using pyrrolidinium-based ionic liquid electrolyte	**T. Tushev**
	Boron Nitride Nanotube-ZnO QDs core-shell composites for transparent flexible piezoelectric nanogenerator	**S. Dong Ick**
	Green Synthesis of SnO2 microspheres and their excellent performance as an active anode material in low temperature lithium-ion batteries	**N. Issatayev**
	Unraveling multiple active sites and band engineering of 1T-2H phase MoSe2/MoO3 with pH universal HER catalysis	**D. Roy**
	Synergetic effect of bulk and surface modification of layered Na2/3Ni1/2Mn1/2O2 oxide for enhancing the electrochemical performance	**M. Kalapsazova**
	Enhanced Stability of Organo-Metallic Electrocatalysts By Intercalation between Clay Materials	**H.-Y. Yoo**
	Synthesis of High-Performance Aramid Polymers for Energy Applications	**W. Song**
	Towards oxygen evolution reaction catalyst activity descriptors using model hydroxide perovskites.	**K. Crossley**
	Room Temperature Argon/Hydrogen Plasma Post-treatment of AZO-Ag-AZO Transparent Conductive Multilayers	**O. Sergeev**
	Leveraging Reduced Graphene Oxide as a Charge Reservoir of Manganese Oxide to Enhance the Charge Storage Property of MnOx-Based Micro-Supercapacitors Through Interfacial Interaction	**J. Yoo**
	Effect of Li-Doping on Micro-Supercapacitor Performances of ZnO/rGO	**I.-S. Lee**
	FeOOH-Decorated Nickel Selenides on Ni Foam for Efficient Overall Water splitting	**S.-M. Kim**
	Improved Cycle Stability of Nickel-rich Single-Crystal Cathode Materials for Lithium-ion Batteries	**S. Jong-Tae**
	Facile fabrication of large-scale BiVO4 photoelectrodes for solar water splitting	**H. Hwang**
	Environmental transmission electron microscopy study of doped ZnO films	**T. Tannert**
	Influence of electrode design on the electrochemical performance of heteroatom-doped carbon anodes in sodium ion batteries	**E.-B. Yilmaz**
	Luminescent hybrid materials in SrF2-Liq, SrF2-LaF3-Liq systems obtained by co-precipitation	**I. Avetissov**
	Microstructural characterization of thin films based on HfNbTaTiZr high-entropy alloy	**P. Hruska**

E06 16:30 - 18:30 — Madrid 2 (Ground floor)

Carbon-based thin films 1

Chairman
S. Sandra Maria Fernandes Carvalho

16:30	Nano indentation mechanical testing of Boron Carbonitride	**Y. Jahn**
16:45	A Study on Ti- and Ta-based Transition Metal Carbide, Carbonitride and Nitride Superlattice Thin Films	**B. Schmid**
17:00	Low-temperature spin arrangement in magnetic MAX phase Mn2GaC thin film - NMR study.	**M. Wojcik**
17:15	Carbon superstructure formed by the preferential site penetration in Mn5Ge3C0.5 epitaxial films	**E. Jedryka**
17:30	Pt carbide formation during graphitic carbon growth studied using in situ TEM	**H. Nerl**
17:45	Effect of different thickness of copper nanolayer on nucleation of CVD diamond	**F. Shahsavari**

18:00	Synthesis and application of carbon nitride film and nanomaterials deposited on metal substrates	Z. Song
18:15	The role of C/N ratio in corrosion behavior of TiSi-based carbonitrides obtained by cathodic arc evaporation	A. Vladescu (Dragomir)

F09 16:30 - 18:30 OPS (Ground floor)

Electronic Applications 3

Chairman
S. Sharma
S. Srivasatava

16:30	Phase transition in atomically thin structures for memristive devices	P. Song
17:00	Ag-PEG nanofluid – a versatile medium with memristive properties	D. Nikitin
17:15	Immobilizing polyoxovanadates on surfaces as molecular memristors	M. Moors
17:30	Polyoxometalate memories fabricated with coplanar nanogap electrodes	D. Georgiadou
18:00	In-situ TEM Observation of Filament Formation in Twined Copper Oxide Nanowire for Resistive random-access memory	C.-H. Hung
18:15	HfO2-based memristive devices for neuromorphic networks that learn from mistakes	K. Nikiruy

G06 16:30 - 18:30 Londres 1 (Ground floor)

Session 6

Chairman
E. Ismailova
R. Hasler

16:30	Development of a novel, cost-effective paper-based SERS substrate fabricated using GLAD with improved enhancement for the detection of nosocomial infection causing bacteria	S. Senapati
16:45	Conductive, recyclable, and biocompatible vitrimer ink for skin-contact applications	M. Najafi
17:00	Fabrication Strategy Using Aerosol Jet Printer for Flexible Bioelectronic Devices	Q. Jing
17:15	Detection of Additives by Nanostructured Flexible Materials	D. Yilmaz
17:30	Impedance-based eutectogel artificial skin with wireless readout system for smart prosthetics	R. Owyeung

H06 16:30 - 18:00 Rome (Ground floor)

Multifunctional Biomaterials

16:30	Mechanical, tribological, and in vitro and in vivo studies of commercially pure Zn-Cu-Mn/Mg alloys for biodegradable application	D. Palai
16:45	Surface modification by nanosecond laser texturing of biodegradable pure Zn: surface morphology and degradation behaviour	J. Fiocchi
17:00	Effect of laser surface remelting on the microstructure, mechanical, tribological and corrosion properties of the Ti40Nb25Zr25Ta10 (with 0.5 at. % O) medium entropy alloy (MEA)	L. Mustafi
17:15	Antibacterial Zn added NiTi alloy produced by laser powder bed fusion	A. Tuissi
17:30	Silver based MOFs Synthesis for antibacterial application and nanoMOFs growth on Titanium scaffold alloy.	V. Paratore
17:45	The Influence of the Nature of Doping on the Antibacterial Activity of SrSnO3Eu Perovskite Nanoparticles	A.-L. Menezes De Oliveira

I07	16:30 - 17:30	Bruxelles (Ground floor)
	Young Investigators Forum - Grown the Biofuture	
16:30	Cells' preferable uptake of microdiamonds and the role of myosin motor proteins in the particle uptake and transport	**A. Ebrahimi**
16:45	Bio-inspired radiative cooling aerogel for sustainable cold chains in developing countries	**L. Pin-Hui**
17:00	PEG-heparin biohybrid synthetic hydrogels for tumoroid culture	**M. Castellote-Borrell**
17:15	The compression strength of carbon fibre composite increases with a nanostructured interface inspired by nacre	**S. Wang**
K08	16:30 - 18:15	Berlin (Ground floor)
	Materials, Structure, and Additives 2	**Chairman** J. Labram C. Nielsen
16:30	New approaches for high-performance organic transistors	**K. Leo**
17:00	Controlling polymorphism in zone-cast PDIF-CN2 thin films	**N. Herrmann**
17:15	Conformational Change of Alkyl Chains at Phase Transitions of Ph-BTBT-C10	**N. Shioya**
17:30	Enhancing the thermal conductivity of amorphous polyimide by molecular-scale manipulation	**T.-Q. Quach**
17:45	N-doping of electron transport layers in organic light-emitting diodes studied by combining TOF-SIMS and XPS	**C. Guyot**
18:00	Assessing the crystallization of OLED molecules using mass spectrometry	**P. Hirchenhahn**
L09	16:30 - 18:30	Etoile A (1st floor)
	Laser Surface Processing - I	**Chairman** P. Simon
16:30	Wavelength dependencies in ultrashort laser processing of dielectrics and semiconductors	**M. Garcia-Lechuga**
17:00	Wide band gap materials texturing using femtosecond laser	**D.-A.-K. Karuppiah**
17:15	Femtosecond laser processing of niobium oxide layers with improved electro-optical properties for environmental applications	**B. Sotillo**
17:30	Generation of high aspect ratio micro-pillars by ultrafast first-order Bessel beam	**V.-V. Belloni**
17:45	X-Ray hazard upon ultrashort laser pulse processing of biological materials	**S. Kraft**
18:00	Femtosecond Laser Induced Oxidation Mechanism on Tungsten Surfaces	**F. Garrelie**
18:15	Light-induced Reshaping of Complex 3D Mesostuctures on Azopolymer surfaces	**I.-K. Januariyasa**
M_P01	16:30 - 18:30	Etoile (1st floor)
	Poster session 1	
	Defects visualization in Gallium Nitride by Scanning Transmission Electron Microscopy	**C. Bongiorno**

Investigation of carrier Lifetime variation with nanopillar spacing in Si-nanopillar/SiGe composite materials for MOSFET application by laser heterodyne photothermal displacement measurements	**T. Harada**
Deep Level Transient Spectroscopy-Secondary Ion Mass Spectrometry combined study of H+ irradiation effects on 4H-SiC	**M.-L. Scalisi**
Super-Resolution Fluorescence Imaging for Semiconductor Nanoscale Metrology and Inspection	**S. Mun**
Band Bending and Surface Composition Analysis by Angle Resolved XPS and Their Impact on Minority Carrier Lifetime After Germanium Wet Etching	**A. Chapotot**
Manipulating spin texture in a hybrid nanostructure comprised of topological insulator and 2D semiconductor with varied band alignment types	**C.-M. Cheng**
Thermal transport on few-layers Fe3GeTe2	**M.-S. Claro**
Stress/strain-induced Raman frequency shift in Gallium Nitride (GaN) Packaged Devices	**Z. Dahrouch**
Features of Ultrathin SiO2 Layers on Si and Their Physical Manifestations	**K. Konin**
4H-SiC RIE etch: Design of Experiments optimization for striations recovery by using ImageJ software	**M. Barcellona**
Sub-Picosecond Carrier Dynamics Explored using Automated High-Throughput Studies of Doping Inhomogeneity within a Bayesian Framework	**R. Al-Abri**
Radiation-enhanced annealing of vacancy-oxygen defects in Cz n-Si: features of the experiment, factor of the radiation ionization, and a possible annealing mechanism	**M. Kras'Ko**
New states of ??2 defect in boron-doped Si	**L. Khirunenko**
The Diffusion Behavior and Electrical Characteristics of Ru Interconnect with Polycrystalline MoS2 Diffusion Barrier	**D.-J. Jhan**
Density functional theory study of multi-interstitial defects complexes in germanium	**A. Abdurrazaq**
Gibbs free energy for MoO2Cl2 reaction on SiO2 surface by density function theory	**H.-K. Kim**
Two-dimensional carrier gas at a polar interface without surface band gap states: A first principles perspective	**F. Brivio**
Two-dimensional van der Waals heterostructures for energy-efficient tunneling transistors	**K. Iordanidou**
General Purpose Machine Learning Interatomic Potential for Silicon-Germanium	**D. Milardovich**
Ab-initio study of the effects of Pb intercalation in Graphene/SiC heterostructures	**S. Brozzesi**
Tuning the Schottky Contacts of graphene/phosphorene heterostructure: a DFT study	**A. Muroni**
TCAD modelling of a-Si:H devices for particle detection applications	**D. Passeri**
Post growth thermal treatments of Si1-x-yGexSny alloys	**O. Steuer**
New method for the deposition of thin films on the inner walls of a deep cavity: application to germanium doping	**C. Carraro**
Strained sintered mesoporous silicon epifoils for IIIV/Si integration and substrate reuse	**C. Sanchez-Perez**
Properties and perspectives of supersaturated (Si)Ge nanosheets grown via molecular beam epitaxy at ultra-low temperatures	**J. Aberl**
Impact of annealing schemes on the formation and agglomeration of thin Ni(Pt)Si film for advanced 3D imagers technologies	**F. Morris Anak**
In-situ transmission electron microscope observation of nickel metal-induced crystallization on a-Si	**C.-C. Hsiang**
Study of interfaces in nickel-based silicides through a multi-level modeling strategy	**C. Jara**

	Influence of the type of interlayer on current transport mechanisms and defects in n-ZnO/ZnCdO/p-Si and n-ZnCdO/ZnO/p-Si heterojunctions grown by molecular beam epitaxy	**R. Szymon**
	Phase transition control of crystalline Ga2O3 grown on sapphire (0001) by MOCVD	**H.-Y. Kim**
	Deposition of Ga2O3 and ZnGa2O4 thin films by liquid metal target sputtering	**M. Zubkins**
	Wafer-Scale Production of 2D SnSe: Synthetic Platform for Van der Waals Semiconductor-Based Broadband Photodetectors	**H.-K. Jo**
	Formation of High-k Al-doped ZrO2 Dielectric Using a New Cocktail Precursor	**H. Kim**
	Effect of dopant distribution on the remanent polarization of La-doped HfO2 thin films	**J.-Y. Jeong**
	Ferroelectricity of La doped Hf0.5Zr0.5O2 Films Deposited by Atomic Layer Deposition using Supercycles	**Y. Han**
	Oxygen Vacancy Control-mediated Ferroelectricity Enhancement in Hafnium Zirconium Oxide Via DUV Photoactivation	**S. Lee**
	Chemical design of magnetoelectric GaFeO3 epitaxial thin films	**M. Nasui**
	Engineering Transition Metal Oxide and Transition Metal Dichalcogenide Memristive Devices for Neuromorphic Systems	**A. Linkenheil**
	Mist-CVD Deposited c-Axis Aligned Crystalline ITZO Thin Film and Its Application to Thin-Film Transistor	**H.-Y. Liu**
	A comprehensive study of the influence of various deposition parameters on the physical properties of ZnO:Al thin transparent conducting films	**A.-S. Racz**
	High mobility Oxide Thin Film Transistor with amorphous In-Ga-Sn-O fabricated by RF-magnetron sputtering	**J. Hyunil**
	Growth Control, Optical and Structural Characterization of Layered Gallium Sulfide Films Prepared by Chemical Vapor Deposition	**S. Dicorato**
	Growth of MoSe2-MoS2 core-shell in-plane heterostructure TMDs using Chemical Vapor Deposition	**I. Lim**
	Photothermal reaction based Low Temperature Synthesis of Vertically Integrated Two-dimensional Heterostructure	**M.-J. Jeon**
	Phase Change Sb2S3 films grown by Chemical Vapor Deposition	**M.-M. Giangregorio**
	Manifestation of Eu dopants in Raman spectra and doping concentration profiles of {ZnCdO/ZnO} superlattices	**I. Perlikowski**
	Effect of gallium doping on structural and transport properties of the Topological Insulator Bi2Se3 by molecular beam epitaxy	**A. Pérez Rodríguez**
	Extraction of single-walled carbon nanotubes of defined chirality with conjugated polymers in organic solvents	**D. Janas**

O3 16:30 - 18:30 Churchill (1st floor)

Perovskite heterostructures

Chairman
G. Grancini
A. Petrozza

16:30	2D/3D bilayers for stable solar cells	**J. Even**
17:00	Manipulation of 2D Layered Perovskites Optoelectronic Properties by Crystalline Orientation Control	**A. Zanetta**
17:30	Perovskite Heterostructures Enabled by Graphene Ion Blocking Layers	**M. Hautzinger**
17:45	A comparative study on bulk and surface passivants in high efficiency p-i-n perovskite solar cells	**R. Montecucco**
18:00	Dimensionality control and growth of bottom- up synthesized lead- free hybrid tin (II) halide perovskites micro- and nanostructures	**R.-I. Sanchez**
18:15	Single-nanowire CsPbBr3 perovskite nanodevices and green-blue nanoheterostructures via anion exchange	**N. Lamers**

P07 16:30 - 18:30 — Londres 2 (Ground floor)

PV materials

Chairman
G. Giorgi

16:30	Computational insights into emerging chalcogenide perovskite photovoltaics	**S. Wang**
16:45	Computational screening for n-type doped ultrawide band gap oxides for power electronics	**E. Garrity**
17:15	Designing novel semiconductor-ferroelectric photovoltaic devices using a new scheme to model semiconductor interfaces from first principles	**J. Ontaneda**
17:30	First-principles Calculations combined with Machine Learning Design Approach toward Electrochemical Energy Storage and Conversion Materials	**B. Han**

Q04 16:30 - 18:30 — Amsterdam (Ground floor)

Interfaces, Heterostructures & low dimensional materials

Chairman
J. Houska
J. Lancok

16:30	PLD-grown epitaxial Fe3O4(111)/ZnO(0001) films with engineered interface	**I. Madaci**
16:45	Structure and properties of low dimensional epitaxial oxides; interfaces and superlattices	**G. Koster**
17:00	Controlling the Schottky Barrier height via polar discontinuity at (La,Sr)MnO3 / SrTiO3 interface	**J. Wolfman**
17:15	Interface control by chemical and dimensional matching in an oxide interface	**M. O'sullivan**
17:30	Choice of substrate for graphene growth by molecular dynamics ~theoretical and experimental approaches	**S. Kaneko**
17:45	Reactive HiPIMS of hydrogenated amorphous carbon using toluene precursor	**M. Ghosh**

T04 16:30 - 18:30 — Varsovie (Ground floor)

Nanostuctured material investigation with TEM and X-ray-based methodology

Chairman
J. Arbiol
M. Hugenschmidt

16:30	In-situ heating (scanning) transmission electron microscopy for exploring the thermal stability of a nanoscale complex solid solution thin film	**J. Arbiol**
17:00	Direct insight into the activation mechanism of Fe and Sb catalysts by operando TEM and XAS techniques	**A.-S. Traore**
17:15	Shedding lights on the birth of hybrid perovskites: a correlative study by In-Situ TEM and synchrotron based SAXS/WAXS	**C. Sidhoum**
17:30	In-situ study of Materials Performance and Structural Properties with high spatial resolution	**A. Davydok**
17:45	Time-resolved cathodoluminescence spectroscopy of silicon nanoparticles	**S. Fiedler**
18:00	In-situ structural phase transition visualization and domain imaging in bulk NiO through dark field hard X-ray microscopy	**R. Rodriguez-Lamas**
18:15	Synthesis of functional metal in metal colloids for applications in catalysis and energy storage	**T. Daeneke**

J08	16:45 - 18:30	Luxembourg (Ground floor)
	Design of theranostic nanoplatforms-2	**Chairman** P. Fender E. Wagner
16:30	Near Infrared Emitting Polymer Dots for Bioimaging	**Z. Rosenzweig**
17:00	mRNA based cytokine delivery	**H. Sun**
17:15	Nanocarriers for Tumor Specific Drug Delivery Application	**S. Ilyas**
17:30	UCNP Based Targeted Imaging of Cancer	**M.-C. Cinar**
17:45	Radical release induced by Magnetothermia	**G. Félix**
18:00	Surface modification of mesoporous silica nanoparticles to enhance colloidal stability for theranostic purposes	**E. Hernando Abad**
18:15	Theranostic NIR/MR Multimodal Amyloid-ß Oligomer-Targeted Upconversion Gadolinium-Based Nanoprobe for Alzheimer's Disease	**M.-S. Wong**

I_P	17:30 - 18:00	Etoile (1st floor)
	Poster session	
	Sustainable and transparent gas barrier films for food packaging	**S. Cho**
	Leaching mechanisms of PVP coated silver nanoparticles from anti-microbial bioplastics	**D. Hermans**
	Synthesis of chitosan-clay composite for potential packaging application	**I.-A. Razonado**
	Nano-zirconia dental implants via additive manufacturing	**P. Gkomoza**
	Numerical and kinetic study of isomerization reaction of oriented polyacetylene induced by laser impact, shown by multichannel Raman	**A. Lakhzoum**
	kinetic study and synthesis of new macroinitiator by ozonization of poly (vinylidene fluoride)	**I.-R. Kribaa**
	Thermally Stable and Reusable Ceramic Encapsulated CalB Enzyme Particles for Rapid Hydrolysis and Esterification	**J.-H. Chang**
	Magnetic Nanoparticles Immobilized CalB Enzyme Particles for reusable and rapid esterolysis of p-nitrophenyl alkanoates	**J.-H. Chang**

PLEN 02	08:45 - 09:45	Schweitzer (Ground floor)
	Plenary session 2	
08:45	Graphene Nanoribbons as Electronic Multitalents	K. Muellen
CB5	10:00 - 10:30	Exhibition area (Ground floor)
	Coffee Break	
A09	10:00 - 12:30	Marie Curie B (1st floor)
	SOFC/SOEC devices	Chairman M. Laguna
10:00	Recent advances in 3D printing of Solid Oxide Cells and Stacks	A. Tarancon
10:30	Boosting the performance of solid oxide cells by infiltrated electrodes	A. Orera
10:45	Ni-Fe bimetallic alloying and Sm-Zr co-doping of CeO2 for Intermediate Temperature Solid Oxide Electrolyzers and Fuel Cells	R. Suarez Anzorena
11:00	In creatio analysis: electrode optimisation by in situ electrochemical studies during the growth of nano structures	A. Stangl
11:15	Interfaces, dopant segregation and oxygen vacancies in Gd-doped CeO2/CoO and CeO2/NiO ceramic eutectics	A. Larrea
11:30	All solid state electro-chemo -electrical ceria based device	D. Daniel Freidzon
11:45	Dynamics of the topotactic phase transition in complex oxide La0.6Sr0.4CoO3-d thin films	S. He
12:00	Development of Oxygen Electrode Materials for Reversible Solid Oxide Cells Based on Proton Conductors	M. Liu
B1_06	10:00 - 12:00	Schweitzer (Ground floor)
	Defects in Perovskites 1	Chairman W. Heiss V. Rehm
10:00	The role of Frenkel pair defects and atomic layer deposited alumina on the perovskite solar cells' stability	M. Kot
10:30	Semi-Transparent FAPb(Br1-xClx)3 Perovskite for BIPV Applications: a systematic study	D. Ory
10:45	Fabrication and characterization of large-scale perovskite solar devices	C. Aider
11:00	carrier dynamics and lasing activities in halide perovskites under continuous & pulsed wave stimulation.	N. Lobo
11:15	Investigating the Application of Organometallic Complexes in Tin Halide Perovskite Solar Cells	F. Vanin
11:30	Defect metastability in metal halide perovskites	I. Scheblykin
11:45	A quantitative model of ion transport in methylammonium lead iodide	R. De Souza
B2_03	10:00 - 12:00	Dresde (1st floor)

	Atomic scale modeling of ferro-optical properties	**Chairman** S. Spreafico F. Wendler
10:00	Second-principles modelling of ferroelectric oxides and related compounds with MULTIBINIT	**P. Ghosez**
10:30	Microscopic origins of enhancement of dielectric permittivity in substituted and co-doped transition metal oxides	**A. Kutana**
10:45	First principal calculation of structural, electronic and optical properties of ZnX (X = Te, S and O): Application to Cu(In,Ga)Se2 solar cells	**I. Bouchama**
11:00	Investigation of Photocatalytic Properties of Undoped and Doped BaTiO3 Compounds	**W. Isoe**
11:30	First principles phase diagram calculation and theoretical investigation of electronic structure properties of KCuTe1-mSem for photoelectrode applications	**A. Kar**
11:45	Defect control and ab initio thermodynamics for synthesising chalcogenide perovskite	**Z. Li**

C08	**10:00 - 12:00**	**Marie Curie A (1st floor)**
	Nanocomposites for Environment 1	**Chairman** G. Filippone
10:00	Synthesis of various metal oxide/hydroxide composites immobilized on magnetic particles as reusable adsorbents for phosphate from wastewater and assessing their ecotoxicity to marine bioluminescent bacteria Vibrio fischeri	**A. Drenkova-Tuhtan**
10:30	Novel functionalized porous carbons as sensor-absorbents for water purification applications	**M. Sandberg**
10:45	Microwave-assisted in-situ synthesis of TiO2/graphene oxide nanoparticles with homo-/heterojunction for highly efficient visible-light photocatalysis	**K. Kato**
11:00	Redox-active Porous Polymers: Synthesis and Applications	**S. Al Siyabi**
11:15	Design of magnetic graphene/iron oxide nanocomposites for the adsorption of relevant persistent organic pollutants	**J. Vaz-Ramos**
11:30	Carbon-Polymer Dots as Optical Sensors for the Drone Mapping of Thiols in Industrial Plants	**P. Corsaro**
11:45	Developing nano plastics models to study their fate in the environment.	**M. Manju Sudheer**

D1_09	**10:00 - 12:00**	**Cassin (Ground floor)**
	Electrochemical	**Chairman** S. Scalese
10:00	The Mg electrode cycling mechanism in simple salt glyme electrolytes	**L. Johnson**
10:30	Electrodes Based on Selenium Anchored on NiCoP and Carbon Nanofibers for Flexible Energy Storage Devices	**M. Afshan**
10:45	Sputtered ternary transition metal oxide-based electrodes for micro-supercapacitors applications: approach, challenges and prospects	**B. Jolayemi**
11:00	The Exploration of Electrochemical Sodium Storage Performance using TiO2 Inverse Opal scaffolds with Controlled Pore Sizes	**Y. Zhang**
11:15	Semitransparent aligned and spaced titania nanotubes materials formed out of TiAg alloys with unique electrochemical activities.	**D.-S. Kouao**
11:30	Exploring the recycling chemistry of layered lithiated transition metal oxide positive electrodes with molten salts	**D. Dambournet**
11:45	Fabrication of Novel 3D Structured Electrode for Electrocatalytic Hydrogen Generation Applications using Additive Manufacturing	**N. Meethale Palakkool**

D2_09	10:00 - 12:00	Boston (1st floor)
	Photocatalysis and photocatalytic materials 4	**Chairman** T. Berestok
10:00	Design of multi-functional photocatalysts on the basis of titania and heteropolyacids for methane activation and conversion to valuable products at room temperature	**A. Khodakov**
10:30	Enhanced electrochemical performance of treated graphite felt for AORFB	**P. Bassil**
10:45	Covalente Organic Frameworks Based on BODIPY and BOPHY Dyes for Artificial Photosynthesis	**T. Naranjo**
11:00	Single atom doped 2D nanosheets of layered niobate for photocatalytic CO2 reduction	**B. Yilmaz**
11:15	CuOx/N-GDY as electrocatalysts for efficient ammonia production via nitrate reduction	**J. Li**
11:30	Combinatorial deposition of mono- and co-doped sodium tantalate: material characterization and photoelectrochemical properties	**C. Garlisi**
11:45	Evaluation of the catalytic potential of melt-spun and chemical-treated aluminium-based intermetallic alloys	**A. Zieba**

E07	10:00 - 12:00	Madrid 2 (Ground floor)
	Carbon-based thin films 2	**Chairman** E. Sardella S. Tamulevicius
10:00	Carbon- & Nitrogen-containing Nanostructured Thin Films for Health and Medical Devices	**D. Mantovani**
10:30	Diamond like carbon film wettability control: superhydrophilic and highly hydrophobic surfaces	**Š. Meškinis**
10:45	An Insight Into Improved Mechanical and Thermal Stability of a-C:H:Si:O coatings	**A. Cavaleiro**
11:00	Influence of molybdenum concentration on the microstructure and tribological properties of diamond like carbon thin films	**H. Zhairabany**
11:15	Industrial Deposition of Hard and Moderately Ductile Coatings: Properties and Process Modelling	**P. Vašina**
11:30	Experimental and numerical investigation of a low-temperature/large-area microwave process based on distributed antenna array plasma used for nanocrystalline diamond film synthesis	**F. Bénédic**
11:45	Molecular dynamics simulations of hydrocarbon film deposition in an Ar/CH4 low-pressure plasma	**G.-C. Otakandza Kandjani**

F10	10:00 - 12:00	OPS (Ground floor)
	Energy/Sensors 1	**Chairman** V. Kumar Y.-K. Mishra
10:00	Rational Design of a Sulfur Cathode for a Highly Stable Room-temperature Sodium-Sulfur Battery	**V. Kumar**
10:30	Advanced Characterization of SnO2 and TiO2 Nanomaterials for Energy Applications	**L. Kavan**
10:45	Low cost, high yield zinc oxide based nanostars for alkaline overall water splitting	**G.-M. Di Mari**

11:00	Cost-effective spray coating of graphene ink for smart antifog substrates in sustainable greenhouse applications	A.-A. Leonardi
11:15	One pot synthesis of Cu@M (M=Ni, Sn) bimetallic core-shell nanowires for a new generation of transparent electrodes	A. Krizan
11:30	A new platform based on MoTe2(1-x)Se2x alloy and functionalized with EGaIn nanoparticles for H gas sensing	N. Gordillo
11:45	Publishing for Impact: A guide to peer review and tips & tricks to make your paper stand out	J. Allen

H07 10:00 - 12:00 Rome (Ground floor)

Biointerfaces Engineering

10:30	Surface Functionalization of Poly(D, L-lactide-co-trimethylene carbonate) Nanofibers Incorporated with Hydroxyapatite Nanoparticles for Osteogenesis and Vascularization in Bone Tissue Engineering	H. Li
10:45	Fabrication of chitosan/gelatin hybrid aerogel for use as a drug carrier.	M. Charoenchaitrakool
11:00	Spherical garnet-based persistent nanophosphors suitable for long-lasting optical imaging	E. Arroyo
11:15	Multifunctional Nanocomposite Hydrogels for Bioanalytical and Antibacterial Applications	A. Sachdev
11:30	Three-dimensional extrusion printing of gelatin methacryloyl (GelMA)-based biomaterial ink with high shape integrity	S. Das

J09 10:00 - 12:00 Luxembourg (Ground floor)

Elaboration strategies of nanoparticles for nanomedicine

Chairman
J.-S. Conteh
R. Tietze

10:00	Hybrid mesoporous silica nanoplatforms for magnetic hyperthermia, NIR photothermia and drug delivery	D. Mertz
10:30	A promising functional Si nanoparticles elaborated by laser method in liquid medium for non-invasive TPE-PDT biomedical applications	A. Al-Kattan
10:45	Controlling the silica shell growth of core-shell iron oxide@ stellate mesoporous silica nanoparticles: effects on MRI, magnetic hyperthermia and NIR-photothermia properties	J. Bizeau
11:00	Two-cycle Stöber protocol for the tailored synthesis and biotinylation of dual-color Silica Nanosystems for Biomedical Approaches	M.-A. Ramirez-Morales
11:15	Scale-up approach for the preparation of ferrite nanocubes for magnetic hyperthermia application	H. Gavilán
11:45	Facile and scalable synthesis of ultrasmall and fluorescent copper clusters for biomedical application	A. Di Girolamo
12:00	Improved 800nm Emission of Upconversion Nanoparticles via Ca-doped NaYF4:Nd,Yb for bio sensing application	M. Shahsavar Gocmen

K09 10:00 - 12:00 Berlin (Ground floor)

Materials, Structure, and Additives 3

Chairman
J. Labram
B. Lüssem

10:30	High performing conjugated polymers of low-synthetic complexity	M. Heeney
11:00	Halogen bonding to boost the charge carrier mobility in NDI-based organic transistors	T.-P. Ruoko

11:15	Optimizing chain alignment and preserving the pristine structure of single-ether based PBTTT helps improve thermoelectric properties in sequentially doped thin films	**M. Brinkmann**
11:30	Combining doping by anion exchange and orientation by high temperature rubbing affords stable and efficient thermoelectric polymer films	**S. Guchait**

L10 10:00 - 12:00 — Etoile A (1st floor)

Laser Surface Texturing Applications

Chairman
R. Stoian

10:00	Laser texturing of metallic surfaces for water harvesting applications	**P. Pou-Álvarez**
10:15	Study of CO2 laser-induced soda-lime glass fracture mechanisms for decorative purposes	**A. Capelle**
10:30	Corrosion, Tribocorrosion and Bioactivity of Ultrafast Laser Structured Titanium alloy (Ti6Al4V)	**D. Madapana**
10:45	Femtosecond laser micromachining of metal surfaces to change the overall adhesion of resins on metal	**S. Rathnayaka**
11:00	Ultrafast laser paint removal of GFRP composites used in shipbuilding	**A.-J. López**
11:15	Ultrashort laser-treated PVD ZrCu-based thin film metallic glasses, or how to switch the biological behaviour of surfaces from biocide to biocompatible?	**P. Steyer**
11:30	Durability of stainless steel surfaces against chemical and mechanical stress modified by laser and chemical techniques	**K. Zimmer**
11:45	Ultra-fast Laser texturing : A New Approach for Deterministic Graphene Folds	**A.-F. Juarez Saborio**

M09 10:00 - 12:00 — Schuman (1st floor)

Metrology and Characterization II

Session Chair
A. Vantomme

10:00	Combining cutting-edge metrology techniques and TCAD to support device integration towards the 2nm Technological Node and Beyond	**P. Eyben**
10:30	Scanning Spreading Resistance microscopy on dopant profiles in elemental and compound semiconductors	**T. Böckendorf**
10:45	Local Strain and Alloy Composition in Ge1-xSnx Microdisks: A Study by X-ray Nanoprobe	**M.-H. Zoellner**
11:00	Capacitance-Voltage Measurements on SiC-Based MOS Structures: What Information Can We Get from Them?	**A. Burenkov**
11:15	On the bulk photovoltaic effect in non-uniformly strained Germanium	**C.-L. Manganelli**
11:30	Deep multi-energy proton implantation in silicon: a SIMS study	**O. Samperi**
11:45	Photoemission Spectroscopy on photoresist materials: A useful tool to use with caution	**F. Sajjadian**

N01 10:00 - 12:00 — Londres 1 (Ground floor)

Light emission & Topology

10:00	Topo lasers and the Berkeley Surface-emitting laser (BerkSEL). How we overcame a six-decade challenge in wave-physics	**B. Kanté**
10:30	GaN-on-Insulator platform for nonlinear processes and laser integration	**N. Bhat**
10:45	Solution-processable CP-TADF polymers for next-generation OLED display applications	**Z. Xu**

11:00	Electroluminescence from Single-Walled Carbon Nanotubes with Quantum Defects	**A. Sinigalia**
11:15	Thermally activated doping mechanism enabled high-performance metal halide perovskite light emitting diodes	**J. Qin**
11:30	Topological Metaphotonics	**P. Genevet**

O4 10:00 - 12:00 — Churchill (1st floor)

Advanced characterization

Chairman
G. Grancini
A. Petrozza

10:00	Study of the formation mechanism of fluorophenylethylammonium - based 2D / triple cation - based 3D perovskite heterostructures for stable solar cells	**E. Deleporte**
10:30	Thermal decomposition kinetics of lead halide perovskite thin films	**P. Pistor**
10:45	In-situ characterization monitoring of physical mechanisms acting during perovskite solar cell degradation and its stabilization when using molecular additive.	**F. Baumann**
11:15	Advanced Perovskite Interface Characterization by Admittance Spectroscopy on MOS Structures	**J. Parion**
11:30	Surface or Bulk Defects - Halide Perovskites Probed by Photothermal Deflection Spectroscopy	**M. Ledinsky**
11:45	When photoluminescence, electroluminescence, and open-circuit voltage diverge – light soaking and halide segregation in perovskite solar cells	**F. Ebadi**

P08 10:00 - 12:00 — Londres 2 (Ground floor)

Biomaterials Design

Chairman
E. Ertekin

10:00	Nucleation of dislocation loop in TWIP steel: Assessing the meta-atom framework	**S. Kumari**
10:15	First principles electron transport in magnetoelectric SrRuO3/BaTiO3/SrTiO3 interfaces	**N. Plugaru**
10:30	First-principles modeling of glasses as ensembles of crystalline microstates	**L. Wolf**
10:45	Symmetry-Induced Singlet-Triplet Inversions Beyond Azaphenalenes: New Molecular Emitters from Known Chemistry	**J.-T. Blaskovits**
11:00	Prediction of Biomaterials Properties via Machine Learning	**V. Gribova**
11:15	Knowledge acquisition of superconductivity information in literature and applications to materials science	**R. Asahi**
11:30	Modulating the Electromechanical Response of Bio-Inspired Amino Acid-Based Architectures through Supramolecular Co-Assembly	**D. Thompson**
11:45	Change point detection and econometrics in nanoscience data analysis	**J. Hamill**

Q05 10:00 - 12:00 — Amsterdam (Ground floor)

Functional oxides & TCO's II

Chairman
E. Million
H. Von Wenckestern

10:00	Transparent oxide films with permittivity enhanced via Ga-Cu co-doping	**F.-C.-C. Ling**

10:15	Proximity induced ferromagnetism in SrIrO3	A.-K. Jaiswal
10:30	The growth and properties of transparent conducting (La,Sr)VO3 thin films of the perovskite type.	O. El Khaloufi
10:45	Strain-Driven Metal-to-Insulator Transition and Charge Ordering in LiV2O4	Y.-M. Wu
11:00	Design for large optical transparency window of Correlated Transparent Conductors	A. Cheikh
11:15	Vanadate TCO on glass substrate using CNO nanosheets as a template: effect of thickness on the film properties	M. El Rami
11:30	Transparent high conductive TiON nanofilms obtained by nucleation control for sustainable optolectronics	E.-P. Esther
11:45	Room temperature epitaxial growth of Zn-doped iron oxide films on c-, a- and r-cut sapphire substrates	V. Demange

R06 10:00 - 12:00 — Madrid 1 (Ground floor)

Quantum devices II

Chairman
M. Mather

10:00	The tin vacancy center in diamond: control of charge states, spins and photons	C. Becher
10:30	Widefield detection of NV center Rabi oscillations	S. Magaletti
10:45	Excited singlet and triplet states of the negatively charged NV-center in diamond calculated using a variation density functional approach	H. Jonsson
11:00	Detecting spatial magnetic field gradients using a nanodiamond thin-film sensor on an optical fiber facet	M. Jani
11:15	Enhanced SiV magnetometry in diamond using electromagnetically induced transparency	A. Jimenez
11:30	Diamond-Based Magnetic Widefield-Microscopy of Domain Patterns in Transformer Steel	S. Philipp
11:45	Revealing impurity evolution in silicon-doped diamond film via thermal oxidation	B. Yang

T05 10:00 - 12:00 — Varsovie (Ground floor)

Beam sensitive and 2D materials

Chairman
S. Bals
M.-C. Spadaro

10:00	Advances in In-Situ Electron Microscopy: From Growth of 2D Materials to the Thermoresponsive Behaviour of PNIPAM Colloids	M. Van Huis
10:30	Fully optical in-operando investigation of electrical switches in ambient conditions	J. Symonowicz
10:45	An insight into the mechanism of dealumination in zeolite: an in situ TEM study on the route of Al	V. Girelli Consolaro
11:00	Direct insight into phase transition of boehmite coupling electron tomography with in-situ gas phase Transmission Electron Microscopy	N. Sudheer
11:15	Real-time observation of molecular dynamics and chemical reactions in STEM	R. Zamani
11:30	Doping-induced assembly of conjugated polymer interpreted by in-situ TEM	E. Lee
11:45	Impact of electron beam irradiation on Carbo n Black Oxidation	D. Wahlqvist

I08	10:30 - 12:00		Bruxelles (Ground floor)
	Living Systems/Materials and Biomimetics Multifunctionality from Nature		Chairman O. Chukova O. Felix B. Zhu
	10:30	Biomimetic photoswitchable dry adhesives	A. Staubitz
	11:00	Functionnalized plant virus-based nanomaterials: From synthesis to applications	N.-T. Ha Duong
	11:15	Exploring opportunities for biosynthesized nanocellulose in ophthalmology	A. Roig
	11:30	Cellulose/Aramid Nanocomposite for flame retardant	P. Hyun Been
	11:45	Cationic Surface Modification of Tunicate-based Cellulose Nanofibers for the Development of Environmentally Friendly Materials and Its Application	J.-H. Lee
LU3	12:00 - 13:30		Hall 5
	Lunch		
I09	13:00 - 16:00		Bruxelles (Ground floor)
	Living Systems/Materials and Biomimetics Multifunctionality from Nature		
	13:00	Hierarchical bio-inspired nanocomposite materials with anisotropic properties	O. Felix
	13:30	Biobased vitrimers - novel dynamic materials from vegetable oils and their applications	A. Zych
	13:45	Nanolipogels for drug delivery applications	R. Chu
	14:00	Green synthesis and characterzation of luminescent ZnO@polymer core-shell nanoparticles with natural biopolymer coatings	O. Chukova
	14:30	Scission of a specific covalent bond by mechanical force transferred through DNA	G. Kim
	14:45	A Simple(r) Approach to Making DNA	K. Callaghan
	15:00	Design and Synthesis of Programmable DNA Hydrogels Based on Rolling Circle Amplification Products	W. Hanif
	15:15	Antifreeze protein-DNA hybrid nanostructures for inhibition of ice recrystallization	M. Kang
	15:30	Introduction of a lipophilic nucleobase to DNA by enzymatic reaction	B.-F. Soeriawidjaja
	15:45	Bioinspired Full-Spectrum Photonic Pigments	A. Dodero
JOINT LQ 01	13:30 - 15:00		Etoile A (1st floor)
	PLD of Thin Films I (JOINT SESSION L & Q) Symposia		Chairman E. Haro-Poniatowski
		High quality MnZn soft ferrite films grown by pulsed laser deposition for applications in high frequency planar transformers and inductors	L.-G. Petrescu
	13:30	A brief historical overview of PLD for complex oxides	D.-H.-A. Blank
	14:00	Low-Dimensional Eu2+ Based Emitters on Si by means of Nano- and Femtosecond Laser Processing	A. Mariscal-Jiménez

14:15	PLD-based pyramidal-shaped ceria biointerfaces	**A. Bonciu**

A10 13:30 - 16:00 — Marie Curie B (1st floor)

	Surface catalysis	**Chairman** G. Harrington
13:30	Exsolution: Rethinking the Role of Nanoparticles in Materials	**D. Neagu**
14:00	Electronic and ionic effects of acidic adsorbates on SOFC cathode surfaces	**M. Siebenhofer**
14:15	Measurements of oxygen surface exchange kinetics on porous mixed conducting oxides, and strategies to improve ceramic processing for surface reaction studies	**C. Nicollet**
14:30	Exsolved Palladium Doped Double Perovskite as a Potential SOFC Anode Material	**S. Sengodan**
14:45	Production and Characterization of Tubular Solid Oxide Cells with infiltrated nanocatalyst precursors	**M.-A. Morales-Zapata**
15:00	Air Electrode Stability for Reversible Solid Oxide Cells	**J. Zhu**
15:30	Oxygen mass transport properties of bulk and grain boundaries in Mn-deficient La0.8Sr0.2MnO3±d thin films	**F. Chiabrera**
15:45	Study of oxygen ion conductivity in high-entropy oxides	**M.-V. Kante**

B1_07 13:30 - 16:00 — Schweitzer (Ground floor)

	Defects in Perovskites 2	**Chairman** W. Heiss V. Rehm
13:30	Defect engineering in Mixed Halide Perovskites with Ion Irradiation	**O. Plantevin**
14:00	Unrevealing Defects During Lead-Halide Perovskite Film Formation	**N. Mrkyvkova**
14:15	Surface Treatment and Control of Perovskite Film Growth to Achieve High Efficiency Solar Cells.	**T. Pauporté**
14:30	Temperature-Dependent Ionic Conductivity and Properties of Iodine-Related Defects in Metal Halide Perovskites	**S. Tammireddy**
14:45	Surface passivation to control charge carrier injection in electroluminescent lead-halide perovskite nanocrystals	**R. Jayabalan**
15:00	Carbazole Based Self-Assembled Monolayer as Hole Transport Layer for Efficient and stable Pb/Sn perovskite Solar Cells	**M.-A. Loi**
15:30	Removal of surface trps leads to enhancement of exciton-to-dopant energy transfer in Mn:CsPbCl3 nanocrystals	**I. López-Fernández**
15:45	Probing perovskite/C60 interface modifications by near-UV photoemission spectroscopy: defect states and band line-up	**D. Menzel**

B2_04 13:30 - 16:00 — Dresde (1st floor)

	Simulation and Modeling of Energy Conversion Systems: From Materials to Devices	**Chairman** A. Hegendoerfer Y. Ryota
13:30	Design and develop a commercializable piezoelectric energy harvesting system	**Y. Bai**
14:00	Optimization of a vibrating MEMS electromagnetic energy harvester : from simulations to demonstrator	**L.-M. Lacroix**
14:15	Artificial Intelligence Enabled Self-Powered Sensors for Next-Generation Electronic Devices	**A. Babu**

14:30	An implicit finite element method-electronic circuit simulator coupling for accurate simulations of piezoelectric energy harvesting systems	A. Hegendörfer
14:45	The effect of contact motion components on the optimization of surface texture of triboelectric materials: A theoretical study	O. Verners
15:00	Microscopically motivated continuum modeling of domain switching effects in ferroelectrics	F. Sutter
15:30	Combining image information with integrated device quantities of perovskite solar cells for improved modelling and material parameter estimation	E. Knapp
15:45	Numerical analysis of new generation of smart laminated panels embedded with multiple piezoelectric patches utilizing ambient vibration-based energy harvesting	P. Lahe Motlagh

C09 13:30 - 16:00 — Marie Curie A (1st floor)

Photocatalysis 3

Chairman
Y. Paz

	Cross-dimensional activation of 2D cobalt hydroxide with 0D cobalt oxides for photocatalytic microplastic degradation	R. Greco
13:30	Innovative photocatalytic nanocomposites for water treatment	G. Impellizzeri
14:15	Design of Z-scheme photocatalytic systems and studies of their photocatalytic activity in wastewater and air pollutants degradation	L. Andronic
14:30	Understanding the photocatalytic activity of sodium hexatitanate: A spectroscopic approach	I. Dos Santos
14:45	Photocatalytic removal of gaseous ethyl acetate in a continuous reactor pilot scale : reactor efficiency in simulated real conditions	M.-A. Hajjaji

D1_10 13:30 - 15:00 — Cassin (Ground floor)

Water splitting/HER OER 1

Chairman
N.-R. Manwar

13:30	Growth of MoO3 NWs by thermal evaporation for OER application	S. Scalese
14:00	Conception of a heterostructured bismuth vanadate based photoanode for solar-driven water oxidation in acidic conditions	A. Blot
14:15	Mechanism of Alkaline Water Splitting by Pt, Pd, Pt80Pd20 and Cu(OH)2 Nanoparticles Obtained by PLAL	A. Scandurra
14:30	Enhancing Broadband Light Absorption in Ultrathin Film Absorbers for Solar Fuel Generation	S. Shor Peled
14:45	Structure-Induced Catalytic Activity of Ni- and Co-substituted Layered MoB2 toward Hydrogen Evolution	N.-S. Peighambardoust

D2_10 13:30 - 15:00 — Boston (1st floor)

Photocatalytic and photovoltaic materials

Chairman
A. Khodakov

13:30	Metastable Ni(I)-TiO2-x Photocatalyst: Self-Amplifying H2 Evolution from Plain Water without Noble Metal Co-Catalyst and Sacrificial Agent	M. Altomare
14:00	Improved specific capacitance of WO3 nanostructures obtained by hydrothermal synthesis for energy storage applications.	G. Mineo
14:15	Precious Metal-Free N-rGO-based ORR electrocatalyst for Graphene Oxide-Hydrogen Membrane Fuel Cells (GOHMFCs)	M.-S.-K. Chowdury
14:30	Photocatalytic Partial Oxidation of Methane to Carbon Monoxide and Hydrogen over CIGS Solar Cell	V. Ordomsky

E08	13:30 - 16:00	Madrid 2 (Ground floor)
	Carbon-based nanomaterials for energy applications	**Chairman** D. Mantovani J.-F. Pierson
13:30	Carbon-nitrogen cold-plasma-deposited nanomaterials – a new step forward in photocatalysis	**M. Fronczak**
14:00	Hybrids cobalt-based catalysts and carbon nitride/carbon quantum dots for the catalytic oxidation of water into dioxygen.	**F. Avignon**
14:15	Mesoporous Carbon Thin Films as Electrocatalyst Support for the Oxygen Evolution Reaction	**L.-Q. Wagner**
14:30	Remarkable CO2 photoreduction and photoelectrochemical water-splitting performance using narrow bandgap carbon-rich carbon nitride nanosheets	**N. Chaulagain**
14:45	Near-percolation Nanodielectrics of Conductive Carbon-based Nanoparticles for High-voltage Structural Composite Capacitors	**R. Windey**
15:00	Carbon model electrodes for the kinetics investigation of vanadium redox couples	**M.-A. Costa De Oliveira**
15:15	Conformal carbon nitride thin film inter-active interphase heterojunction with sustainable carbon enhancing sodium storage performance	**E.-O. Eren**
15:30	Synthesis of CoxPy-based carbon composite nanofibers as a lithium-storage anode using polyvinylpyrrolidone as a carbon source	**S. Berikbaikyzy**
15:45	Liquid crystalline Ti3C2Tx MXene fiber-electrodes for flexible supercapacitors	**S. Kim**

F11	13:30 - 15:00	OPS (Ground floor)
	Energy/Sensors 2	**Chairman** V. Kumar R. Puglisi
13:30	Tetrapods based Smart Materials for Advanced Technologies	**Y. Mishra**
14:00	Novel Nanoporous Gold Organic Hybrid Materials for Photocatalytic Oxidation Reactions	**A. Wittstock**
14:15	Enhanced the selectivity and sensitivity of SnO2-rGO nanocomposites synthesized from sol-gel for NO gas sensors	**V. Singh**
14:30	Metal Halide Perovskites as Gas Sensing Elements: From Bulk to Micro to Nano	**K. Alexaki**
14:45	Fabrication of MoTeSe alloy based hydrogen gas sensor	**G. Tabares**

J10	13:30 - 15:00	Luxembourg (Ground floor)
	Continous flow synthesis approaches	**Chairman** A. Detappe R. Muller
13:30	Thermo-responsive magnetic nanoparticles for anti-cancer drug delivery: from synthesis on bench to a scale-up approach and their applications	**J.-S. Conteh**
14:00	Microwave assisted continuous-flow synthesis of magnetic nanocrystals for metabolites detection	**K. Simeonidis**
14:15	A microfluidic photo-induced platform to shape ultrasmall functionalized gold and platinum nanoparticles	**M. Marelli**

14:30	Continuous flow manufacturing of magnetic nanoparticles using polyol solvents: the Magnified project	T. Vangijzegem
14:45	Biofunctionalized iron oxide nanoparticles for diagnostic purposes	R. Tietze

K10	13:30 - 14:30	Berlin (Ground floor)
	Manufacturing and Device Design 2	Chairman S. Fabiano B. Lüssem
13:30	Advanced materials and manufacturing paradigms for emerging electronics	T. Anthopoulos
14:00	A n-type, stable electrolyte gated organic transistor based on a printed polymer	F.-A. Viola
14:15	Toward fast and stable organic electrochemical transistors	S. Zhang

JOINT LQ 01	13:30 - 15:00	Etoile A (1st floor)
	PLD of Thin Films I (JOINT SESSION L & Q) Symposia	Chairman E. Haro-Poniatowski
13:30	A brief historical overview of PLD for complex oxides	D.-H.-A. Blank
14:00	Low-Dimensional Eu2+ Based Emitters on Si by means of Nano- and Femtosecond Laser Processing	A. Mariscal-Jiménez
14:15	PLD-based pyramidal-shaped ceria biointerfaces	A. Bonciu
14:30	High quality MnZn soft ferrite films grown by pulsed laser deposition for applications in high frequency planar transformers and inductors	L.-G. Petrescu

M10	13:30 - 15:00	Schuman (1st floor)
	Simulation and Modeling III	Session Chair A. La Magna
13:30	Material Engineering for Advanced CMOS Technology	V. Moroz
14:00	Gate-All-Around SRAM: Performance Investigation and Optimization Towards Vccmin Scaling	P.-B. Vyas
14:15	Impact of solid and liquid phase reflectivity on the ultra-fast laser melting of silicon-germanium alloys	D. Ricciarelli
14:30	Boron diffusion in germanium and the impact of oxygen	F. Kipke
14:45	Generation and loss of hydrogen-boron pairs in fired silicon wafers	V. Voronkov

N02	13:30 - 15:00	Londres 1 (Ground floor)
	Integration of functional materials	
13:30	Heterogeneous material approaches in integrated photonics: the challenging path from explorative research to industrial manufacturing	R. Baets
14:00	High performance Si OPA for LiDARs by interface control of direct fusion bonding	E.-K. Lee
14:15	Carrier dynamics engineering for enhanced radiative recombination in graphene/QD mixed-dimensional heterostructures	N.-D.-Q. Lung

14:30	Formation of (Er0.1Y0.9)2Zr2O7 waveguide amplifier by digitally processed DC sputtering toward heterogeneous integration on SiNx waveguide circuits	H. Isshiki
14:45	Hybrid integration of nitrogen-vacancy centres in nanodiamond with foundry silicon nitride photonics	J.-A. Smith

O5 13:30 - 15:00 Churchill (1st floor)

Devices and stability 2

Chairman
M. De Bastiani
A. Petrozza

13:30	Pathways to efficient and stable perovskite/silicon tandem solar cells	S. De Wolf
14:00	Wide Band Gap Perovskites for Tandem Solar Cells Fabricated by Thermal Co-Evaporation	M. Roß
14:15	Stability Assessment of Perovskite Solar Cells Under Real Outdoor Conditions: Effect of Encapsulation	K.-T. Tanko
14:30	Visualizing Losses in Highly Efficient and Stable Perovskite-based Tandem Solar Cells	E. Ugur
14:45	Ageing and characterization of high-bandgap perovskites for all thin-film tandem solar cell devices	A. Cabas Vidani

P09 13:30 - 15:00 Londres 2 (Ground floor)

AI-Accelerated Materials Discovery II

Chairman
A. Zakutayev

13:30	How deep learning can help with materials design.	S. Kadkhodaei
14:00	Machine Learning-Assisted Discovery of Lead-Free Perovskites for Solar Cell Applications	J. Seung Hwan
14:15	Fundamentals of photoactive chiral materials from simulation workflows	A. Pietropaolo
14:30	Computational approaches for the design of materials with desired physicochemical properties	K. Kotsis
14:45	Computational Design of Photocathodes for Next Generation Light Sources	F.-C. Mildner

T06 13:30 - 15:00 Varsovie (Ground floor)

Solar Cells and Photocatalysists

Chairman
S. Bals
M.-C. Spadaro

13:30	Monitoring Structural dynamics Using In Situ Electron Microscopy	T.-W. Hansen
14:00	Kelvin Probe Force Microscopy under variable illumination: a novel technique to unveil charge carrier dynamics in GaN	P. González-Izquierdo
14:15	Operando FTIR investigation of surface species reactivity in the photocatalytic reduction of CO2 in vapour phase over Pt/TiO2	J. Dankar
14:30	How can three-dimensional and multimodal X-ray microscopy reveal the impact of voids in CIGS solar cells?	G. Fevola
14:45	In-line quality control of perovskite photovoltaics by using intensity dependent photoluminescence	B. Hacene

R07 13:45 - 16:00 Madrid 1 (Ground floor)

	Processing, Optics and Thermal Management	**Chairman** I. Friel
13:45	A TEM study of the 3D nanographitic generated structures generated by Laser writing process to induce local diamond conduction	**D. Araujo**
14:15	Graphitic Micro-channels in Diamond: An Impedance Spectroscopy Study	**C. Henderson**
14:30	Locally Ion Implantation and Annealing Effects in Diamond	**M.-E. Bouras**
14:45	Diamond Electrochemical Sensors: Graphitic microchannels as both through substrate vias and patterned electrodes	**R. Moors**
15:00	Surface modification of thin boron doped diamond electrodes with controlled sp^2 sites – ultrashort laser pulses fabrication and electrochemical characterization	**N. Lambert**
15:15	Consistent manufacturing of high-quality in-diamond lens devices for enhanced Color Center Photolumincenence detection	**E. Tsapanou-Katranara**
15:30	Nano-structured Diamond Sensors for Extreme Environments: Taking SERS from the laboratory to the Ocean	**M. Ramsay**
15:45	Low Thermal Budget Diamond Heat Spreader for Semiconductor Devices Channel Cooling	**M. Malakoutian**

H08	**14:00 - 16:00**	**Rome (Ground floor)**
	New Materials for Biomedical Applications	
14:00	Effect of Nanoparticles on the Bulk Shear Viscosity of a Lung Surfactant Fluid	**J.-F. Berret**
14:30	4D Bioprinted Multilayered Biomimicking Scaffolds for Uterine Tissue Regeneration	**S. Chen**
14:45	Polymeric composites of electroactive P3HT-MWCNT thin films for bioelectronics application	**P. Campione**
15:00	Lipid coated Mesoporous Silica as the Carrier of Hydrophobic Drugs	**S. Iqbal**
15:15	Laser assisted structuring of bio-polymer for the oriented proliferation of stem cells	**C. Murru**
15:30	Investigation of Printable Overhang Angle for Direct Printing of Sodium Alginate / Gelatin Hydrogel	**N. Mahmoodi**
15:45	A green and sustainable approach for the preparation of antimicrobial alginate fibers	**P. Tordi**

K11	**14:30 - 16:00**	**Berlin (Ground floor)**
	Sensors and Neuromorphic Electronics 1	**Chairman** T. Anthopoulos A. Paterson
14:30	Biorealistic organic electrochemical neurons: materials and challenges	**S. Fabiano**
15:00	Two-terminal Organic Electrochemical Diode-based Novel Neuromorphic Operation	**D. Heo**
15:15	Bio-electronic Sensors for Fast and Selective Detection of Xylella fastidiosa	**L. Sarcina**
15:30	Organic double-gate FET for high-quality chemical sensing	**D. Hatami**
15:45	Toxic Water soluble Mercury metal-ions detection by Organic Field Effect Transistors using Pyridine-end oligo p-Phenylenevinylene oligomer as a sensing material	**S.-P. Verma**

JOINT LQ 02	15:00 - 16:00	Etoile A (1st floor)
	PLD of Thin Films I (JOINT SESSION L & Q) Symposia	**Chairman** D.-H.-A. Blank
	15:00 Morphology control of self-organized Sr3(VO4)2 and Ca3(VO4)2 nanostructures on SrVO3 and CaVO3 perovskite PLD films	**V. Demange**
	15:15 Perovskites-based thin films for photoelectrochemical water-splitting applications	**F. Andrei**
	15:30 Fabrication of nanostructured glasses by laser ablation	**E. Haro-Poniatowski**
	15:45 A Hybrid p-n Junction Based on metal chalcogenides for Highly Efficient Self-Powered Photodetection	**K.-L. Kumawat**
D1_11	15:00 - 16:00	Cassin (Ground floor)
	Water splitting/HER OER 2	**Chairman** L. Johnson
	15:00 Plasmon-induced 2D supported atomic site catalysts for thermo-photocatalytic simultaneous conversions of CO2 into fuels and biomass Valorization	**N.-R. Manwar**
	15:30 Novel Substrate-Agnostic Fabrication of High-Performance Regenerative Water Splitting (Photo)electrodes	**J.-Z. Soo**
	15:45 Is Fe3C can alone improve the oxygen reduction reaction kinetics in fuel cell cathodes?	**S. Aryagopal**
D2_11	15:00 - 16:00	Boston (1st floor)
	Photovoltaics 1	**Chairman** P.-C. Ricci
	15:00 Development of monolithically integrated photosupercapacitors based on different photovoltaic technologies	**T. Berestok**
	15:30 Multifunctional powder feedstock as a sustainable key enabling technology in additive manufacturing	**J.-J. Rosero Romo**
	15:45 Trade-Off between Photovoltaics Parameters and Thermal Annealing in Non-Fullerene Acceptors Organic Solar Cells	**S. Alam**
F12	15:00 - 16:00	OPS (Ground floor)
	Energy/Sensors 3	**Chairman** D.-K. Avasthi S. Srivasatava
	15:00 Cu-based nanostructures embedded in transparent and conductive oxides thin films: new plasmonic systems for photovoltaic applications	**S. Boscarino**
	15:30 Photothermal Application of Plasmonic Titanium Nitride Nanotubes in Solar Steam Generation	**M. Afshar**
	15:45 Gold nanorods as shape-dependent light-harvesting plasmonic enhancers in perovskite solar cells	**D. Carvalho**
J11	15:00 - 16:00	Luxembourg (Ground floor)
	Nanoplatforms for imaging 1	**Chairman** H. Gavilan Rubio D. Mertz

15:15	Functionalized ultrasmall nanoparticles as multimodal imaging biomarkers	**A. Detappe**
15:45	Dynamic Metal-Enhanced Fluorescence Microarray for ultrasensitive detection of Neurodegenerative Disease Biomarkers	**Q. Xiong**
16:00	Nanozymatic magnetic nanomixers for enzyme immobilization and multiplexed detection of metabolic disease biomarkers	**D. Li**

JOINT LQ 02 — 15:00 - 16:00 — Etoile A (1st floor)

PLD of Thin Films I (JOINT SESSION L & Q) Symposia

Chairman
D.-H.-A. Blank

15:00	Morphology control of self-organized Sr3(VO4)2 and Ca3(VO4)2 nanostructures on SrVO3 and CaVO3 perovskite PLD films	**V. Demange**
15:15	Perovskites-based thin films for photoelectrochemical water-splitting applications	**F. Andrei**
15:30	Fabrication of nanostructured glasses by laser ablation	**E. Haro-Poniatowski**
15:45	A Hybrid p-n Junction Based on metal chalcogenides for Highly Efficient Self-Powered Photodetection	**K.-L. Kumawat**

M11 — 15:00 - 16:00 — Schuman (1st floor)

Silicides and Germanides II

Session Chair
M. Gregoire

15:00	Some challenges and issues for contacts formation and stability in microelectronics	**D. Mangelinck**
15:30	NiGe formation on thin Ge films by flash lamp annealing: electrical properties	**L. Rebohle**
15:45	NiSi2/Si interface with segregation of one-atomic Au layer in a silicide-embeded silicon nanowires	**C.-Y. Wu**

N03 — 15:00 - 16:00 — Londres 1 (Ground floor)

Integration of functional materials 2

15:00	Doped crystalline zirconia oxides for photonic applications	**S. Matzen**
15:30	AlGaAs-on-insulator hybrid platforms for guided and free-space nonlinear photonics	**G. Leo**

O6 — 15:00 - 16:00 — Churchill (1st floor)

Devices and stability 3

Chairman
M. De Bastiani
A. Petrozza

15:00	Stability aspects of perovskite/silicon tandem solar cells on the path of industrialization	**E. Aydin**
15:30	Efficient and Stable Formamidinium Based Perovskite Solar Cells by Slot-Die Coating	**M.-S. Kunnummal Mangott**
15:45	Structure and Stability Studies of Chlorine Addition to Flexible Printed Perovskite Solar Cells	**C. Stavraki**

P10	15:00 - 16:00		Londres 2 (Ground floor)
	Optical and Magnetic Properties		Chairman M. Chan
	15:00	Optoelectronic Features of 3D, mixed 2D/3D, and 2D Hybrid and Full Inorganic Perovskites from first principles	G. Giorgi
	15:30	Ferromagnetism and Ferroelectricity in a Superlattice of Antiferromagnetic Perovskite Oxides Without Ferroelectric Polarization	A. Ray
	15:45	Tuning octahedral rotation and magnetism in perovskites	J. Jia
T07	15:00 - 16:00		Varsovie (Ground floor)
	Heating and environmental TEM		Chairman J. Arbiol M. Hugenschmidt
	15:00	Operando TEM in catalysis research: Bridging the pressure gap	P. Kooyman
	15:30	High-Temperature Oxidation of Titanium Aluminium Nitride Coatings Visualized by Environmental Transmission Electron Microscopy	M. Ek
	15:45	In-situ TEM Observations of Interface Engineering between Ti and Ga2O3	P. Hsieh
CB6	16:00 - 16:30		Exhibition area (Ground floor)
	Coffee Break		
A11	16:30 - 18:30		Marie Curie B (1st floor)
	Proton conduction in oxides		Chairman F. Chiabrera
	16:30	Novel Nanoscale optimized electrodes and proton ceramic electrolytes for electrochemical reactions	M.-L. Fontaine
	17:00	Hydration Entropy and Enthalpy of SrTiO3 from Oxygen Tracer Diffusion Experiments	J. Kler
	17:15	Proton mobility in triple-conducting perovskites	R. Merkle
	17:30	Proton uptake and transport properties of self-generated Ba(Ce,Fe,Y)O3-d and Ba(Ce,Fe,In)O3-d composites	C. Nader
	17:45	Atomistic insight into proton migration barriers in BaFeO(3-d)	A. Chesnokov
	18:00	Exploring the nature of the oxidation states of tungsten and ionic conductivity in W-doped LaNbO4	K. Huang
	18:15	Understanding the Meyer-Neldel rule in fast ionic conductors	Q. Chen
B1_08 b	16:30 - 18:30		Schweitzer (Ground floor)
	Defects in Perovskites 3		Chairman C. Brabec
	16:30	Resolving defect densities and lifetimes in perovskite solar cells using frequency domain methods	S. Ravishankar

17:00	Photophysics of light-induced halide segregation in wide bandgap perovskites interfaced with self-assembled monolayers	C. Petoukhoff
17:15	Microwave photoconductivity – A powerful characterization method for perovskite solar materials	C. Kupfer
17:30	Structural Disorders in Double Perovskite Cs2AgBiBr6	B.-G. Han

B2_05	16:30 - 18:30	Dresde (1st floor)
	Simulation of Energy Materials from Atomistic to Continuum Scales	Chairman D. Durdiev F. Wendler
	Novel concept for an optimal solar cell based on self-assembling organic molecules	S. Kraner
16:30	„Interplay of domain structure, phase transitions and functional responses in ferroelectric BaTiO3"	A. Grünebohm
17:00	Ferroelectric 90° domain wall migration and free energy in BaTiO3 via molecular dynamics simulations	H. Azuma
17:15	Dislocation effects on the inversion of ferroelectric polarization in BaTiO3 using a graph neural network potential	G. Deguchi
17:30	A phase-field model for ferroelectrics with defects configured by molecular dynamics	D. Durdiev
17:45	Hot carriers in metal halide perovskites: the cold background effect	T. Faber
18:00	Using Molecular Dynamics simulations as a tool to better understand reactive multilayers	F. Schwarz

C10	16:30 - 18:30	Marie Curie A (1st floor)
	Nanocomposites for Environment 2	Chairman M. Salzano De Luna
16:30	Synthesis and biocompatibility testing of nanosized metal organic frameworks (nanoMOFs) for heavy metal contamination remediation	M. Mortimer
17:00	Protein nanofibrils: new sustainable materials for environmental remediation	M. Peydayesh
17:15	An in-line magnetic separation system for the recovery of water adsorbents: Simulation and laboratory validation	K. Simeonidis
17:30	Biopolymer/graphene oxide nanocomposite aerogels for water purification from organic dyes	L. Vitiello
17:45	Composite Adsorbents from Waste Gelatin for the Removal of Methylene Blue	K. Sudsakorn
18:00	Spray-coating of superhydrophobic surfaces for oil water separation	A. Goralczyk

D_P02	16:30 - 18:30	Etoile (1st floor)
	Poster session 2	
	Scalable Fabrication of High-performance Perovskite Solar Modules and their Application to Photo-rechargeable Batteries	Y.-Y. Kim
	Sodium titanates with controlled morphology as effective anode materials for lithium- and sodium-ion batteries	S. Stanchovska
	Electrochemical Suzuki-Miyaura cross-coupling using peptide bolaamphiphile hydrogel supported Pd NPs as heterogeneous electrocatalyst	D.-K. K. Kori

The effect of Sn doping on the optical properties of polycrystalline Sb2Se3	**M.-E. Uslu**
A water-based flowless energy-dense Zinc-ion Bromine Battery	**J. Zhu**
Studying the Membrane Electrode Assembly (MEA) for a Hydrogen-Manganese Redox Flow Battery (RFB)	**H. Zhang**
Heat Activated Nb-Doped Vanadium Dioxide Cathodes for Zinc Ion Batteries	**S. Aydin**
Molybdenum Doped Vanadium Dioxide as High-Performance Aqueous Zinc-Ion Battery	**B. Aydogdu**
RF Energy Harvesting with Vertical Pt/MoSe2 Schottky Diode-Based Crystal Radio	**S. Hong**
Fabrication, photovoltaic characterization, and study of degradation mechanisms of a dye-sensitized solar cell based on sustainable tetrapyrrole-dyes extracted from Baltic microalgae	**L. Siebert**
Synthesis of PdRhalloy@ZnO-CeO2 core-shell nanoparticles with different shell composition for photocatalyst	**G.-J. Oh**
Development of Si-organic-based Binder for High-performance Li-ion batteries	**J. Yoon**
Improvement of the physical properties of nanostructured AgxO thin films grown by Glancing Angle Deposition (GLAD) method	**F. Chaffar Akkari**
Materials for the conversion of solar energy with photovoltaic applications	**I. Chilibon**
Electrochemical Influence of Aqueous Binders on LiFePO4 Cathodes	**R. Parmenter**
Constructing MWCNT/ZIS nanocomposite to enhance photoelectrochemical water splitting performance	**M. Mohit**
Computational analysis of the enhancement of photoelectrolysis using transition metal dichalcogenide heterostructures	**E. Baker**
Modification of Aluminum Alloy Anode using Iron for Enhancing Rechargable Aluminum Battery Operation	**G. Razaz**
The Investigation of Carbon Coating on Iron-Oxide Actives for Lithium-ion Batteries	**W.-C. Su**
Investigation of the order-disorder transition in (Cu,Ag)2ZnSn(S,Se)4 monograin powders	**I. Mengü**
Transition metal dichalcogenides for photovoltaics	**F. Bozheyev**
The Effect of Zinc-based-oxide Coating on Iron-oxide Actives for Lithium-Ion Batteries	**W.-C. Liu**
Porous network carbon structure on Si-C composite for lithium ion battery	**H.-S. Chung**
Improvement of Li metal compatibility in all solid state batteries via SSZ-13 zeolite filler	**J.-H. Kim**
Evaluation of characteristics according to cathode material particle size in PEO/LLZO-based all-solid-state battery	**Y.-W. Song**
Lithium-ion battery with the carbon nanofibers applied carbon nanowalls	**K. Kim**
Enhanced Proton-conducting Nanohybride Membranes with Graphene Oxide and (3-mercaptopropyl)trimethoxysilane for PEMFCs	**M.-S.-K. Chowdury**
Manganese-Based Tunnel & Layered oxide Cathode Materials for Secondary Metal-Ion Batteries	**J. Yadav**
The Impact of Different Spin Coating speed on the Properties of Cu2ZnSnS4 Nanocrystal Thin Films	**A. Alluhaybi**
Design of conductive and ultrathin iridium catalyst layers for highly efficient and stable PEM-water electrolysis	**A. Lim**
Reconstruction of Cobalt Molybdenum Oxide Pre-catalyst for Boosted Hydrogen Production: Structure Evolution and Performance Enhancement Mechanism Insight	**A. Zhu**
Interface engineering for organic and perovskite solar cells introducing simple non-conjugated polymer	**S. Hong**

Fabrication of Hydrogen Permeation Leak Element using Atomic Layer Deposition on Anodic Aluminum Oxide	**N.-K. Chung**
N-doped carbon framework encapsulated Pt-Ni dual-site single atoms and alloy nanoparticles for ORR/HER bifunctional electrocatalyst	**T.-D. Le**
Insights into Controlled Multiphasic Growth of Zinc Tungstate Hierarchal Nanostructures for Improved Electrochemical Energy Storage	**P. Tiwari**
Self-activated porous carbon template for lithium ion battery anode	**H.-S. Chung**
Surface Potential Variation Across (hk1) and non-(hk1) Grain Boundaries of Antimony Triselenide	**A. Vashishtha**
Fabrication of Nickel Antimony Oxide-Carbon Black Composite Anode for Alkali-ion Batteries by Electrophoretic Deposition Technique	**U. Ray**
Investigations on Na-doped Cu2ZnSnS4 thin films as a critical raw material-free for photovoltaic applications	**N. Khemiri**
A novel synthesis method of sulfide-based solid electrolytes for the high energy density all-solid-state batteries.	**J.-W. Park**
Microwave-Induced Surface Defects in Lithium Titanate Oxide over the Wide Voltage Window for High Energy Li-Ion Hybrid Capacitors	**S. Byun**
Synthesis of garnet LLZO by aliovalent co-doping, and electrochemical behavior of composite solid electrolyte for all-solid lithium batteries	**M.-Y. Kim**
Effect of Charge Transport Layers and applied potential on the impedance spectra in CH3NH3PbI3 perovskite solar cells	**M. Khalifa**
Practical Solid-State Synthesis of Supported Pt-Co Nanoparticles for Proton Exchange Membrane Fuel Cells	**T.-Y. Yoo**
The solution-based synthesis of Li6PS5Cl solid electrolyte for effective lithium ion conduction in the cathode electrode of all-solid-state batteries	**J.-H. Park**
TiO2 nanograss tubes as hybrid membrane in Li-S Battery	**K. Doohun**
Electroplated Nickel-phosphorous HER catalysts with the enhanced performance and stability via electrochemical surface-treatment	**K. Eom**
Plasma-induced Heterojunction Material as Cathode Additive to Adjust Polysulfides Conversion of Lithium-sulfur Battery	**Y. Lei**
Characteristics of VOx thin films fabricated by closed-field unbalanced magnetron sputtering system for thermochromic devices	**J. Lee**
An interfacial wetting water based hydrogel electrolyte for high-voltage flexible quasi solid-state supercapacitors	**T.-C. Liu**
Interface chemistry engineering for advanced aqueous Zn metal batteries	**W. Han**
Dynamically crosslinked self-healable solid-state polymer electrolyte for lithium metal batteries	**Y.-T. Chen**
Hydrogen Spillover and Storage on Graphene with Single-Site Ti Catalysts	**C.-L. Wu**
Unassisted Solar water splitting via Organometal Halide Perovskite-Based dual Photoelectrodes	**S. Lee**
Electrolyte Engineering Enables Stable Zn-Ion Deposition for Long-Cycling Life Aqueous Zn-ion Batteries	**Y. Wu**
Effect of doping on Ni-rich layered cathode materials for low-Cobalt Li-ion batteries	**A. Bano**
Enhanced performances of lithium metal batteries by synergistic effect of low concentration bisalt electrolyte	**T.-D. Pham**
Direct and in situ growth of 1T' TMDs on electrochemically synthesized MXene as an electrocatalyst for hydrogen generation	**S.-Y. Pang**
Modified MXene for Regulating Sulfur Evolution Reactions in High-Volumetric-Energy-Density Lithium-Sulfur Batteries	**V.-P. Nguyen**
The important role of thermal stability for the design of Cu3N films by RF sputtering as solar absorbers	**M.-I. Rodriguez**

E09	16:30 - 18:30	Madrid 2 (Ground floor)
	Carbon-based nanomaterials for bio applications	**Chairman** S. Tamulevicius
16:30	How carbon-based matrix determines the functional behaviour of antimicrobial nanomaterials?	**S. Carvalho**
17:00	SiOCH-based plasma surface functionalization of photocatalytic metal oxides for antimicrobial applications	**P. Navascués**
17:15	Detection of carbon-containing micro- and nanoplastic materials in carbon-rich biological matrices for biomedical applications	**G. Sarau**
17:30	Laser synthesis of nanometric-sized silicon carbide and nanodiamonds containing silicon vacancy centers	**A. Piccoli**
17:45	Bioresource-Derived Colloidal Nitrogen-Doped Graphene Quantum Dots as Ultrasensitive and Stable Nanosensors for Cancer and Neurotransmitter Biomarkers	**Y.-Y. Chen**

F_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	pH sensing, bioimaging, and Fluorescence lifetime imaging microscopy using polyethyleneimine coated carbon dots and gold nanoparticles	**S. Shweta Pawar**
	Cellulose Acetate-Based Plasmonic Crystals for Surface-Enhanced Raman and Fluorescence Spectroscopy	**J. Rice**
	Fabrication of Ag nanostructures directly from Piezo Inkjet printed equidistance microdots for surface plasmonics resonance enhancement	**B. Aissa**
	The influence of the shape and size of gold nanoparticles on their ultrafast plasmon relaxation dynamics	**S. Tamulevicius**
	Morphology optimized MoS2/Ag nanocomposites based SERS substrates with ultralow detection limits	**A. Kaushik**
	Surface-Enhanced Raman Scattering of Randomly Distributed Single-Walled Carbon Nanotubes Network decorated with Gold Nanoparticles	**A. Sinopoli**
	Electron tomography: a powerful method for the characterization of Au chiral nanoparticles.	**M. Mychinko**
	High quantum yield InP based quantum dots synthesis and QD film coating to prevent light pollution	**J.-M. Lee**
	InP quantum dot adhesive sheet with high dissipating bio-inspired composite 4CL resins	**M.-S. Lee**
	Optical Activation of Different Rare-Earth Ions Implanted into AlN Nanowires	**M. Correia**
	Optimized NiO/ZnS Nanoparticles as a Hole Injection Layer for Enhanced Quantum Dot Light-Emitting Diodes-	**J. Kim**
	Highly efficient quantum dots light-emitting diodes with a Zn0.85Mg0.15O thin films as an electron transport layer by RF sputtering	**B. Kim**
	Thermoluminescent powder lead material dopped with Gd3+/Sm3+	**I. Avetissov**
	Ionizing radiation detection and dosimetric applications of Cr-doped Zinc Gallogermanate	**M.-S. Batista**
	Impact of functionalization of MoTe2(1-x)Se2x alloy by EGaIn nanoparticles on its optical properties	**R. Magro**
	Optically active centres in Pr-implanted ß–Ga2O3 single crystals	**J. Zanoni**
	Synchrotron-excited luminescence of Zn2SiO4 nanoparticles in ion-implanted silica	**E. Buntov**
	Luminescent performance of polylactic acid/ lanthanide-based metal?organic framework composites	**J. Zanoni**

	Study of passive, active and smart programmable shape memory nanocomposite polymers for 3D printing	**A. Guarnaccio**
	Strong piezoelectric response in two-dimensional van der Waals layered CuInP2S6 for piezoelectric nanogenerators	**W.-F. Io**
	Facile fabrication of tin monoxide and application of bendable memristor	**D.-J. Lee**
	Giant photo-amplification in air-stable a-CsPbI3 nanocrystals / WS2 0D / 2D mixed-dimensional phototransistor with asymmetric contacts	**S. Das**
	Nanoscale probing of surface potential landscape at MoS2/BP van der Waals p-n heterojunction	**M. Raturi**
	Transparent and anti-icing MXene-polymer self-cleaning coatings for solar panels	**E. Mariam**
	Characteristics of V doped TiO2 thin films fabriacted by spray coating system for photovoltaic application	**Y.-S. Park**
	X-ray absorption spectroscopy study of ZnS:M (M=Mn, Cu) nanoparticles	**A. Kuzmin**
	Comparison of Electroconductive Properties of Silver, Copper-Silver and Copper Nanowire Films	**B. Polyakov**
	Dispersion kinetics of silver, gold and palladium nanofilms deposited onto oxide materials and annealed in vacuum	**T. Stesyuk**
	Synthesis, characterization and spectroscopic properties of Er, Yb - doped SrTiO3 ceramics sintered from sol-gel derived powders	**E.-C. Tihon**
	Investigation of rare earth (Er, Yb) effects on structural, morphological, and optical properties of SrTiO3 doped ceramics elaborated from sol-gel synthesized nanopowders.	**C. Stanciu**
	Study of the stabilization of the orthorhombic phase pure ZrO2 deposited on a Nb:SrTiO3 substrate with different orientations, using TEM/HRTEM techniques	**M.-C. Istrate**
	numerical simulation of splat formation dynamics of two molten ceramic particles in plasma spray process	**K. Benoumsaad**
	Bio-Inspired Polymeric Functional Platform for Sensing application	**G.-K. Verma**
	Composition effect of Pd-Au gradient alloy core on hydrogen gas sensing performance of Pd-Augr-alloy@ZnO core-shell nanoparticles	**T.-V. Tran**
	MOF Textile Patch for Humidity Sensing	**L. Xu**
	Nickel Coated Silver Core-Shell Nanowires for High Efficient Electromagnetic Interference Shielding	**R. Sahoo**
	Pre-Compression-assisted Approach to Wavy Networks of Metal Nanowires Imparting Omnidirectional Stretchability and Transparency	**S.-S. Lee**
	A new efficient strategy based on light management to improve the broadband photodetector performances	**F. Djeffal**
	A efficient design paradigm of nanoscale junctionless TFET via global and multi-objective optimization approach	**F. Djeffal**
	Relationship between Processing Conditions and Electrical Properties of Single-Walled Carbon Nanotube Networks for Infrared Detectors	**T. Shibuya**
	Quantum study of different structures of the Cis-Trans transition of substituted polyacetylene by different methods: semi empirical AM1+PM6, HF (Ab-initio) and DFT (B3LYP)	**R. Masmoudi**
	A mechanochromic strain sensor of wide working range with angle compensators	**H.-M. Nguyen**

H09	16:30 - 18:30	Rome (Ground floor)
	New Materials for Biomedical Applications II	
16:30	Alternative peptide grafting strategies for enhancing PEEK bioactivity in bone regeneration	**L. Cassari**

16:45	Atomic force microscopy for characterizing plasma proteins adsorption morphology on poly(styrene sodium sulfonate)-functionalized silicone surfaces	**M. Lam**
17:00	PVA-based hydrogels with active biocidal effect: From polymer functionalization to real-time observation of the gels' efficacy against model bacteria through confocal laser scanning microscopy	**V. Rosciardi**
17:15	Tracheal engineering to the reconstruction of the larynx	**C. Bertsch**

I10 16:30 - 18:30 — Bruxelles (Ground floor)

Living Systems/Materials and Biomimetics Multifunctionality from Nature

16:30	Biomimicking Organic Electronic Materials Toward Bioelectronic Devices Intrinsically Resisting Nonspecific Interactions	**B. Zhu**
17:00	Facile but Tunable Electroassembly of Tubular Functionalized nano PEDOTs toward Bioelectronics	**Z. Geng**
17:15	Nanoconfined PEDOT:PSS with One- and Two-Dimensional Alignment	**S. Lee**
17:30	Magnetic membrane polymers with on-board electronic skins for supervised actuation	**E.-S. Oliveros Mata**
17:45	3D multiphoton lithography of protein-based photoresists	**D. Sivun**

J12 16:30 - 18:30 — Luxembourg (Ground floor)

Nanoplatforms for imaging 2

16:30	From Ions to Molecules and Particles, the Saga of Contrast Agents for MRI	**R. Muller**
17:00	Evaluation of oxidative stress in metastatic breast cancer cells using nanodiamond relaxometry	**C. Reyes-San-Martin**
17:15	Synthesis of Size-Controlled Cubic Iron Oxide Nanoparticles for MPI-MFH Application	**S. Harvell-Smith**
17:30	Enhancement of Phosphate Removal in Peritoneal Dialysis using designed magnetic Iron Oxide Nanostructures.	**T. Lucante**
17:45	Green-light responsive Carbon based nanosystems for chemo-photothermal combined anticancer therapy.	**S. Petralia**

K12 16:30 - 18:00 — Berlin (Ground floor)

Sensors and Neuromorphic Electronics 2

Chairman
J. Labram
A. Paterson

16:30	Organic electrochemical diodes for current rectification, digital logic, and neuromorphic devices	**M.-H. Yoon**
17:00	A flexible optically stimulated synaptic transistor based on rGO-ZnO NRs based hybrid channel	**A. Bag**
17:15	Ultrafast singlet fission dynamics in high quality organic single crystals	**D. Maslennikov**
17:30	Fabrication of photo-transistor using perovskite materials as a gate dielectric	**A. Mandal**
17:45	Investigating the dielectric properties of Tb3+ doped LaPO4 nanoparticle-PMMA composite thin films and its application as organic phototransistor for UV detection	**R. Banerjee**

L_P 16:30 - 18:30	Etoile (1st floor)
Poster session	Chairman A.-M. Kietzig E. Rebollar
Laser-Printed Emissive Metasurface as an Optical Security Platform	D. Kang
Laser induced graphene synthesis from photoresist	S. Kwon
kinetic and comparative study of the isomerization reaction of substituted tetradecahepta-ene by ab-initio and dft method	C. Lekbir
study of the isomeric ratio of oriented polyacetylene isomerization reaction by laser beam	A. Djebaili
Numerical and kinetic study of isomerization reaction of oriented polyacetylene induced by laser impact, shown by multichannel Raman	A. Djebaili
Controllable wettability behavior of stainless steel surfaces developed by femtosecond laser texturing for application in high traffic objects	A. Daskalova
Bimetallic copper oxide/Pd nanoparticles obtained by laser ablation in water for antibacterial applications.	A.-M. Vilas
Chitosan-metal nanocomposite with enhanced antibacterial and photocatalytic activity obtained by laser ablation in liquid	A. De Bonis
Experimental investigation and numerical modeling of melt pool dynamics during direct laser interference patterning	B. Voisiat
Organic heterostructures with nanopatterned electrode and nanoparticle buffer layer prepared by laser technique	C. Breazu
Structural and electrochemical properties of epitaxial titanium carbide thin films grown by laser processing on MgO (111) and Al2O3 (001) substrates	C.-D. Constantinescu
Laser-induced forward transfer (LIFT) of metals for multiscale printing of 3D micro-objects and surface structuring	C.-D. Constantinescu
High resolution patterning of doping in semiconducting polymer films by non-resonant laser excitation	C. Rainer
High yield C-SiC composite nanoparticles synthesized by laser pyrolysis and their application for thermal transfer as aqueous nanofluids	C. Fleaca
Experimental study of short and ultrashort pulse laser processing modes of solar silicon cells	D. Tsankov
Ambient pressure influence on the conductivity of tracks fabricated by picosecond laser pulses on the surface of AlN ceramic	A. Dikovska
Carbide Dispersed Surface on Beta Titanium Alloy (Ti-13Nb-13Zr) by Laser surface Alloying	T. Bera
Corrosion and Tribocorrosion Behavior of Laser Surface Melted Titanium Based Alloy (Ti6Al4V)	B. Das
Studies on Mechanical, Electrochemical and Mechanochemical Behaviour of AISI 316L Stainless Steel for Bioimplant Application	I. Imanna@Metal.Iitkgp.Ernet.I
Secondary electron yield engineering of copper using ultra-short laser pulse irradiation	K. Zimmer
Fabrication of micro cubes with plasmonic functionalization by laser precision machining of modified polymers foils	K. Zimmer
Production of iron oxide nanoparticles through laser pyrolysis using isopropanol as sensitizer	I.-I. Lungu
Effect of picosecond laser illumination direction on P3 scribing of CuInGaSe2 thin-film solar cell architecture based on transparent back electrode	J.-H. Jeong
Chemical and topographical changes upon sub-100-nm laser-induced periodic surface structure formation on titanium alloy	J. Bonse
Picosecond laser processing of hierarchical micro-nanostructures on titanium alloy upon pre- and post-anodization	J. Bonse

	Impact of laser-induced periodic surface structures on the bactericidal properties of copper and brass	**S. Meissner**
	Femtosecond laser intraoral robotic: the future of modern dentistry	**J. Brand**
	Microwave Induction heating for Non-contact and Ultra-fast Annealing of Conductive Thin Film	**D. Kim**
	Tuning the optical and structural properties Sn-Sb-S (TAS) thin films by 248 nm excimer laser irradiation	**N. Khemiri**
	High-rate laser texturing for advanced coating substrate preparation	**S. Kraft**
	Bacterial adhesion on fs-laser processed laser-induced periodic surface structures	**M. Razkin**
	Study of laser textured polymer to control wettability and emissivity	**M. Flury**
	Polymer thin films with hole transport properties for organic solar cell applications	**M.-L. Stîngescu**
	Microstructure of the EVA thin films deposited by MAPLE process from three - component target	**B. Mitu**
	Magnesium Nanoparticles obtained by Laser Ablation in Ethanol	**M. Fernández-Arias**
	Laser assisted synthesis and optical properties of hybrid silicon nanoparticles for solar-thermal applications	**N. Tarasenko**
	Laser ablation fabrication of anisotropic metal oxides nanoparticles for the novel electrochemical sensors	**N. Tarasenka**
	Surface structuring and ablation characteristics of nitride ceramics induced by picosecond laser pulses	**N. Nedyalkov**
	Charge transfer induced robust spin polarization in hBN/TMDC/PbI2 heterostructures in type I and type II configurations	**P.-K. Barman**
	Robust photoluminescence enhancement of in-band-engineered TMDC/PbI2 heterostructure by non-radiative energy transfer process	**P.-K. Barman**
	Fabrication of TiOx/copper oxide nanostrustures by laser ablation as photocatalyst for hydrogen production	**P. Pou-Álvarez**
	Core-selective silver-doping of gold nanoclusters by surface-bound sulphates on colloidal templates: From synthetic mechanism to relaxation dynamics	**S. Chandra**
	Exploring subthreshold control over HfO2 mirrors upon fs laser irradiation via target current measurements. Towards Understanding Damage Threshold Limit	**S. Irimiciuc**
	Effects of fs pulsed laser ablation on synthetic zeolite targets	**S. Orlando**
	Laser micromarking of dental implants for improved traceability	**V. Craciun**
	Production of copper-based nanostructures via pulsed laser ablation in different solvents and their properties for water splitting in alkaline electrolyte	**V. Iacono**
	Lasing in Atums Green: a New Phenylene-Based Conjugated Polymer	**V. Kumar**

M12 16:30 - 18:30 Schuman (1st floor)

Applications in Advanced Devices

Session Chair
J. England

16:30	Back-end-of-line and flexible substrate compatible ferroelectric memories for neuromorphic computing and adaptive sensing	**S. Majumdar**
16:45	Indium Gallium Zinc Oxide Based Ferroelectric Thin Film Transistors for Content Addressable Memory Cell Applications	**S. De**
17:00	2D MoS2 Charge Injection Memory FETs Utilizing Hetero-stack Dielectrics and Interface Traps	**L.-J. Widiapradja**
17:15	Impact of ferroelectricity on the electron-phonon coupling at oxide interfaces	**M.-A. Husanu**
17:30	Site-controlled fabrication of integrated graphene nanoribbons-based quantum dot devices using scanning probe nanopatterning	**X. Liu**

17:45	Physically Unclonable Functions Capable of Preventing Machine Learning Hacking Attacks Obtained by Disordered Interfacial-doping of Graphene Using Mixed Self-assembled Monolayers	S. Lee
18:00	New technologies for High Purity Germanium segmented detectors: from virgin crystals to innovative devices.	S. Bertoldo
18:15	Different Schottky barriers have been obtained by varying the Schottky metal and deposition parameters	S. Milazzo

N_P	16:30 - 18:30	Etoile (1st floor)
	Poster session	
	Simultaneous Recording of Independent Visible and Infrared Images in a Thin-Film Cavity for Multispectral Optical Security	D. Kang
	Selective growth of magnetic garnet crystals for optical isolator with Si guiding layer	H. Yokoi
	Traffic flow control on road intersections: Communication through Visible Light.	M.-A. Vieira
	Wafer-scale characterization of high-brightness blue micro-LED arrays with a high pixel density of 4233 pixels per inch for industrial mass production	H.-H. Park
	Fabrication of hierarchical surface structure by using nanoscale lateral wet-etching of Nickel films in lamellae layers	K. Jeong Hwan
	Photoluminescence and Electron Paramagnetic Resonance Spec-troscopy for Intrinsic Defects of ZnO Quantum Dots	H.-H. Kim
	Engineering of Formamidinium and Cesium for High-performance Perovskite Photodetectors with Low Dark Current	E. Hong
	Voltage-Tunable Broadband Ni-doped CuCrO2 Photodetector and Its Application in Optoelectrical AND Gate Logic	Y. Jeon
	Elaboration of perovskite thin films with metal-insulator transition for infrared optical modulation	A. Tausch
	Fiber photonics in frame of the optical fluxes waveguide-resonance propagation	V. Egorov
	Gallium-Doped Zinc Oxide Thin Film on Silicon for Near Infrared Plasmonics	K.-Y.-J. Hsu
	Bulk and Micro-Photoluminescence Studies of Perovskites	G. Arvanitakis
	Uniform and scalable printing of perovskite ink for new generation solar cells	D. Akin Kara
	Interactions in interphase regions of “KBi(MoO4)2 crystal / K2O-P2O5-MoO3-Bi2O3 glass” nanocomposite material	Y. Hizhnyi
	Effect of oxygen deficiency on Bi12GeO20 crystal phase luminescent properties	I. Avetissov
	Theoretical study of the structural, optical and ONL properties of some polyacetylene derivatives	W. Hafied
	Structural, optical and non-linear-ONL- optical analysis of halogen-substituted hexatriene	A. Djebaili
	Influence of the small cation on the spin relaxation in quasi-2D layered hybrid perovskites	A. Stadlbauer
	Dual-Light-Emitting Printable Fluorescent-Phosphorescent Metal-Organic Frameworks for Three-Dimensional Encryption	J.-W. Oh
	Development of light-controlled nanoparticle-polymer cell isolation array	S.-T. Hung
	The Play Role of Absorbers/Collectors in the Efficiency of Pioneering Radial Flexible Photo-Thermoelectric Optical Sensors.	A. Pires
	Establishing charge-transfer excitons in 2D perovskite heterostructures	J. Zhang
	Charge control of manganese ions in red phosphors based on magnesium germanates	L. Borkovska

O_P 16:30 - 18:30	Etoile (1st floor)
Poster session	
Performance analysis of Tin-based Perovskite-SnS Tandem solar cell using alternative hole transport and buffer layers	**F. Djeffal**
Effect of film composition and interlayers on the stability of tin perovskite solar cells.	**D. Gupta**
Increasing Halide Perovskite Stability with Food Additives	**C. Cartledge**
Effect of A-site engineering on the crystal structure and UV light photodetection properties of cesium copper iodide perovskite	**J. Nawrocki**
Nano-filters for perovskite solar cell stability enhancement	**S. Delgado Rodríguez**
Molecular doping of MAPbI3 with hole transport triazatuxenes: effect on solar cell performance.	**C. Coya**
Magnetron Sputtered SnO2 as Electron Transport Layer for Perovskite Solar Cells	**Y. Zakaria**
Europium bromide doped-CH3NH3PbI for stable and organic perovskite films	**J. Marí-Guaita**
Synthesis of perovskite nanocrystals using bio-inspried passivation agent for stability enhancement	**H.-Y. Yang**
A 2D lead halide hybrid system with the lowest bandgap and exciton binding energy	**D. Pariari**
Ultrastretchable perovskite solar module with high areal coverage of active devices with 3D printer-based fabrication process	**P. Lee**
First principles investigation of microscopic effects of additives bication thiocyanate slats in wide bandgap perovskites	**Y.-H. Chang**
Natural Clay Based Scaffold Layer for Perovskite Solar Cells	**B.-N. Bütün**
Impact of hexagonal stacking fault on defect distribution of metal halide perovskites	**Y.-W. Woo**
Perovskite solar cells based on lead-deficient Perovskites	**T. Pauporté**
Sulphur-doped CQDs to improve the photovoltaic parameters of perovskite solar cells	**Ç. Kirbiyik Kurukavak**
Controlling Intrinsic Quantum Confinement in Formamidinium Lead Triiodide Perovskite through Cs Substitution	**K. Elmestekawy**
Over 20% efficient FAPbI3-based perovskite deposited by hybrid evaporation-solution method as a mid-cell for triple junction solar cells	**M. Golobostanfard**
Encapsulated Cs0.1(MA0.17FA0.83)0.9Pb(I0.83Br0.17)3 triple cation perovskite in MOF-5 as a highly efficient material for Stable perovskite solar cell	**P. Goel**
Super Stable Quadruple-cation Bromide Perovskite Solar Cells- From Fundamental Research To Final Application.	**N. Heshmati**
Using ZnCo2O4 nanoparticles as the HTL for fabricating perovskite solar cells with enhanced device stability	**S.-H. Yang**
Synthesis of perovskite nanocrystals tethering conjugated sulfonate ligands for light-emitting application	**S.-H. Yang**
Full-Color Micro-LED Display Enabled by Highly Stable Photo-Patternable Perovskite Quantum Dot Resin	**H. Shim**
Flash Annealed Nickel Oxide for Large Area Perovskite Solar Cells	**E. Ochoa-Martínez**
Light and Iodine-Induced Phase Segregation in Mixed-Halide Perovskites Studied by Optoelectric and X-ray Diffraction Methods	**J. Holovský**
Dual passivation strategy to suppresses non-radiative recombination in narrow bandgap Pb-Sn perovskite solar cells for achieving efficiency above 20%	**J. Kurisinkal Pious**

P_P 16:30 - 18:30	Etoile (1st floor)
Poster session	
Quantitative analysis of CNT network morphology of R2R-printed CNT-TFTs via machine learning AFM image processing	S. Na
Electronic Structure and magnetic properties of Eu doped GaN nanowires: An Ab-initio study for spin-optoelectronic applications	V.-K. Gudelli
Locating the solvated electrons in alkali metal doped zeolites	D. Sarker
Microstructure and mechanical properties of Ta-Al-B coatings	C. Hu
Prediction of icephobic performance on textured surfaces using experimental techniques combined with data-driven approach	M. Marzook
YSrFeCrO6 as a Robust Ferromagnetic Semiconductor with Large Photovoltaic Efficiency	A. Ray
Hydrogen impurity in the bulk and proper/imporper ferroelectric domain walls	M. M. Khalid
Modelling crack initiation processes in boron-based ceramics	N. Koutna
Cellular Automata Simulation of Crystal Growth	D.-K. Tirkey
Physical Unclonable Functions with Unpredictably Disordered Resistance of HGO and PGO According to Concentration Control of Differently Synthesized Graphene Oxide Flakes	S. Lee
A neural network interatomic potential for nanoindentation: The case of pure molybdenum	A. Naghdi Dorabati
Systematic Modification of Functionality Through Free Energy Surface Tailoring	D. Mendels
Calcium Silicate Hydrate Surface - Ca or Si Termination?	Z. Casar
Ab Initio Calculations of the Raman Spectra of Thin Strontium Titanate Films with and without Adsorbates	V. Krasnenko
Protamine-Controlled Reversible DNA Packaging: A Molecular Glue	Y. Lansac
Molecular Modeling of Flexible Electronics: Enhancement of Conductivity and Stretchability of PEDOT:PSS by Hard-Cation-Soft-Anion Ionic Liquids	Y.-H. Jang
Interaction of graphene with 3d Cu(n) & 5d Au(n) atomic clusters (n =1-5): ab initio study to probe the structural, electronic, and spin-based properties-	R. Murugesan
Core structure analysis of dislocations in TWIP steel under the Meta-atom framework: An assessment	S.-S.-R. Pulagam
Fermi Level Instability as the Way to Tailor Properties of La3Te4	M.-R. Khan
Molecular Dynamics Studies of Organic Photovoltaics	J. Hong
Deciphering the electrochemical window potentials of ionic liquid electrolytes for Dual Ion Batteries: A Machine Learning Based Approach	S.-S. Manna
Role of Electrolyte Components in Solid Electrolyte Interphase formation in Al Anode Dual-Ion Batteries	S. Das
Dynamical thermal activated effects of metal atoms doped molecular and atomic gas adsorption in graphene: A multiscale computational study by SCC-DFTB	A. Aligayev
Giant anomalous thermal Hall effect in tilted type-I magnetic Weyl semimetal Co3Sn2S2	A. Roy Karmakar
Effects of exchange-correlation functionals on predicted bulk properties of hexagonal hydroxyapatite	X. Wang
Machining mechanism and deformation behavior of NiAlTiCuZr alloy under conventional and multi-dimensional vibration cutting	T.-H. Fang
Effect of magnetic ordering on optoelectronic properties of 2D materials	A. Yadav
Noble gas defects promoting formation of acceptor defects in ZnO	L. Lovelesh

Role of band filling correction in accurate calculations of defect formation energy in gapped metals	**H.-R. Gopidi**
Martensitic Transformation and Electronic Properties in Zr and Cu-doped NiTi Alloys: A First-Principles Investigation	**T. Adhikary**
High Pressure Chemistry of Some Iron Complexes	**P. Gain**
Nonlocal correlation effects due to virtual spin-flip processes	**P. Buczek**
Thermodynamic computations for the refractory compounds high temperature electrochemical synthesis possibility substantiation	**T. Stesyuk**
Data-Driven Design of Transition Metal-Substituted NASICON-Type Electrodes for Sodium Ion Battery Utilizing Graph-Based Neural Network	**S. Yoonsu**
High Pressure Chemistry of Some Iron Complexes	**P. Gain**
Investigation of structural and magnetic properties for magnetic materials	**A. Okos**
A multi-scale study of Co-Free Cantor alloy: Thermodynamic stability and mechanical properties	**R. Alvarez-Donado**
AI-based spreadability analysis of cosmetics and topical medications for improving sensory evaluation	**Y.-S. Yang**
Giant Flexoelectricity in Janus IV–VI Nanotubes	**K. Zheng**
Calculation of the Judd-Ofelt parameters for neodymium-activated new oxochloride lead-borate glasses	**I. Avetissov**
A novel kinetic Monte Carlo model for magnesium phosphate conversion coatings film growth on a Mg AZ31 alloy substrate for car body applications	**P. Kekarjawlekar**
Effects of Crystallographic Orientation on Deformation Behavior of Monoclinic Zirconia Subjected to Nanoindentation: Molecular Dynamics Simulations	**S. Fazeli**
First-Principles Calculations of Energy Loss Near Edge Structure (ELNES) spectra of High-k Dielectric Thin Films	**J. Park**
Synthetic Image Generation for Improving Surface Defect Classification in Solid Oxide Fuel Cells using Generative Adversarial Networks	**W.-J. Lee**
Computational study of lipid-modified DNA: self-assembly and interaction with a bilayer membrane	**E. Jeon**
Kinetic Monte Carlo (KMC) Simulation of Single-layer MoS2 Compared to Actual Growth	**Y. Kang**
Enhancing Materials Science Research through Machine Learning: A Study of Meta-Learning Techniques for Improving Predictions with Limited Data	**S.-J. Bong**
Computational Characterization for Electrical Conductivity of Hybrid Nanocomposite under mechanical deformation	**H. An**
First-principles study on phase stability of Ce1-xNixO2-d solid solution	**H.-K. Kim**
Data-driven Fatigue Strength Prediction of Aluminum Alloys	**M.-S. Quraishy**
A high-throughput search of 2d materials for Li-ion batteries	**H. Alipour**
Ab initio study of ScAlO3 under high pressure	**A. Muñoz**
Time dependent density functional theory calculations of semiconducting materials for efficient visible light driven photocatalytical water splitting and photovoltaics	**S. Piskunov**
Topology Optimization of Cantilevered Energy Harvesting Piezoelectric Structures	**C. Mercado**
A Machine Learning-accelerated Density Functional Theory (ML-DFT) Screening of Bimetallic Transition Metal Surfaces based on Single-Atom Adsorption Energy Predictions	**J. Ocon**
A DFT study of oxygen vacancy formation in pure and transition metal doped titanates	**L. Borkovska**

Poster session	Chairman A. Caillard J. Gonzalo S. Konstantinidis M. Nistor
In situ monitoring of electrical resistivity during pulsed laser deposition of p-type copper halides films	**J. Lancok**
Influence of deposition parameters on the microstructure of GeTe-Sb2Te3 heterostructures grown by pulsed laser deposition	**S. Cremer**
Spin-gapless semiconducting nature in epitaxial thin films of equiatomic quaternary CoFeCrGa Heusler alloy	**D. Rani**
Controlling the tungsten films structure by recessive and pulsed current electrolysis modes	**T. Stesyuk**
Spectroscopic ellipsometry of porous black aluminium thin films	**E. Maresova**
Deposition of superhard WB2 based films using HiPIMS	**M. Lewandowska**
Effect of PLD parameters on optical properties of nickel oxide thin films	**E. Horynova**
Photo-resistivity in nickelate films with tailored structure	**A. Stupakov**
Tuning the infrared dielectric and plasmonic properties of pulsed laser deposited ZnO thin films	**M. Tabbal**
Zirconium oxynitrides thin films by reactive magnetron sputtering for the oxygen reduction reaction	**A. Caillard**
Effect of silicon content and thermal treatment on structural and optical properties of hafnia-based films	**L. Khomenkova**
Thermal conductivity of thin films and bulk BiFeO3 determined by opto-thermal Raman spectroscopy method	**C. Himcinschi**
Growth and properties of Ga2Ox (x < 3) thin films obtained by pulsed-laser deposition	**J. Perriere**
Black amorphous zinc oxide thin films grown by pulsed electron beam deposition	**M. Nistor**
Spectral and structural investigation of e-beam evaporated yttrium based oxide, and oxyhydride thin films	**H. Arslan**
Homo-epitaxial growth of Lithium Niobate by Pulsed-Laser Deposition	**I. Pershukov**
Effect of Ba+ ion implantation on the composition of silicate glasses	**D. Tashmukhamedova**
Carrier density distribution, potential profile, and energy sub band calculation of a conducting interface LaVO3/SrTiO3 using optical and transport measurement.	**A. Kumari**
Structure and properties of RVO3 epitaxial thin films grown by pulsed laser deposition	**M. Martirosyan**
3d – 4f exchange-strictive interactions in perovskite rare-earth vanadate thin films	**O. Copie**
Unusual angular dependence of the magnetoresistance in the LaVO3-KTaO3 Rashba system	**A. Gupta**
Features of pulsed laser deposition of luminescent lanthanum vanadate films	**O. Chukova**
Phase-electrical function relationship of vanadium oxide based heterostructures	**R. Plugaru**
XPS characterization of functional materials: beyond the surface chemical nature analysis	**N. Laidani**
Spectro-microscopic investigation of 2DEGs in Al - KTaO3 interfaces	**A. Raji**
Effect of surfactant on the morphology and tarnishing behaviour of nanostructured Au coatings deposited via ultrasonic-assisted pulse-galvanostatic route from a deep eutectic solvent-based bath	**B. Satpathy**
Fabrication of nanostructures consisting of composite nanoparticles by open-air PLD	**A. Dikovska**

	Nanocrystals synthesis by atmospheric air breakdown voltage generated by the interaction between microwaves and metallic wires	**V. Craciun**
	Antibacterial activity of MAPLE coatings based on the magnetite nanoparticles functionalized with Nigella sativa and antibiotics	**V. Craciun**
	Fabrication of Gold and Silver Nanostructured Films by Pulsed Laser Ablation and Application to SERS Substrates	**N. Takeda**
	Exploring the biocompatibility and antibacterial activity of immobilized Ag NPs doped Bio-HEA coatings for orthopedic implants	**A. Motallebzadeh**
	Cytocompatible and antimicrobial assessment of novel marine-derived hydroxyapatite coatings	**L. Duta***
	Effect of annealing temperature on optical and microstructural properties of Cu-based transparent heat reflectors obtained by HiPIMS and RFMS processes	**I. Pana**
	Pulsed Laser Deposition of ceramic solid electrolyte thin films for solid state microbatteries	**A. De Bonis**
	High-rate HiPIMS reactive sputter deposition of p-type Cu2O-based thin films for translucent electronics applications	**J. Rezek**
	Pulsed laser deposition of LaAlO3 films for MEMS applications	**L. Cichetto Jr**
	Gold thin film composites for highly sensitive plasmonic biosensor	**M. Gireau**
	Electrical and gas sensing properties of ZnO-WO3 mixed oxide nanostructures produced by open-air PLD	**T. Dilova**
	Lead free BCTZ thin films for gas detection	**V. Ion**
	Physical-chemical characteristics and in vitro biofunctional performance of bioceramic implant-type coatings fabricated from renewable sources	**L. Duta***
	Accelerated molecular dynamics of pulsed plasma synthesis for linear-chained carbon	**E. Buntov**
	Influence of the flexible substrate on the properties of the organic films prepared by MAPLE	**G. Petre**
	Effect of laser deposited flexible transparent conductor electrode on the properties of organic heterostructures	**G. Petre**

R08	16:30 - 18:30	Madrid 1 (Ground floor)
	Sensors and Bio-devices	**Chairman** S. Mandal
16:30	Boron-doped diamond enriched vertical graphene nanostructures for electronic and sensing applications	**M. Pierpaoli**
17:00	Protein immobilization on ultrananocrystalline diamond for biosensing applications	**C. Popov**
17:15	Exploring the impact of ionizing radiation on neuronal networks and neuroendocrine cells with advanced diamond-based cellular sensors	**F. Picollo**
17:30	Virus Capture by nanodiamond modified membranes	**O. Williams**

T08	16:30 - 18:30	Varsovie (Ground floor)
	Electron Microscopy and Micromechanics	**Chairman** J. Arbiol M. Hugenschmidt
16:30	Environmental Electron Tomography for material science	**L. Roiban**
17:00	Machine-learning-based, in-situ estimation of ceramic's microstructure upon the laser spot brightness during laser sintering	**F. Peng**
17:15	Direct injection of coherent free-electron radiation into an optical fiber	**M. Liebtrau**

	17:30	Two Microscopes are better than One - in-situ Correlative Analysis by Combination of AFM and SEM	**H. Frerichs**
	17:45	Nanoindentation material testing using SMART and SMART CUBES for non-ambient conditions	**D. Bedorf**
	18:00	In situ Extreme Micromechanics – Recent Innovations and Prospects	**R. Widmer**
AW	**18:30 - 19:30**		**Schweitzer (Ground floor)**
	Award Ceremony		
	18:30	Thin Film Implants for Bioelectronic Medicine	**G. Malliaras**
CB	**19:30 - 22:00**		**Main Entrance**
	Social event		

PLEN 03	08:45 - 09:45		Schweitzer (Ground floor)
	Plenary session 3		
	09:30	Expanding plasma technologies for sustainable world	**M. Shiratani**
CB7	10:00 - 10:30		Exhibition area (Ground floor)
	Coffee Break		
A12	10:00 - 12:00		Marie Curie B (1st floor)
	In situ and operando analysis I:devices		**Chairman** A.-K. Opitz
	10:00	Spatially and temporally resolved operando measurements on solid oxide cells of device-representative size	**J. Van Herle**
	10:30	Study of ion transport in thin-film batteries by operando spectroscopic ellipsometry	**A. Morata**
	10:45	Exploration of the resistive switching mechanisms in La2NiO4+d-based devices by in situ and operando spectroscopic techniques	**M. Burriel**
	11:00	In-operando optical tracking of phase change and oxygen vacancy migration in ultra-thin film binary oxide ferroelectric memories	**A. Jan**
	11:15	Electronic structure and charge transport in NaNbO3	**A. Klein**
	11:30	Analysis of Behaviours and Characteristics for All-Solid-State-Batteries via In-situ XRD technique	**J. Koo**
	11:45	Sustainable solution-processed oxide memristors: Approaches to interface analysis by XPS	**J. Deuermeier**
B1_09	10:00 - 12:00		Schweitzer (Ground floor)
	Development, Characterization, and Applications of Energy Materials		**Chairman** J. Maier J. Roscow
	10:00	Structure property relationships in polar perovsktie oxides	**N. Khansur**
	10:30	Phonon dispersions of Ta- and Ti-doped Fe2VAl Heusler-type thermoelectric materials studied by inelastic X-ray scattering	**K. Kimura**
	10:45	Clarification of the structural origin of an enhanced ductility in Mg-REEs alloys using x-ray fluorescence holography	**T. Kato**
	11:00	X-ray fluorescence holography (XFH) of ß-PdBi2 imaging using point- and 2D- CdTe detectors at ambient temperature	**H. Sekhar**
	11:15	Structural study on ZnFe2O4 by x-ray fluorescence holography	**S. Hosokawa**
	11:30	Robust chemical state analysis of Sn-based perovskites via Auger parameter analysis in XPS	**A. Wieczorek**
	11:45	Structural and surface properties of Ca-doped BaTiO3	**R. Gan**
B2_06	10:00 - 12:00		Dresde (1st floor)

Processing and Properties of Chalcogenides Semiconductors including Perovskites 1

Chairman
P. Wellmann

10:00	Synthesis of chalcogenide perovskite thin films	**J. Scragg**
10:30	Optimization of interface carrier transport in band gap graded flexible Cu(In,Ga)Se2 thin film solar cells	**H.-K. Park**
10:45	Fabrication of Precursors for Chalcogenide Perovskite Thin Films	**T. Freund**
11:00	Metastability in Dark Current Diode Characteristics of Chalcogenide Photovoltaic Modules	**B. Friedel**
11:15	Complete determination of thermoelectric and thermal properties of supported few layers 2D materials	**M. Rahimi**
11:30	Comparison of one and two-stage growth approaches for close space sublimation deposited Sb2Se3 thin film solar cell.	**D. Sindi**
11:45	Surface treatments of FeS2 microcrystals as absorber material for monograin layer solar cell	**K. Kristmann**

C11 10:00 - 12:00 — Marie Curie A (1st floor)

Photocatalysis 4

Chairman
A. Kahru

10:00	Photo-electrocatalytic degradation of contaminants of emerging concern in water and wastewater – materials and challenges	**P. Ferna´Ndez-Iban~Ez**
10:30	Design and Characterization of 2D and 3D Nanostructures of ZnO for an Efficient Photocatalytic Performance	**E.-(. Daher**
10:45	Green synthesis of photocatalytic TiO2/Ag nanoparticles for application in water treatment	**M. Cantarella**
11:00	Titanium dioxide-based heterojunctions study and photocatalysis	**F. Giuffrida**
11:15	Development of efficient ZnO nanorod based photocatalysts	**M. Krunks**
11:30	Simultaneous oxidation of urea and production of hydrogen using photoelectrocatalysis	**J.-A. Byrne**
11:45	Polymer/TiO2 hybrid films activated by laser annealing: Application in water purification	**M. Zimbone**

D1_12 10:00 - 12:00 — Cassin (Ground floor)

Water splitting/HER OER 3

Chairman
A.-K. Surca

10:00	Nanoporous Cubic Silicon Carbide for Hydrogen Production from Solar Water Splitting	**J. Sun**
10:30	Low-cost synthesis of MoS2/MoO3 nanostructures from recycled metallic powder for water splitting applications	**F. Ursino**
10:45	ZnO/BiOI Heterojunction with Enhanced Photoelectrochemical Activity Fabricated via Aerosol-assisted Chemical Vapour Deposition	**M. Wang**
11:00	Development of N-GQDs@NF as highly efficient and stable electrocatalyst for the oxygen evolution reaction.	**M.-J. Im**
11:15	Composition-controlled chemical bath deposition of Fe-doped NiO microflowers for boosting oxygen evolution reaction	**S. Battiato**
11:30	Guidance to Sustainable Materials Processing by Early-Stage Screening Life Cycle Assessment	**M. Widenmeyer**
11:45	Neutral Overall Water Splitting Microreactor of Bifunctional Monolayer WSe2/Graphene Self-Stitching Heterojunction	**C.-H. Chiang**

D2_12	10:00 - 12:00	Boston (1st floor)
	Photovoltaics 2	**Chairman** G. Mula
10:00	High performance transparent silver grid electrodes for organic photovoltaics fabricated by selective metal condensation	**R. Hatton**
10:30	Optimisation of performance and reliability of Electron Transport Layer (ETL) in Organic Solar Cells : for a sustainable and low carbon technology	**A. Chadaigne**
10:45	Solution processed Na-doped and Ag-alloyed Cu2ZnSnS4 thin film based photovoltaic devices	**N. Kumari**
11:00	Low-cost Synthesis of Silicon Quantum Dots and their Applications on Luminescent Solar Concentrators	**J. Zhou**
11:15	New Earth-Abundant Thin Film Solar Cells Based on Cu-doped Antimony Selenide	**R. Jakomin**
11:30	Sprayed quaternary chalcogenides for superstrate solar cells	**D. Payno**
11:45	Manganese-substituted Kesterite thin-films for Earth-abundant Photovoltaic applications	**V. Trifiletti**

E10	10:00 - 12:00	Madrid 2 (Ground floor)
	Thin Films and Nanomaterials 1	**Chairman** J.-F. Pierson
10:00	Nanocomposites and polymer thin films: from gas phase synthesis to functional applications	**F. Franz**
10:30	Analysis of thin film properties of BSB4 grown by close space sublimation (CSS)	**D. Barah**
11:00	Carbon Nitride Thin Films: an Innovative Platform for Energy Conversion and Storage	**P. Giusto**
11:15	Performance Enhancement of P3HT:PCBM Polymer Solar Cell by Doping with Phosphorus Doped Carbon Dots Additive	**Ç. Kirbiyik Kurukavak**
11:30	NH3-induced activation of atomically dispersed Fe-N-C cubic nanobox for enhanced oxygen reduction reaction	**B. Wu**
11:45	High Performance Zinc Ion Capacitor Enabled by Pseudocapacitance of Doped Nitrogen Active Sites	**K. Liu**

F13	10:00 - 12:00	OPS (Ground floor)
	Synthesis/Characterization 1	**Chairman** R. Puglisi S. Srivasatava
10:00	The Amphipathic Nature of Pristine Graphene Flakes and Short and Thin Pristine Carbon Nanotubes	**K.-Z. Milowska**
10:30	Novel self-assembled supramolecular dyads on graphene	**D. Kreher**
10:45	Synergy effects in carbon/magnetic nanoparticles epoxy resin composites	**J. Macutkevic**
11:00	Study of Magneto-Electric (M-E) Coupling Effect in Spin Triangle Based Metal (III) Carboxylate [M3O(O2CPh)6(py)3] ClO4.py (M= Fe, Ga) Molecular Nanomagnet.	**B.-S. Chauhan**
11:15	Influence of Fe and Cu Co-Doping on Structural, Magnetic and Electrochemical Properties of CeO2 Nanoparticles	**A. Alshoaibi**
11:30	Structural, Electrical and Optical Properties of TM (Mn and Cr) Doped BiFeO3 Nanoparticles	**A. Alshoaibi**
11:45	Synthesis of palladium nanoparticles using colloid approach	**I. Saldan**

Fbis01	10:00 - 12:00	Madrid 1 (Ground floor)
	Photonics/Optoelectronics 1	**Chairman** Y.-K. Mishra S. Sharma
10:00	Nanoprobes based on 3D GaP nanocones prepared by integration on single mode fibre.	**J. Novák**
10:30	Improvement of strained quantum well based on new material ZnSnN2/InyGa1-yN for optical components applications	**A. Aissat**
10:45	Absorption dominant electromagnetic interference shielding effectiveness of reduced graphene oxide/zinc oxide coated cellulose-based textiles	**S. Gupta**
11:00	Inverted top-emitting red quantum-dot light-emitting diodes on silicon for microdisplay applications	**S. Sim**
11:15	Oxidation in nanocrystalline silicon: spatial resolution, photooxidation, and photoluminescence quenching after laser irradiation	**A. Ramirez-Porras**
11:30	Synthesis and optical characterization of NIR photoluminescent PbS nanocrystal-based aerogels	**D. Pluta**

H10	10:00 - 12:00	Rome (Ground floor)
	Nanostructures and Nanoparticles for Biomaterials Applications	
10:00	High Temperature Stable Anti-microbial Photocatalytic Nanomaterials for Building Material Applications	**S.-C. Pillai**
10:30	Smart core/shell magnetic nanoparticles and their further use in cancer therapy	**H. Alem**
10:45	Biofunctionalized circa 2 nm gold nanoparticles for exploring intracellular machineries of human cells at cryo-Electron Microscopy resolution level	**G. Zuber**
11:00	A versatile and controllable strategy for synthesizing a cadherin-magnetic nanoparticle bioconjugate as a novel magneto-mechanical cell actuator	**C. Castro-Hinojosa**
11:15	In vivo enhancement of tissue regeneration through Magnetic Hyperthermia mediated ROS production	**S. Del Sol-Fernández**
11:30	Synthesis of Surfactant-Free Starch-Based Microspheres in Different Size Ranges and Factors Affecting the Synthesis Process	**E.-N. Karagulle**
11:45	Application of hybrid magnetoplasmonic nanoparticles for SERS detection of cancerous kidney areas	**S. Adomaviciute-Grabusove**

L11	10:00 - 12:00	Etoile A (1st floor)
	Laser-induced Plasma and Applications	**Chairman** G.-F. De La Fuente
10:00	Laser ablation combined with electric sparks for element analysis of steels and polymers by optical emission spectroscopy	**J. Pedarnig**
10:15	Laser-induced reactive micro plasma as an advanced tool for high quality surface engineering	**K. Zimmer**
10:30	Combining atmospheric pressure plasma jet processing with pulsed laser ablation for ultra-precise processing of technical glasses	**R. Heinke**
10:45	Rethinking ionic oscillations in ns-laser produced plasmas	**S. Irimiciuc**
11:00	Laser-Induced Thermal Desorption for Probing Adsorption on Carbon Surfaces: A Combined Experimental and Theoretical Study	**J. Al Aseel**

11:15	Application of laser technologies to control the crystallinity of Cu2O and ZnO layer deposited by SALD	**A. Frechilla**
11:30	Laser-Induced Graphene as electrode material in Proton-Exchange Membrane Fuel Cells	**T. Serra**
11:45	Laser-synthesis of Tin Sulfides	**A. Averchenko**

M13 10:00 - 12:00 — Schuman (1st floor)

Substrate Technologies and Layer Synthesis II

Session Chair
I. Radu

10:00	Strain engineering of Si/Ge heterostructures based on Ge virtual substrates	**K. Sawano**
10:30	Wafer-scale single crystalline MoSe2 and WSe2 monolayers grown by molecular beam epitaxy	**Y. Xia**
10:45	Synthesis of MoS2 layers by sputter deposition and pulsed laser annealing.	**A. Tonon**
11:00	Growth of transferable germanium membranes on porous substrate for flexible optoelectronics	**T. Hanus**
11:15	Van der Waals epitaxy of CdTe on 2D surfaces	**E. Tourard**
11:30	Lamellar GeP thin films: a first step on the road toward 2D-GeP	**M. Stoffel**
11:45	Synthesis of relaxed Ge0.9Sn0.1/Ge by nanosecond pulsed laser melting	**E. Di Russo**

N04 10:00 - 12:00 — Londres 1 (Ground floor)

Fabrication & Patterning

10:00	Top-down and bottom-up fabrication of electro-optic lithium niobate and barium titanate devices	**R. Grange**
10:30	Structuring and Patterning Silicon Nanowire Arrays for Engineering Light Absorption in Three Dimensions	**G. Bourret**
10:45	Gate Tunable Near-Infrared Plasmonic Resonances in Atomically Thin NbSe2	**M. Zhao**
11:00	Strategies to obtain chiral perovskites via surface modification	**M. Heindl**
11:15	High-Pressure-Engineered Optical Properties of Hybrid Perovskites from Bulk to Low Dimension	**T. Yin**
11:30	3D additive fabrication for CMOS-compatible integration of scalable neural networks	**D. Brunner**

O7 10:00 - 12:00 — Churchill (1st floor)

Novel materials and deposition techniques

Chairman
M. De Bastiani
P. Juan Martínez

10:00	Pulsed Laser Deposition of Halide Perovskites: A Single-source, Dry, Vapor Deposition Approach	**M. Morales-Masis**
10:30	Surface Functionalized MXene-based Halide Perovskite Solar Cells	**A. Paingott Parambil**
10:45	Investigation of perovskite solar cells with guanidinium iodide doped MAPbI3 active layer	**T.-C. Chang**
11:00	Interface Quality and Stability Correlation in Photonically Cured Solution Processed Tin Oxide Thin Films based Perovskite Solar Cells	**N. Sarda**
11:15	Out-of-Glovebox Integration of Recyclable Europium-Doped CsPbI3 in Triple-Mesoscopic Carbon-Based Solar Cells Exceeding 9% Efficiency	**S. Valastro**

11:30	Control of Perovskite Film Crystallization and Growth Direction to Target Homogeneous Monolithic Structures	T. Pauporté
11:45	Functional layers engineering for efficient and durable flexible perovskite solar cells	Z. Jing

P11 10:00 - 12:00 — Londres 2 (Ground floor)

Methods for Materials Discovery I

Chairman
E. Ertekin

10:00	Fully Quantum (Bio)Molecular Simulations: Dream or Reality?	A. Tkatchenko
10:30	Thermodynamic Origin of nuclei formation, unimodal size distribution, and its temperature-dependent shape transition	J. Sung
10:45	3d kMC modelling of Cu on Cu(001) homoepitaxy under GLAD growth conditions: ripple's formation and their orientation transition	F. Nita
11:00	Ab-initio high-throughput screening for magnetic MAX phases	A.-M. Malik
11:15	Strutural and energetic studies of boronic-acid-functionalized polyaniline (B@Pani) monomers and dimers using Density Functional Theory approach	M.-A. Salvador
11:30	Combining Theoretical Approaches in Understanding Defect Chemistry and Ionisation Potential of CeO2	X. Zhang
11:45	Off-stoichiometry and ordered defect compounds in Cu-(In,Ga)-Se system	K. Sopiha

Q06 10:00 - 12:00 — Amsterdam (Ground floor)

Applications

Chairman
V. Demange
G. Koster

10:00	Reactive pulsed sputtering of semiconducting ternary oxide thin films for photoelectrochemical water splitting and hydrogen production	Z. Hubicka
10:30	Growth of epitaxial a-Fe2O3 and ZnFe2O4 thin film photoelectrodes by pulsed laser deposition for solar water splitting	K. Miriyala
10:45	Growth of binary oxide thin films for medical applications.	A. Yadav
11:00	Development of VO2 thin films, the beginnings of a radiative thermal transistor	I. Alonzo-Zapata
11:15	Influence of PLD deposition parameters on the structural properties of VO2 epilayers for smart windows applications	A. Rai
11:30	AlxTayOz thin films deposited at low temperature by pulsed direct current reactive magnetron sputtering for dielectric applications	R. Drevet
11:45	Experimental band structure of ferroelectric Pb(Zr,Ti)O3 and what can we learn from it	M.-A. Husanu

U01 10:00 - 12:00 — Berlin (Ground floor)

Techniques and Methods for a deeper knowledge of CH

Chairman
G. Padeletti

10:15	Non-invasive (chemical) imaging of works of art – some case studies illustrating current possibilities	K. Janssens
10:45	Stratigraphy of ancient frescoes: a new approach with photoacoustic and SORS imaging	F.-A. Pisu
11:00	Innovative nano-engineered formulations for the protection of frescoes from microbiological attacks	M. Moglianetti

11:15	Innovative method for provenance study: a new algorithm based on observables from high-resolution Raman spectra	D. Chiriu
11:30	Nanostructured ZnO/CuO based chitosan hydrogel coating for the protection of cultural heritage buildings and sculptures	S. Basak

V01	10:00 - 12:00	Luxembourg (Ground floor)
	Nanoparticles: synthesis and interactions	Chairman F. Sheffold
10:00	Self-assembly of patchy colloids for photonics: colloidal diamond and chiral structures	D. Pine
10:45	Surface-topography quantification of DNA-functionalized colloids via super-resolution microscopy	B. Rouhvand
11:00	Patterned assembly of DNA coated colloids using UV/Blue light input	B. Malheiros
11:15	Transient Binding Events on DNA Simulations	R. Rivas Barbosa
11:30	Probing temperature-responsivity of microgels by super resolution microscopy	X. Shaulli
11:45	Unveiling the mechanism of laser trapping prepared Au nanoparticle swarming	J. Jui-Kai Chen

I11	10:30 - 12:00	Bruxelles (Ground floor)
	Tutorial Advancing Frontiers in Biomaterials and Nanomedicine	Chairman P. Chen
11:00	Introduction	P. Siffert
11:10	Frontiers in Neurosensorics	D. Julius

LU4	12:00 - 13:30	Hall 5
	Lunch	

I12	13:00 - 16:00	Bruxelles (Ground floor)
	Tutorial Advancing Frontiers in Biomaterials and Nanomedicine	
13:00	Validation of Nanomedicine in Animal Models by Real-time Two Photon Imaging	P. Chen
13:30	Indocyanine Green-loaded Activatable Theranostic Nanogels for Image-guided Photodynamic Therapy and Enhanced Immunotherapy of Rapidly Growing Cancers	Y.-D. Choi
14:00	Magnetic Nanoparticles for Theranostics	Y. Ichiyanagi
14:30	Concurrent and sensitive detection of duplex in opto-electrochemical platform	M.-H. Lee
15:00	From Waste to Biomedical Resources: Applications of Keratin to Tissue Regeneration, Nanomedicine and Hemostasis Agent	J. Yu
15:30	Development of Bacteria-Targeted Mesoporous Silica Nanotherapeutics for Wound Healing	S.-H. Wu

A13	13:30 - 15:00	Marie Curie B (1st floor)
	In situ and operando analysis II: surfaces and interface phenomena	**Chairman** A. Orera
13:30	In situ photoelectron spectroscopy reveals the chemical nature of semiconductor surface states	**M. Favaro**
14:00	Probing Electrode/Electrolyte Interfaces via Operando Piezoelectric Sensing	**O. Sel**
14:15	In Operando XAFS on Local Structure and Electronic State of Tungsten Oxide Nanoparticles with Different Crystal Structure under Electrochromism	**M. Takahashi**
14:30	Growth and Resistive Switching Properties of Single Crystalline HfO2 Thin Films	**K. Goß**
14:45	In-operando spatiochemical depth profiling of interfaces in Li/LiPON/LMO on-chip solid-state batteries.	**A. Panagiotopoulos**

B1_10	13:30 - 16:00	Schweitzer (Ground floor)
	Development, Characterization, and Applications - Atomic and Microscale	**Chairman** R. Gan A. Martin
13:30	Electronic Coupling of Highly Ordered Perovskite Nanocrystals in Supercrystals	**P. Schall**
14:00	Bulk Photovoltaic Effect in Ferroelectric Vertically Aligned Nanocomposites	**E. Palladino**
14:15	Thin film of lanthanum cobaltite LaCoO3 for solar thermal collectors	**A.-A. Bande**
14:30	Texturing and ferroelectric properties of SrxBa1-xNb2O6 thin films prepared by aqueous solution deposition	**V.-H. Pedersen**
14:45	Increasing the Open-circuit Voltage in a-Si:H/oxide Ultrathin Transparent PV Devices via Electron Transport Layer Optimization by Incorporating Dipolar Molecules	**A. Lopez-Garcia**
15:00	Influence of cooling rate and atmosphere on the structural and dielectric behavior of lead free-ferroelectric Bi1/2K1/2TiO3 (BKT)	**G.-E. Eyoum**
15:15	Local structure-function control in a low band gap Mn-Nb co-doped BaTiO3 ferroelectric	**S. Mukherjee**
15:30	Doping control in metal oxides transparent electrodes by ion implantation	**F. Tringali**
15:45	Synthesis of PVDF-based materials for optimal multiphysic energy harvesting	**M. Fricaudet**

B2_07	13:30 - 15:00	Dresde (1st floor)
	Processing and Properties of Chalcogenides Semiconductors including Perovskites 2	**Chairman** T. Freund
13:30	Hybrid Pulsed Laser Deposition of Perovskite and Related Phases of Chalcogenides	**J. Ravichandran**
14:00	Fundamental Vibrational Properties and Crystallographic Orientation Evaluation of Sb2S3 by Means of Multiwavelength Raman Spectroscopy	**V. Rotaru**
14:15	Effect of composition on structural and optoelectronic properties in combinatorially synthesized BaZrS3 thin films	**A. Röttger**
14:30	Negative Doping in Semiconducting 2H-MoS2 and Surface Functionalisation	**A. Krajewska**
14:45	MoS2 Wrapped N-Doped Carbon for Batteries Beyond Lithium	**S. Priya**

C12	13:30 - 15:00	Marie Curie A (1st floor)
	Photocatalysis 5	**Chairman** M. Mortimer
13:30	Enhanced Assisted Photocatalytic Performance of Cu-doped TiO2 Semiconductors through the Addition of MXene Layers – Application for Wastewater Treatment and H2 Production	**Z. Roostaei**
14:00	Enhanced removal of volatile organic compounds using carbon modified visible light active cerium oxide photocatalysts	**S. Saqlain**
14:15	A novel synthesis of ternary hybrid nanocomposite (WS2/ZnO/PPy) for waste water-treatment	**N. Tyagi**
14:30	Highly efficient nanostructured ZnO based catalysts synthesized by novel mist chemical vapor deposition	**C. Li**

D1_13	13:30 - 15:00	Cassin (Ground floor)
	Water splitting/HER OER 4	**Chairman** J. Sun
13:30	Porphyrins that ROCks: Meeting rational design rules for OER catalysis at lower overpotentials.	**D. Cardenas-Morcoso**
14:00	Designing In-situ Grown Ternary Oxide / 2D Ni-?BDC MOF Nanocomposites on Nickel Foam as ?Efficient Electrocatalysts for Electrochemical Water ?Splitting	**E. Sadeghi**
14:15	Interfacial interaction of Metal-Organic Framework-Derived Zn-Co-Fe LDH on Ultrathin Mxene Nanosheet for Electrocatalytic HER/OER Evolution	**A. Behera**
14:30	Exploring the Role of Mo and Mn in Improving the OER and HER Performance of CoCuFeNi-based High-Entropy Alloys	**U. Unal**
14:45	Cobalt Copper sulphide /Tungsten Disulphide Nanowire Heterostructure as an Excellent Bifunctional Electrocatalyst for Overall Water Splitting	**J. Gautam**

D2_13	13:30 - 15:00	Boston (1st floor)
	Photovoltaics 3	**Chairman** G. Tseberlidis
13:30	The interplay of chemical structure, physical properties, and structural design as a tool to modulate the properties of melanins within mesopores	**G. Mula**
14:00	First-principles calculations of defects in CsPbX3 (X = Br, I) crystals for photovoltaic applications	**E. Kotomin**
14:15	(Sb,Bi)2Se3 thin films for short wavelength infrared region solar cell applications	**J. Kumar**
14:30	Understanding the role of organic hole transport layers in Sb2Se3 solar cells	**T. Shalvey**
14:45	Germanium Substrate Manifold Reusability: A Cost-effective and Sustainable Manufacturing Path for III-V Solar Cells	**A. Chapotot**

E11	13:30 - 15:00	Madrid 2 (Ground floor)
	Sensors 2	**Chairman** A. Coclite S. Tamulevicius

13:30	Ag Nanoparticle Functionalized Reduced Graphene Oxide for Chemiresistive Sensing of ppb Level Pb(II)	M. Deb
13:45	Laser-induced graphene functionalised with carboxymethyl cellulose for real-time ambient sensing of volatile organic compounds	M.-K. Hoque
14:00	Controlled growth of 1D TiO2 nanotubes and their coupling with reduced graphene oxide for efficient sensing applications	V. Galstyan
14:15	Quick large-area detection of thin silicone films with Coherent-Anti Stokes Raman Scattering (CARS) Microscopy	J. Naser
14:30	Room temperature sensing of volatile organic compounds using hybrid SnO nanoflower and Laser-Induced Graphitic carbon devices.	R. Murray
14:45	High-spatial & energy resolution analysis of CN based Organic materials via monochromated Electron Energy Loss Spectroscopy (EELS)	J.-H. Jang

F14 13:30 - 15:00 OPS (Ground floor)

Synthesis/Characterization 2

Chairman
D.-K. Avasthi
V. Kumar

13:30	Solution grown multifunctional ZnO nanostructures: From heterostructured to large-scale efficient growth	A. Gokarna
14:00	Structural, electrical and optical properties of indium-zinc oxide thin films prepared from solutions	D. Kuscer
14:15	Synthesis of 3D metal oxide fiber networks using polymer-egg protein electrospun fibers as templates	A. Evanghelidis
14:30	Influence of electrodes on electrical properties of CBVD grown high-k composite ternary oxides.	R. Rani
14:45	High uniform thickness thin film on 450 mm substrates by Chemical Beam Vapour Deposition for smart multi-functional complex oxides	G. Benvenuti

Fbis02 13:30 - 15:00 Madrid 1 (Ground floor)

Photonics/Optoelectronics 2

Chairman
Y.-K. Mishra
S. Sharma

13:30	Enhancing the Electrical and Optical Properties of Thermochromic VO2: The Impact of Nanostructuring and Gold Nanoparticles	G. Savorianakis
14:00	Thermo- and Electrochromic Properties of Nanostructured Porous Silicon/VO2 Hybrid Thin Films	J. Volk
14:15	Antireflective structures directly imprinted on chalcogenide glasses	S. Tzadka
14:30	One-step printing for high-efficiency netasyrfaces down to the deep Ultra violet region	W. Kim
14:45	Smart radiation fluxes for nanoelectronics and nanophotonics	V. Egorov

L12 13:30 - 15:00 Etoile A (1st floor)

Ultra-short and Ultra-high Power Laser Interaction with Matter - II

Chairman
A. Mermillod-Blondin

13:30	Holographic optical engine (HolOE) for laser processing with beam shaping	Y. Hayasaki
14:00	Ionisation dynamics, damage conditions and surface patterning in fused silica irradiated with Mid-Infrared femtosecond pulses	G. Tsibidis

14:15	Laser-induced symmetry breaking in energy absorption of silicon induced by intense femtosecond laser pulse	**T. Derrien**
14:30	Correlating High-Harmonic Generation and Ionization Dynamics in Bulk Solids	**P. Juergens**
14:45	Few-cycle laser-written surface waveguides for evanescent field sensing	**L. Rammelt**

M14 13:30 - 15:00 — Schuman (1st floor)

Simulation and Modeling IV

Session Chair
A. Hemeryck

13:30	Multiscale simulations of critical processes for the fabrication and functionalization of nanostructures	**A. La Magna**
14:00	Multi-Threshold Voltages Enablement Using Oxide Dipoles in WFM-Less Gate Stack for n- and p- Type GAA Devices	**P. Jadaun**
14:15	A simulation workflow to couple the meso and atomistic scale for the CVD epitaxy of Si and SiGe-based structures	**G. Fisicaro**
14:30	Accurate and efficient 3-D analytic model of ion implantation based on Legendre polynomials	**N. Zographos**
14:45	TCAD process simulation of self-limiting oxidation of silicon nanowires	**C. Rossi**

N05 13:30 - 15:00 — Londres 1 (Ground floor)

Phase-change Materials

13:30	Photonic in-memory computing	**W. Pernice**
14:00	Optical switch of Sb2S3 phase change material for tunable nanophotonic applications	**C. Laprais**
14:15	Gallium Sulfide as Phase-Change Material for Photonic Applications	**Y. Gutierrez**
14:30	New functionalities enabled by phase change materials in silicon devices	**P. Sanchis**

O8 13:30 - 15:00 — Churchill (1st floor)

Perovskites for photonic applications 1

Chairman
G. Grancini
P. Juan Martínez

13:30	Vapor phase deposited halide perovskites for photonic applications	**C. Roldan Carmona**
14:00	Demonstrating multiple Metal Oxide charge transport layers in fully Inkjet-Printed Halide Perovskite LEDs on Flexible Substrates	**S. Gonzalez-Torres**
14:15	Temperature-Induced Morphology Optimization for High-Performance Green Emissive Cs3MnBr5 Perovskite Nanoparticles	**H.-C. Yoo**
14:30	The sharp blue and green emission in Eu-doped CsPbBr3 halide perovskite for the Optical Applications	**S. Kachhap**
14:45	Unveiling the electro-ionic coupling mechanisms in high-performance Perovskite Light-emitting Diodes through modulated techniques	**R. S. Sánchez**

P12 13:30 - 16:00 — Londres 2 (Ground floor)

Materials Acceleration Platforms

Chairman
S. Kadkhodaei

13:30	The engineering of research - from screening to acceleration and	**H. Stein**

	beyond	
14:00	Improving Lithium metal battery performance by pulsed current charging and discharging	K. Cicvaric
14:15	Locating novel polyanionic cathode materials for Li-ion batteries in underexplored chemical spaces	B. Zhu
14:30	Accelerated experimental synthesis of theoretically predicted semiconductors	A. Zakutayev
15:00	Integrating theory and AI/ML for materials characterization	M. Chan
15:45	Atomistic simulation of strain ageing in low carbon steel	E. Ekta

Q07	13:30 - 15:00	Amsterdam (Ground floor)
	Nanoparticles, nanostructures & nanoscale materials I	Chairman Z. Hubicka M. Nistor
13:30	A versatile technique for complex materials: a review on the Pulsed Electron Deposition	F. Pattini
14:00	Ultrafast laser processing of PLD-deposited Yb2O3-doped ZnO films	J. Solís
14:15	In-flight decoration of gas-aggregated ZrN nanoparticles with Ag using continuous and pulsed magnetron sputtering	M. Protsak
14:30	Ionised Jet Deposition system and method	P. Nozar
14:45	Optical Properties of Silicon NCs Embedded in SiO2 Fabricated by Ion Implantation and Reactive Pulsed Laser Deposition	T. Iwayama

U02	13:30 - 15:00	Berlin (Ground floor)
	World Heritage Case Studies	Chairman A. Bouquillon
13:45	Turning tragedy into opportunities: analyzing the fragments of the glass artefacts of the AUB Archeological Museum shattered by the Beirut August 2020 explosion	M. Tabbal
14:00	Mortars from the Monastery of Santa Maria de Alcobaça, in Portugal: characteristics and functions	J.-P. Veiga
14:15	Preservation of Bush Hammering Granite Ashlars of Casa de Mateus Palace Complex Chapel (Vila Real, Galicia-North Portugal Euroregion)	A.-J. López
14:30	Cleaning the Sydney Harbour Bridge: comparison between femtosecond and nanosecond pulse lasers	J. Brand
14:45	The original colour of the Apostles and the Evangelists on the Spire of Notre-Dame de Paris	A. Azema

V02	13:30 - 16:00	Luxembourg (Ground floor)
	Super-resolution microscopy and nanoparticles	Chairman P. Zijlstra
13:30	Plasmonic-polymer hybrid nanomaterials for light harvesting	C.-F. Landes
14:15	Super-resolution microscopy on nanoparticles: exploiting point-spread function deformations for precise localization	T.-A. Huijben
14:30	Orienting single molecules in DNA origami constructs	A.-K. Adamczyk
15:15	PSF distortion and mislocalization by dielectric nanoparticles in single-molecule microscopy	M. Fahim
15:30	Exploiting plasmon-fluorophore coupling for 3D localization microscopy	S. Mahajan

15:45	Investigating proteins on the surface of nanoparticles with Cryo-Electron Microscopy	I. Harley

H11	14:00 - 16:00	Rome (Ground floor)
	Bioinspired Coatings and Thin Film	
14:00	The antibacterial properties of multiple antigenic peptides: in vitro MIC evaluation and molecular dynamic simulations	E. Lebaudy
14:15	Poly(2-Ethyl-2-Oxazoline)-co-Polyethyleneimine and Heparin Multifunctional Coatings	G. Azizi Saadatlou
14:30	Silicon bioinstructive engineering for preventing microbial and fibrosis development	V. Dinca
14:45	Biodegradable Zein/Polyvinylpyrrolidone-based films for underwater delivery of Curcumin mitigate thermal stress effects in corals	M. Contardi
15:00	Limiting bacterial adhesion through bioinspired combinations of thin film coatings and topography	A. Whiteley
15:15	Crystal Engineering of Pyroelectric and Piezoelectric amino Acid mixed Crystals	D. Ehre

A14	15:00 - 16:15	Marie Curie B (1st floor)
	Alternative storage in the solid state	Chairman M. Burriel
15:00	Symmetry breaking – A peek into the field of oxide heterostructures	N. Pryds
15:30	Investigation of the low-temperature thermoelectric transport and intrinsic electronic structure of half-Heusler TiCoSb	F. Serrano Sanchez
15:45	Increased filling, structural disordering, and correlation with thermoelectric properties in Sn-doped CoSb3 skutterudites	J. Gainza
16:00	CMOS-Compatible and Scalable Electrochemical Synaptic Transistor Arrays for Deep-Learning Accelerator	Q. Cao

B2_08	15:00 - 16:00	Dresde (1st floor)
	Photonic Materials: Structure & properties	Chairman D.-K. Dobesh T. Otsuka
15:00	Development of Transparent Nanocrystallization of Oxyfluoride Glasses in Melt-quenching Process by Glass Structure Design	K. Shinozaki
15:30	Energy Conversion properties of Eu-doped barium fluoride thin films through a simple MOCVD approach	F. Lo Presti
15:45	The Local Atomic Structure of Amorphous Organotin Sulfide Compounds with Extreme Nonlinear Optical Properties	J.-R. Stellhorn

C13	15:00 - 16:00	Marie Curie A (1st floor)
	Adsorption methods	Chairman S.-C. Carroccio
15:00	Rethinking Food Protein Waste	R. Mezzenga
15:30	A TiO2 sponge to prevent lead pollution in water	C. Spampinato
15:45	Enhanced Cr(VI) uptake from drinking water using biochar-based nanocomposites	T. Asimakidou

D1_14	15:00 - 16:00	Cassin (Ground floor)
	Water splitting/HER OER 5	**Chairman** D. Cardenas-Morcoso
15:00	Comparative study of IrO2 and Ir metal nanoparticles: Raman spectroscopy and activity for oxygen evolution reaction	**A.-K. Surca**
15:30	Liquid metal catalysts for the production of ammonia	**T. Daeneke**
15:45	Manipulating Spin Exchange Interactions of Two-dimensional Metal Phosphosulfide Crystals for Water Oxidation	**C.-Y. Huang**

D2_14	15:00 - 16:00	Boston (1st floor)
	Photovoltaics 4	**Chairman** R. Hatton
15:00	Cd-free kesterite solar cells featuring titania as buffer layer	**G. Tseberlidis**
15:30	Highly improved photocurrent density and power conversion efficiency of perovskite solar cell by plasma-polymerized-fluorocarbon antireflection coating	**S.-J. Lee**
15:45	Sustainable Zinc tin oxide artificial synapses towards energy-efficient in-memory computation architecture	**A. Kiazadeh**

E12	15:00 - 16:00	Madrid 2 (Ground floor)
	Optical, electrical and thermal applications	**Chairman** C. Bittencourt
15:00	Exploring the Complex Structure and Luminescent Properties of Nitrogen-doped Carbon Dots via Optical and Nuclear Magnetic Resonance Spectroscopies	**C. Olla**
15:15	Thermal and electrical properties of nanographene-coated mesoporous silicon	**S. Nar**
15:30	Photoresponse enhancement of C nanofiber-based photodetector on CuNi nanoparticle inclusion	**S. Shukla**
15:45	Microelectronic technology on patterned ultra-thin reduced graphene oxide films.	**S. Majumder**

F15	15:00 - 16:00	OPS (Ground floor)
	Synthesis/Characterization 3	**Chairman** D.-K. Avasthi D. Janas
15:00	Engineering hexagonal/monoclinic WO3 phase junctions for improved electrochemical hydrogen evolution reaction	**G. Mineo**
15:30	All-ceramic Zirconia-Alumina Nanofibers for Durable Passive Daytime Radiative Cooling	**T.-C. Chen**

Fbis03	15:00 - 16:00	Madrid 1 (Ground floor)
	Photonics/Optoelectronics 3	**Chairman** A. Beniwal

		Y.-K. Mishra
15:00	New Emissive Organic-Inorganic Hybrid Nanomaterials Based on Organic Fluorophores Grafted onto Nanocrystals	**O. Margeat**
15:30	Spectroscopic studies of hybrids derived from organic-phosphonic acid with alkaline earth elements (Mg, Ca, Sr, Ba)	**P. Ganesan**
15:45	EDOT-based nanostructures written by STED-inspired nanolithography	**G. Gvindzhiliia**

L13 15:00 - 16:00 Etoile A (1st floor)

Laser-induced Melting and Crystallization

Chairman
M. Garcia-Lechuga

15:00	Laser Heating, Melting and Quenching of Thin Films	**J. Resl**
15:15	Pulsed laser crystallization of sputtered MoS2 layers	**A. Tonon**
15:30	Synthesis of relaxed Ge0.9Sn0.1/Ge by nanosecond pulsed laser melting	**E. Di Russo**
15:45	Pulsed Laser Melting for Sb heavy doping of Ge1-xSnx epilayers	**D. Fontana**

M15 15:00 - 16:00 Schuman (1st floor)

Silicides and Germanides III

Session Chair
A. Alberti

15:00	Tuning nickel silicide properties via ion implantation: the role of defects and impurities	**A. Vantomme**
15:30	Formation of the C54-TiSi2 phase using nanosecond laser annealing and RTA enhanced by amorphous silicon	**R. Guelladress**
15:45	Influence of the Si surface preparation on CoSi2 agglomeration	**A. Newman**

N06 15:00 - 16:00 Londres 1 (Ground floor)

Photodetectors

15:00	Optimization of light coupling, third order optical nonlinear properties and mid-IR photodetectors using integrated hybrid photonics	**S. Serna**
15:30	Influence of Shell thickness in 2D CdSe/CdS Core/Shell NPLs for High Performance Photodetector Applications	**A. Medda**

O9 15:00 - 16:00 Churchill (1st floor)

Perovskites for photonic applications 2

Chairman
G. Grancini
P. Juan Martínez

15:00	High-performance perovskite light-emitting diodes with tuneable near-infrared emissions and improved operational stability	**Z. Yuan**
15:30	Towards fully inkjet-printed 2D Lead-Free Halide Perovskite Red-emitting LEDs on Rigid and Flexible Substrates	**G. Vescio**
15:45	Molecular Interaction Strategies Enable Highly Stable and Efficient Perovskite Light-Emitting Diodes	**C. Kuang**

Q08 15:00 - 16:00 Amsterdam (Ground floor)

	Nanoparticles, nanostructures & nanoscale materials II		**Chairman** F. Pattini J. Solís
	15:00	Pulsed-laser ablation of silver: formation of nanoparticles on a liquid substrate	**C.-E. Bejjit**
	15:15	Synthesis of gold nanoparticles by DC and High-Power Impulse Magnetron Sputtering using a liquid substrate	**S. Konstantinidis**
	15:30	Tuning the functional properties of perovskite thin films through complex ensembles of nanoscale phase/nanodomain fluctuations.	**N.-D. Scarisoreanu**
	15:45	Presence of Delocalized Ti 3d Electrons in Ultrathin Single-Crystal SrTiO3	**S.-W. Huang**
U03	**15:00 - 15:30**		**Berlin (Ground floor)**
	Poster Pitch		**Chairman** J.-P. Veiga
CB8	**16:00 - 16:30**		**Exhibition area (Ground floor)**
	Coffee Break		
A_P02	**16:30 - 18:30**		**Etoile (1st floor)**
	Poster session 2		
		Enhanced ionic conductivity in composite solid electrolytes via Cold Sintering Process	**S. Ferrer-Nicomedes**
		Preparation of cold sintered (1-x)-Li1.3Al0.3Ti1.7(PO4)3:x-Bi2O3 solid-state electrolytes	**A. Mormeneo-Segarra**
		The mixed proton- and electron-conducting material BaFe0.9Y0.1O3-??: Synthesis, characterization, and application as fuel electrode in proton conducting solid oxide cells	**M. Anstiss**
		Investigation of the real performance of proton conducting ceramic cells with double perovskite positrode	**H. Zheng**
		Coupled anionic redox structural features in Li-excess layered cathodes	**B. Zhu**
		Magnetron sputtering of C- or Si-doped LiPON as Li-ion conducting thin-film separator for solid-state batteries	**N. Osenciat**
		An NIR dual-emitting/absorbing inorganic compact pair: A self-calibrating LRET system for homogeneous virus detection	**D. Kang**
		Lithium metal passivation by atmospheric-pressure plasma	**V.-S. Rangasamy**
		Effect of (External) Electric Fields on The Heterogeneous Solid State Reaction between Al2O3 and Y2O3 Forming Multiple Product Layers	**C. Korte**
		Polyelectrolytes based on Nafion for Lithium Rechargeable Batteries	**V.-S. Rangasamy**
		Electrical conductivity and chemical diffusion coefficients of self-generated Ba(Ce,Fe,Y)O3-d composites	**E. Bucher**
		Strain engeenering of thermoelectric and dielectrical properties of misfit cobaltates	**S. Harizanova**
		Water adsorption and surface protonics of mixed conducting oxide materials	**X. Kang**
		Elucidation of Crystallization Mechanism of NASICON Glass-ceramics Toward Aqueous Sodium-ion Batteries	**K. Sakaeda**

A comparative study: Influence of magnetic (Fe) and non-magnetic (In) doping on structural, magnetic, and weak anti-localization properties of Bi2Te3 topological insulator	**N. Kander**
Control of functional properties of perovskite oxides by voltage-driven oxygen-ion transport	**P. Nizet**
Steroactivity and disorder cause fluorite BaSnF4 to be stranger than it seems	**S.-W. Coles**
Strategy of Enhancing Ionic Conductivity with Accurate Sintering Conditions in Li7La3Zr2O12	**K. Park**
A solid oxide harvestore for combined harvesting and storing photovoltaic energy	**A. Schmid**
Upscaling strategies for the fabrication of solid oxide cells	**K. Ruiz**
Size and Shape Optimization of Silicon Anodes for All-Solid-State Batteries	**M. Grandjean**
Towards all-phosphate solid-state lithium batteries	**J.-C. Gonzalez-Rosillo**
Scaling-up the synthesis of sulfide solid electrolytes - Challenges between product and process design	**A. Gries**
Stability analysis of Ni-doped SrTiO3 using ab-initio thermodynamics	**N.-Y. Lee**
Gaining Insight into the Role of Electrochemical Polarisation on Degradation Phenomena in Solid Oxide Cells by Experiments on Thin Film Electrodes	**K. Rath**
Effect of (Y,Co) co-doping on the space charge and electrical conductivity of CGO based materials sintered by hot pressing	**J. Abrantes**
Effect of yttrium ion on the space charge potential across grain boundaries regions of gadolinia-doped ceria electrolytes	**E. Gomes**
Silica scavenging effect of praseodymium on tetragonal zirconia – effects on conductivity and space charge	**A. Ferreira**
Reducing interfacial resistance in garnet-based solid-state batteries by an ex-situ formed SEI interlayer	**Y. Sun**
Explaining Hysteresis in Metal Halide Perovskite-based Memristors by Numerical Simulations	**J.-C. Pérez Martínez**
Thin-film (Cu, Fe)-Li-F conversion cathodes for high-energy solid-state batteries	**J. Casella**
Understanding molecular-scale dynamics inside composite polymer electrolyte	**G. Navallon**
Numerical Modeling of Two-Dimensional Memristive Devices for Neuromorphic Computing	**B. Spetzler**
Novel 3D Structured Electrode Fabrication as Free-Standing Carbon Lattice for Al –Air Batteries	**M. Taverne**
Modified polytetrahydrofuran-based solid polymer electrolytes for safe lithium-ion batteries	**E. Nurgaziyeva**
Antiperovskite Materials for Li-ion Solid-State Batteries: A Computation-Guided Design Approach	**L. Shen**
The role of doping in all-inorganic mixed-halide perovskites for ozone sensing	**A. Argyrou**
Understanding the superionic phase transition of lithium nitride from machine learning force fields	**G. Krenzer**
Effect of Intentional Potassium Incorporation in Solution-Processed Cu(In,Ga)(S,Se)2 (CIGSSe) Solar Modules on Structural Shunt Defects	**S.-H. Lee**
Experimental Study and Thermodynamic Modelling of NASICON Sub-systems for Application as Solid State Electrolyte	**S. Gonde**
Fast microwave-assisted syntheses for old and new positive electrodes in conventional and solid-state batteries	**F. Murgia**
Evaluation of Potential Induced Degradation in Silicon Solar Cells	**P. Pathi**
Interface studies on reactively sputtered TiOxNy-based MIS device	**H.-P. Gajula**

	Surface reconstruction enables highly active catalyst for oxygen catalysis	**Y. Bi**
	Self-recovered Symmetric Protonic Ceramic Fuel Cell with Smart Reversible Exsolution/Dissolution Electrode	**Y. Wang**
	In-situ Polymerized PDOL-based Quasi-solid-state Electrolyte for Practical Li-Metal Battery	**Z. Wang**

B1_11	16:30 - 18:00	Schweitzer (Ground floor)
	Development, Characterization, and Applications - Atomic and Microscale	
16:30	Engineering the electromechanical properties of ferroelectric composites: domains to devices	**J. Roscow**
17:00	Defect modulated negative thermal expansion in ceramic films for energy harvesting deposited with powder aerosol deposition	**K. Webber**
17:15	Exploring electro mechano thermal potentialities of lead-free hybrid molecular ferroelectrics dabcoH[A]	**G. Morvezen**
17:30	Conversion polymorphism in the high-pressure stabilized BiMg0.5Ti0.5O3-BiZn0.5Ti0.5O3 solid solution system – a lead-free structural analogue of PbZrO3-PbTiO3	**A.-N. Salak**
17:45	Improving stability and open-circuit voltage of perovskite mini-modules by tuning laser processing conditions	**Y. Jeong**

B2_09	16:30 - 17:30	Dresde (1st floor)
	Photonic Materials: Structure & properties	
16:30	Charge Transfer Complexes for Advanced Optical Materials	**S. Tian**
16:45	Filterless Visible-Range Color Sensing and Wavelength-Selective Photodetection Based on Barium/Nickel Codoped Bandgap-Engineered Potassium Sodium Niobate Ferroelectric Ceramics	**V. Balanov**
17:00	Synthesis and characterization of highly durable P2O5-ZnO-Na2O/CaO-Fe2O3 glasses for low-temperature sealing applications	**B. Mazinani**
17:15	Low-cost WO3 nanoparticles / PVA smart photochromic glass windows for sustainable building energy savings	**Y. Badour**

C_P02	16:30 - 18:30	Etoile (1st floor)
	Poster session 2	
	A Study on the Mechanical Properties of Polymer-Based Materials	**C.-S. Woo**
	MOF-coated nylon microfiber mesh for immobilized photocatalyst in RhB and Cr(VI) removal	**S. Cho**
	Exploring microfluidic platform for photocatalytic reduction of Cr(VI) using nanosized titanium dioxide.	**V. Katoch**
	Development of a filter system to reduce microplastics generated during Laundry process	**J. Kim**
	Development of superhydrophobic surface with green hollow nanosilica-octadecyltrichlorosilane	**J. Kim**
	Novel approach to produce boron doped micro and ultrananocrystaline diamond on titanium grid	**N. Gomes Ferreira**
	Preparation and characterization of RF sputtered Zinc tungstate thin films for photocatalytic applications	**F. Chaabouni**

	Carbon-based nanocomposite porous materials as electrocatalysts for valorisation of biomass	**F. Pota**
	Combined effect of porous silicon substrate and rare earth doping on photo-catalytic activities of zinc oxide thin films	**M. Atyaoui**
	Low temperatures Electrical characterization of single layer graphene ribbons	**R. Remmouche**
	Metal–Nitrogen–Carbon Single-Atom Aerogels for Dechlorination of 1,2-Dichloroethane	**G. Gan**
	Study of the transport mechanisms of the interfaces of ZnO/p-Si heterojunctions by the current-voltage-temperature (I-V-T) technique: Effect of argon flow rate	**S. Tata**
	Development of Fe3O4-decorated Sn-hydroxide nanocomposites for advanced Cr(VI) capture in drinking water	**K. Simeonidis**
	Metal oxide nanoheterostructures as De-NOx photocatalysts	**A. Gasparotto**
	Lightweight and hard AlCrCuFeMnNi complex concentrated alloys obtained by hot-pressing	**F.-J. Oliveira**
	Replicative Manufacturing of Metal Moulds for Optical-Grade Polymer Replication	**S. Kluck**
	The role of metal sulfides precursor on the sulfur resistance property for NH3-SCR catalyst	**B. Ye**
	Excellent strength-ductility synergy in a novel medium manganese steel: development and thermo-mechanical processing	**S. Kumar**
	Waste-to-Biosensor: A Potential Approach for Translating the Waste Materials into Prospective Biomedical Sensors	**A. Babu**
	Role of hole conductor and electron conductor toward enhancement of Ag3PO4-based photocatalysts for enhanced photodegradation	**F.-N.-I. Sari**
	Enhanced gas sensing properties of pristine and metal nanoparticle decorated 2D SnS thin films	**P. Bisht**
	Numerical and kinetic study of isomerization reaction of oriented polyacetylene induced by laser impact, shown by multichannel Raman	**Y. Bouzaher**
	An Environmental-Inert and Highly Self-Healable Elastomer Obtained via Double-Terminal Aromatic Disulfide Design and Zwitterionic Crosslinked Network for Use as a Triboelectric Nanogenerator	**S.-H. Chou**
	Green Laser Induced Graphene Electrochemical Sensors from Cork for Sensitive Tyrosine Detection	**E. Vaughan**
	Hygroscopic-superhydrophilic natural fibrous fabric for repelling highly viscous heavy oil	**Y.-A. Lee**
	Enhancement of SO2 resistance in CO-SCR catalyst through WS2 over NiFe/CeO2	**W.-G. Kim**
	De-NOX performance of V, W supported on modified morphology of TiO2 at wide temperature range	**J.-I. Jung**
	Two dimensional In2S3 nanosheets coupled with Mxene heterostructure composite for efficient photoelectrochemical and photocatalytic activity	**I. Pugazhendi**
	Liquid Crystal-Assisted Alignment Control of Metal–Organic Frame-work Crystals	**Y. Bak**
	13X zeolite- chitosan composite aerogels as versatile materials for environmental remediation	**E. Luzzi**
	Intrinsic impacts of Graphene oxide entrapped Polystyrene (GO@PS) nanohybrid inferred toxicological effects on embryonic zebrafish (Danio rerio)	**A. Sinha**
	Optical and photoelectrical properties of Ag/Au doped transition metal oxide thin films	**R. Nemkayeva**
	Preparation of High Performance Ultra-low Loading PEM Fuel Cell Catalyst layers	**M. Metaxas**
	N-doped TiO2 thin films for photoelectrochemical CO2 reduction	**K.-R. Gustavsen**
	Light induced room-temperature gas sensing by donor doped Anatase TiO2 ultrasmall nanoparticles	**A. Sutka**

	Sulfonated Pentablock Copolymer/GO Coating of Polypropylene Filters for Dye and Metal Ions Effective Removal from water	**L. La Piana**
	Versatile synthesis of TiO2-Cu composites by plasma electrolytic oxidation for photoelectrochemical and photocatalytic applications	**R. Levinas**
	Chemoresistive gas sensor fabrication by laser direct transfer	**A. Bonciu**
	Dispersion of tunicate cellulose nanofibers with hydroxyl groups by silica nanoparticles	**Y. Hong**
	Fully biobased, biodegradable imine vitrimer derived from epoxidized soybean oil for flexible food packaging	**M. Safarpour**
	Shape-Controlled Block Copolymer Particles and Their Energy Applications	**B. Kim**
	Complex ternary TiO2/SnO2/Zn0 nanocomposites with photocatalytic properties obtained by facile one-step laser method	**C.-T. Fleaca**
	Polymer mediated chiral nematic nanocellulose phases	**R. Yerushalmi-Rozen**
	Immobilization of the polyphenol oxidase AbPPO4 on mesoporous silica: towards mimicking key enzymatic processes in peat soils	**C. Iriarte-Mesa**
	Natural Acid-Assisted Synthesis of Hierarchical Silver Nanostructures for Surface-Enhanced Raman Scattering Applications	**L.-V. Sayson**
	Plasma engineering and in-situ oxidation of Ti2C MXene using atmospheric pressure plasma printing	**L. Damptey**

D_P03	**16:30 - 18:30**	**Etoile (1st floor)**
	Poster session 3	
	Materials and Printed processes for Flexible Smart window films	**H. Kim**
	Manipulating nucleation and hydrogen evolution by N-methylthiourea additive for highly reversible Zn anode	**S. Yoon**
	Deep Eutectic Solvents for Rice Husk Treatment for Sustainable Battery Material	**C. Padwal**
	A novel process to isolate pure rare earth oxides (REOs) from rare earth-bearing waste streams (with a focus on waste permanent magnets and Ni-MH batteries)	**R. Khayyam Nekouei**
	Self-reconstruction of sulfate-containing high entropy sulfide for exceptionally high-performance oxygen evolution reaction electrocatalyst	**T.-X. Nguyen**
	Design of flame-retardant hybrid polymer/inorganic electrolytes with enhanced ionic conductivities	**Y. Zhang**
	Adsorption of H2 on metal–organic frameworks at 20 K for the mitigation of boil-off losses of liquid hydrogen tanks	**H. Oh**
	Tantalum Pentoxide/MXene Hybrid Composite as Bi-functional Electrocatalyst for Highly Efficient and Stable Overall Water Splitting	**K. Kannan**
	PTMPM@SiO2 functional fillers to improve the performance of commercial PEO as solid electrolyte	**Z. Chen**
	Synthesis of crystalline NiO/NiAl2O4 catalysts for coking free low temperature partial oxidation of methane	**M. Abbas**
	Insights into the electronic structure of PEDOT with AlCl4- and its use as an electrode material in batteries and supercapacitors	**B. Craig**
	Ion Transport Mechanism in Argyrodite Electrolyte and Their Effect on the Electrochemical Performance in All Solid-State Lithium Battery	**R.-K. Bhardwaj**
	SiO2 Particles Prepared from PDMS with Potential Use as a Viscosity Enhancer	**Y. Yadawa**
	Bismuth-Carbon Anodes with Hierarchical Structure for Fast-Charging Sodium-Ion Battery	**B. Park**

Nanostructured Thermoelectric Materials Fabricated Using Chemically-Synthesized Tin Diselenide Nanosheets	**S. Moore**
Bridge percolation: electrical connectivity of discontinued conducting slabs by metallic nanowires	**A. Baret**
Development of noble metal-based MEA/HEA nanofilms by ALD-EJH method for water splitting	**Y. Zou**
Chromium Tetraphosphide (CrP4): A New and High-performance Anode for Li-ion and Na-ion batteries	**J. Lee**
Great Potential of Rare-Earth Element Doping in NiFe-Based Electrocatalysts for Realization of Industrial Level Hydrogen Production via Water Electrolysis	**C. Dang Van**
A facile blow spinning technique for green cellulose acetate/polystyrene composite separator for flexible energy storage devices	**A. Rafique**
Development of a two-step process based on ultrasonic spray pyrolysis to optimize optical and electrical properties of ZnMgAlO	**W. El Berjali**
First principles investigations on the opto-electronic properties of LiNiO2	**A.-A. Sasikala Devi**
Tuning the properties of Janus van der Waals hetero structures by varying interface terminations: A first principles investigation	**A.-A. Sasikala Devi**
Electronic structure modification and N-doped carbon shell nanoarchitectonics of Ni3FeN@NC for overall water splitting performance evaluation	**D.-I. Jeong**
Intercalation-type TiNb24O62 anode for sodium-ion and potassium-ion batteries enabled via a synergetic strategy of oxygen vacancy and carbon incorporation	**A.-P. Vijaya Kumar Saroja**
Co4N nanoparticles encapsulated in Fe/N-doped carbon nanoboxes as superior trifunctional electrocatalysts for zinc-air battery and water electrolysis	**H.-W. Choi**
Ni-d orbital modulation via the in situ 2D core-shell formation of Ni(CN)2@Ni2P upon Hofmann-type MOF nanoplate for highly efficient oxygen evolution reaction	**J. Kim**
Dense/porous bilayer structured BiVO4 photoanode for efficient PEC water splitting performance	**H. Sung**
Synthesis of Fractal-like Structure of Fe2O3: A Study of Negative Electrode for Supercapacitor Applications	**R. Jaiswal**
Facile In Situ Preparation of NiCoFe LDH Films as Oxygen- Evolving Catalysts with Self-Healing Capability	**J.-N. Bamba**
Cobalt Oxide Synthesis thru Thermal Decomposition with Various Solvents for the Development of High-Performance Electrocatalysts for Oxygen Evolution Reaction	**D.-D. Matienzo**
Strain engineering of the optoelectronic properties of epitaxial BiVO4 thin films	**E. Fernandez**
Elastocaloric properties of polycrystalline NiMnGa produced by open die pressing	**E. Villa**
Charge Transfer Induced Geometric Distortion of Ni(HCO3)2@CNT and its Effect on the Catalytic Performance Enhancement for Oxygen Evolution and Reduction Reaction	**J.-R. Jeong**
Nanotechnology application for the human energy problem solution	**V. Egorov**
Non-unity photogeneration yield of mobile charge carriers in open d-shell transition metal oxide photoelectrodes	**D. Grave**
Encapsulated BN nanocages and capped nanotubes as anode materials for Magnesium-Ion Batteries: A DFT Study	**D. Corona**
Exsolved bimetallic Ni-Fe catalysts for CO2 conversion applications	**F. Colombo**
Ultrafine-grained and nanocrystalline steels with enhanced properties for nuclear energy applications	**H. Wen**
Compacted Laser-Induced Graphene with Bamboo-like CNTs for Flexible Energy Storage Electrodes	**S.-K. Hyeong**
Nanostructure characterization by transmission electron microscope for energy conversion application	**H. Baik**

WO3/Ag2S type-II hierarchical heterojunction for improved charge carrier separation and photoelectrochemical water splitting performance	**J. Yadav**
Zigzag Ag2Se nanorod arrays with ultrahigh room temperature thermoelectric performance	**J. Khan**
Optimizing Concentration-dependent Thermal and Structural Behaviors of Water-in-salt Electrolytes for Wide-temperature-range Electric Double-layer Capacitors	**J. Park**
Raman analysis of CD/Ti3C2Tx MXene hybrid for supercapacitor application	**A. Ashok**
Revealing chemistry and structure of dual salt-plastic crystals blended with polymer electrolytes affecting the solid-electrolyte interface for high-performance Li metal batteries.	**J. Bae**
Molecular Engineering to develop 3d and 3d-4f metal based Molecular Ferroelectric complexes and their potential applications in Piezoelectric Energy Harvesting	**R. Haldar**
MXene vs. Graphene as Supercapacitor Electrodes, Demonstration of A Superior Performance	**I. Lisheshar**
High Figure of Merit p-Type Copper(I) Iodide Films with Sulphur Incorporation	**A.-S. Mirza**
Copper mediated NiFe double-layered hydroxide electrocatalyst for oxygen evaluation reaction in photovoltaic-coupled electrochemical cell	**D. Chanda**
Nanostructured spinel ferrite films in solar energy conversion systems	**M. Bombaci**
Enhancing Thermoelectric and Mechanical Properties of p-type (Bi, Sb)2Te3 through Rickardite Mineral Incorporation	**M. Yahyaoglu**
Synthesis of Pt Double-Walled Nanoframes with Controllable Facets and Their Catalytic Performance toward the Methanol Oxidation Reactions	**M. Haddadnezhad**
Engineering of solid-solid interface in Si-Transition Metal Oxide photoanodes	**C. Maurizio**
Low Temperature Based V2O5 Nano-Spheres for High-Yield Electrodes in Supercapacitor Application	**A. Singh**
Microwave-Assisted Reduction of Bimetal/Graphene Aerogel for Efficient Oxygen Evolution Reaction	**G.-H. Kanat**
Investigation of Thermal ALD deposited AlOx and HfOx bilayer films for Silicon Surface Passivation	**M. Devi**
Elucidating Molecular-level Charge Storage Mechanisms in Flexible and Organic Nanocellulose/Graphite Battery Electrodes	**E. Founta**
Fabrication of ß-Ga2O3 nanowires via aerosol-assisted chemical vapor deposition	**R. Chen**
Nanostructured 3D mesoporous a-Fe2O3 Nano-cubes as a high-performance electrode for supercapacitors.	**U. Singh**
Phase equilibria and solubility limits in the B-Ce-Fe-Nd system	**E. De Villoutreys**
Structural Analysis for Maximum Energy Yield of Soundproof Photovoltaics	**H. Jang**
Nanohierarchical Metal-Organic Frameworks for Enhanced Dew Harvesting Efficiency	**P. Kabi**
Process-structure-property relationships of pulse-laser-deposited ZnFe2O4 thin film photoelectrodes for solar water splitting	**Y. Shriqui**
Mechanically enhanced performance of textile tribelectricnanogenerators; a sustainable way forward.	**U.-B. Humayoun**
Transition Metal Dopants on Graphitic Carbon Nitride (g-C3N4) for Electrocatalytic Carbon Dioxide Reduction Reaction	**Y.-J. Hsu**
Novel materials for Metal Additive Manufacturing (MAM) technologies	**J.-J. Rosero Romo**
The Perovskite Band Gap Engineering For Photostimulated Water Splitting	**E. Kotomin**
Eco-friendly Solvents for Organic Photovoltaics	**A. Cheung**

E13 16:30 - 18:30 — Madrid 2 (Ground floor)

Thin Films and Nanomaterials 2

Chairman
J.-F. Pierson

16:30	Exploration of Cu functionalized MXene in aqueous urea adsorption	**Z. Yen**
16:45	Tailoring the photophysics of atomically-precise distorted nanographenes by structural engineering	**M. Reale**
17:00	In situ actuation of Gallium liquid metal alloys on polypyrrole coated electrodes	**S. Bhagwat**

F16 16:30 - 18:30 — OPS (Ground floor)

Synthesis/Characterization 4

Chairman
D.-K. Avasthi
S. Srivasatava

16:30	Direct Laser Writing of Complex 3D Ag Nanoparticle Patterns inside Prefabricated Polymer Microstructures	**L. Lavelle**
17:00	Mechanical and Optical Properties of Silica Nanocomposite Microstructures Fabricated via Direct Laser Writing	**A. Augustine**
17:15	Gelation Methods to Achieve Tunable Properties of Semiconductor and Noble Metal Nanoparticles in Assemblies	**M. Rosebrock**
17:30	Development of a sustainable ink to functionalize stretchable surfaces for robotic applications	**E. Forestier**
17:45	Preparing and exploring the versatility of mixed surface silicon quantum dots	**J. Trach**
18:00	One-Step printed metahologram using Nanoparticle-Embedded-Resin	**C. Park**
18:15	Elaboration and characterization of pure carbon transparent electrodes presenting equivalent performances to Indium Tin Oxide	**R. Meyer**

Fbis04 16:30 - 18:30 — Madrid 1 (Ground floor)

Photonics/Optoelectronics 4

Chairman
A. Beniwal
S. Sharma

16:30	Efficient White LEDs Made of Near Unity Emitting Quantum Dots for Wide Color Gamut Displays	**A. Onal**
17:00	Zinc germanate (Zn2GeO4) deep-red emitter	**M. Batista**
17:15	Investigations on shape-property relationship of magnetic and persistence luminescence nanomaterials coupled in a single assembly	**H. Ullah**
17:30	Understanding the texture degree on Zinc Aluminate Nd, Ce sub-micrometer films by screen printing for NIR Emitting applications	**R. Rojas Hernandez**
18:00	Rare-earth complex as self-calibrated photoluminescent sensor for low-range pressure measurement	**Y. Zhou**
18:15	Nanocatalyst-enabled physically unclonable functions as smart reversible anticounterfeiting agents with instrument-free AI-aided authentication	**M. Moglianetti**

H12 16:30 - 18:30 — Rome (Ground floor)

Bioinspired Coatings and Thin Film II

16:30	Artificial extracellular matrices for organoid formation: from novel patient-derived preclinical models to human immune cell culture	J. Guasch
17:00	Physico-chemical and in vitro biological behavior of plate-like hydroxyapatite coatings obtained in pulsed galvanostatic mode	A. Vladescu (Dragomir)
17:15	Aqueous Protein-Polymer Bioconjugation via Photoinduced RAFT Polymerization Using Porphyrinic Metal-Organic Frameworks	Y. Huang
17:45	3D Printing of Bioceramic Scaffolds with Graded Pore Sizes for Bone Regeneration	Y. Wang

I13 16:30 - 18:00 Bruxelles (Ground floor)

Tutorial Advancing Frontiers in Biomaterials and Nanomedicine

16:30	Regulation of liquid-liquid phase separation induced by G-quadruplex nucleic acids	D. Miyoshi
17:00	Bioinspired Surfaces Designed for Stem Cell Expansion	K. Kato
17:30	Using Real-time and High throughput Force-sensing Biochip Reveal Cellular Herterogeneity Under Drug Treatment	J.-Y. Shiu

L14 16:30 - 18:30 Etoile A (1st floor)

Lasers and Applications

Chairman
J. Pedarnig

16:30	New technologies for High Purity Germanium segmented detectors: from virgin crystals to innovative devices.	S. Bertoldo
16:45	Polariton condensation from a bound state in the continuum	F. Riminucci
17:00	Chemisorbate monolayer sensitivity for carbonate on barium titanate BaO-terminations by tip-enhanced Raman spectroscopy	M. Bakhtbidar
17:15	Naturally Occurring Halloysite Nanotubes as Stable Passive Light Scatterers for Random Lasing	A. Pramaniik
17:30	From optical pumping to electrical pumping: the threshold overestimation in metal halide perovskites	J. Qin
17:45	Transport layer engineering towards lower threshold for perovskite lasers	J. Zhang
18:00	Laser processes for HPGe gamma ray detectors	C. Carraro
18:15	Fast and low temperature detection of Nitric Oxide (NO) based on CuO nanoparticles obtained by pulsed laser ablation in liquid	V. Iacono

M_P02 16:30 - 18:30 Etoile (1st floor)

Poster session 2

	A low-temperature route to the green synthesis of CsPbBr3 films on rigid and flexible substrates	L. Sirna
	A new Combinatorial Approach for Solution Deposition of Thin Films	N. Zakay
	Pulsed 193 nm Excimer laser processing of 4H-SiC(0001) wafers with radiant exposure dependent “in situ” reflectivity studies for process optimization.	R. Delmdahl
	Investigation of the dopant activation in ultra-highly B-doped Si1-xGex films	K. Lee
	Wet etching characteristics of poly-Si depending on the various structures for advanced 3D integrated circuits	S. Ji

	Impact of Si3N4 stoichiometry on the formation of an AlN layer in an Al/Ti/Si3N4 thin film system during AlGaN/GaN Ohmic contact formation for HEMT device	**S. Colombo**
	Neuromorphic Synapse Implementation using InOx Interfacial Layer in InAs Nano-Wire Field-Effect Transistor	**J. Lee**
	Symmetric nitride-based ambipolar transistors with tunable electrical properties by high electronegativity dopant	**J.-M. Park**
	Fabricating Cfet Devices with Vertically Stacked P/N Si Channels Using Ge/Si 2D Epitaxy and High Ge/Si Selective Etching Ratio	**C. Chun-Lin**
	Comparative study of metal-insulator-semiconductor and metal-semiconductor AlGaN channel high electron mobility transistors for operating temperatures up to 600 K	**J. Bassaler**
	Electrical properties of graphene field-effect transistor (GFET) by minority carrier resistance effect of graphene	**T. Gu**
	Electrical Characteristics (80 – 525 K) of High Quality Pt SBDs Fabricated on HVPE-Grown ß-Ga2O3 Epilayers	**H. Sheoran**
	Reliable Multiply-Accumulate Operation of a Ru/TaOx/Si:ZrOx/TiN Stacked Device	**H.-K. Seo**
	Tailoring the multilevel resistive switching characteristics of hafnium oxide-based memory devices by differential work function engineering	**S. S. P.**
	Self-assembled Tantalum oxide/2H-TaS2 as van der Waals Platform of Multilevel Memristor Circuit with ß-Ga2O3 Transistor	**T. Kim**
	Multiply-Accumulate Operation on One Selector-One Resistor(1S1R) 32 x 32 crossbar arrays	**S.-Y. Lee**
	Synthesis of Large-Area Monolayer MoS2 for Two-Terminal Neuromorphic Devices with Short-Term Memory	**A. Thool**
	Transposable 1T-SRAM for neuromorphic computing	**D. Lim**
	Resistive switching properties of CuxO films through phase transition during low-temperature annealing	**E.-K. Kim**
	Synthesis and memristor properties of CVD grown ReS2 thin film: Change from DRAM to WORM	**P. Aggarwal**
	Deposition of TiO2 Thin Films by Mist Chemical Vapor Deposition and Their Application to Resistive Random Access Memory	**Y. Y. Cheng**
	Efficient Inverted Tandem Structure of Quantum Dot Light-Emitting Diodes with Inorganic Charge Generation Layers	**K. Lee**
	Ligand exchanged highly dispersed NiO nanoparticles for hole injection layer of Quantum Dots LED	**L. Hyojun**
	Interplay between strain, Sn content and temperature in GeSn optoelectronic devices	**I. Zaitsev**
	Investigation of Chiral Halide Perovskite/III-V LEDs with Circularly Polarized Emission	**M. Hautzinger**
	Carrier dynamics and structural properties of hybrid orange-red LED based on In-rich InGaN/GaN multiple quantum wells	**H. Alamoudi**
	Studying the carrier dynamic of pyramid-shaped InGaN/GaN micro-light-emitting diodes (µ-LEDs) by using Time-resolved photoluminescence	**F. Alreshidi**
	AlxZn1-xO-based Ultraviolet Photodetectors with Tunable Cutoff Wavelength from Near-UV to Deep-UV	**W.-H. Chen**
	Gate/Light Co-Tunable Negative Differential Resistance Behaviors and 9 by 9 Photodetectors Array from Small-Molecules Heterostructure	**Y. Jeon**
	Effect of Sn+ ion implantation and post-annealing on enhancing ß-Ga2O3– based DUV self-powered photodetector performance	**K. Upadhyaya**
	Photosensitive graphene field-effect transistor with porous silicon supporting layer	**I. Olenych**
	Large area 4H-SiC Schottky barrier diodes as radiation detectors	**T. Knezevic**
	Ultrafast low power room temperature H2 gas sensor based on atomically sharp nanopatterned exfoliated MoS2 flakes	**A.-V. Agrawal**

	Mercury (II) Selective Probe by Thin Film Transistor Based on Supramolecular Flavin-Wrapped Single-Chirality Single-Walled Carbon Nanotube	D.-H. Kim
	A High-temperature stable Self-driven Broadband-photodetector based on MoS2/GaN Heterostructure.	P. Vashishtha
	Exploring light trapping of nanopillar arrays decorated with self-aligned quasi-nanolenses using near-field optical microscopy	A. Kumar
	Development of AlGaAsBi for the Next Generation of APDs	M. Carr
	Synthesis of Pb-free Ag-Bi-based double perovskites thin films for photovoltaic applications	S. Ruiz Raga
	Template synthesis and experimental-theoretical study of a new type of heterostructures	A. Dauletbekova
	3D-printed metasurface structure with thermal-compressed circuit patterns for phase shifter fabrication	G. Lee
	Electrical Conductivity and Light Sensing based on 3D Printed Nanoporous Structures	K. Xia
	Oxide Nanopatterning using Sequential Infiltration Synthesis – In Situ FTIR study	M. Biswas
	Development of nanoelectromechanical device based on complementary metal oxide semiconductor for three dimensional integrated associative memory-augmented neural networks	S.-H. Jung
	Effect of stress and different crystal orientations on 3C-SiC resonator	F. La Via
	Investigation of Thermal ALD deposited AlOx and HfOx bilayer films for Silicon Surface Passivation	M. Devi
	Design rules for selective deposition of silver by condensation coefficient modulation	S. Abrahamczyk
	Control of interfacial reaction between high TC superconductor Tl2Ba2CaCu2O8 and topological insulator Bi2Se3	Y.-D. Chung
	Elucidating the effects of impurities on interfacial void formation of Cu and Sn-Ag electrodeposits	Y. Jo

N07	16:30 - 18:30	Londres 1 (Ground floor)
	Systems & circuits	
16:30	Integrated photonic devices for neuromorphic computing	B.-J. Offrein
17:00	Visible Light Navigation System for mobile users inside large building	M. Vieira
17:30	Towards all-optical polariton logic circuitry	R. Mahrt

O10	16:30 - 18:30	Churchill (1st floor)
	Perovskites for photonic applications 3	**Chairman** G. Grancini P. Juan Martínez
16:30	Photovoltaic and excitonic properties of novel perovskite-like materials.	G. Volonakis
17:00	How Relevant are Long Diffusion Lengths for Efficient Halide Perovskite Solar Cells?	S. Akel
17:15	Multi-Stage Phase-Segregation of Mixed Halide Perovskites under Illumination: A Quantitative Comparison of Experimental Observations and Thermodynamic Models	K. Suchan
17:30	Effect of anharmonicity and polymorphism on electron-phonon coupling in halide perovskites	M. Zacharias
17:45	Phase stability in MAPI from first principles calculations	K. Madaan
18:00	Temperature-dependence optical properties of CsCu2I3 NCs	J. Diago Forero

18:15	Interlayer-Sensitized Linear/Nonlinear Photoluminescence of Quasi-2D Perovskites Using Aggregation-induced Emission Active Organic Cation	C.-K. Lim

P13 16:30 - 18:30 Londres 2 (Ground floor)

Methods for Materials Discovery II

Chairman
V. Stevanovic

16:30	Generative adversarial networks for microstrucute generation: A primer to Process-Structure linkage.	G. Nimmal Haribabu
17:00	Multiscale modelling to study the evolution of texture and associated deformation mechanism during single point incremental forming	R. Rakshit
17:15	A computational approach for the exciton diffusion in organic solar cells based on first-principles molecular dynamics	C.-O. Diarra
17:30	Efficient and reliable first-principles calculation method for evaluating electronic transport in complex materials	Z. Li
17:45	A Combined DFT and Machine Learning-Driven Discovery of g-C3N4 based Single Atom Catalysts for Efficient Hydrogen Generation	M. V Jyothirmai
18:00	Predicting PV-PEC promising materials based on chemical composition: data-driven accelerated machine learning study	C. Kim
18:15	Accelerated design for magnetocaloric performance in Mn-Fe-P-Si compounds using machine learning	D. Tu

Q09 16:30 - 18:15 Amsterdam (Ground floor)

Metal & alloy functional coatings

Chairman
A. Caillard
N.-D. Scarisoreanu

16:30	Insights on CaTiS3 Films Grown by Pulsed Laser Deposition	T. Fix
16:45	FeCrNiCoMo-based coatings deposited via High Power Impulse Magnetron Sputtering	S.-M. Deambrosis
17:00	Preparation of FeNiCrCoAl Thin Films by Ionized Jet Deposition Method	J. Skocdopole
17:15	Pulsed DC magnetron sputtering of thin films of black aluminium	M. Novotny
17:30	Deposition of W films by HiPIMS: role of magnetic field and bias	D. Vavassori
17:45	PLD of Bi2Sr2CaCu2O8 thin films for ion-beam nanostructuring to uncover new vortex dynamics	S. Keppert

U_P 16:30 - 18:30 Etoile (1st floor)

Poster session

	Mineral and Synthetic Ultramarine: Characterization study of commercial pigments towards their discrimination	G. Vourlias
	An introductory archaeometric study of Gharb Al-Andalus Ceramics from Setúbal (Portugal)	J.-P. Veiga
	Consumed by flames: Study of a fire protocol applied to wall-painting mock-ups	L. Malletzidou
	Degradation study of semiconductor pigments through transient absorption	F.-A. Pisu
	Preliminary study on the effects of salinity on ancient paper by optical techniques	D. Chiriu
	Application of femtosecond pulse laser to clean heritage marble from the Holy Samadh, India	J. Brand

	The materials in the 20th century art: a challenge for characterization and conservation	P. Tomasin

V03	16:30 - 18:30	Luxembourg (Ground floor)
	Biomedical applications of nanoparticles	**Chairman** S. Rocha
16:30	Photosensitized nanoparticles for photodynamic therapy against cancer and microbial infections	V. Martínez-Martínez
17:15	Tracking the biological fate of functional nanoparticles in realistic cancer cell models: advances toward a more effective nanoparticle-based therapy	P. Cybulski
17:30	Nanoantenna enhanced single-molecule biosensing using transient DNA interactions	V. Lamberti
17:45	Two-cycle Stöber protocol for the tailored synthesis and biotinylation of dual-color Silica Nanosystems for Biomedical Approaches	M.-A. Ramirez-Morales
18:00	Tailoring polymer nanoparticle synthesis strategies to maximize the availability of reactive handles for covalent attachment of biomolecules	F. Mazzotta
18:15	Cluster Based Immunoassay for Detection of Biomarkers	S. Gandhi

B_P03	18:00 - 18:30	Etoile (1st floor)
	Poster session 3	
	First-principles study of perovskite/halide interfaces	S. Spreafico
	Tuning physical properties of ferroelectric BaTiO3 by lateral compression: A molecular dynamics simulation study	H. Azuma
	On numerical modelling and experimental approach of Heterojunction Tandem Solar Cells based on Si and Cu2O/ZnO. Results and perspectives	I. Chilibon
	Strong Robust Generalized Cross-validation for Deconvolving the Distribution of Relaxation Times through Tikhonov Regularisation	B. Py
	Octadecanona-ene: Relation of theories of electrical conductivity and chemical reaction in the solid	Y. Ahmane
	Thermodynamics and Kinetics of Charge Transfer in Solid Boosted Flow Batteries: Case of CuHCF and TEMPTMA	M. Moghaddam
	New ab-initio calculations of Tunneling Current in Graphene/n-GaAs forward-biased Schottky Diodes	A. Varonides
	Piezoelectric Response of Poly (L-Lactic Acid) a Form on the Stress State	V. Zadorozhnii
	A Low-Cost and Environmentally Friendly Mixed Polyanionic Cathode for Sodium-Ion Storage	T. Song
	Strain Driven Anomalous Anisotropic Enhancement in the Thermoelectric Performance of Monolayer MoS2	S. Chaudhuri
	Numerical simulation of earth abundant and non-toxic Kesterite-based solar cells using Solar Cell Capacitance Simulator (SCAPS-1D)	N. Khemiri
	Evaluating the nature of arsenic-involving bonds and interactions together with their relationship to piezoelectric properties using Quantum crystallography and complementary bonding analysis	Y. Balmohammadi
	Method to explore optimal multi-metallic alloy hydrogen evolution reaction catalyst by active learning and experiment	M. Kim
	Revisiting Conversion Electrode Materials for Lithium-ion Batteries	X. Hua
	All Organic d-PVDF based Self-powered Nanogenerator for Signal Recognition Approach Through Machine Learning	V. Gupta

	Rationalising the Effect of Electrical Double Layer Structure on the Oxygen Evolution Reaction	**Y. Ye**
	Photoluminescence color prediction of Eu3+-doped perovskite-type oxide by supervised machine learning	**T. Otsuka**
	Europium as a structural probe within Ti/Zr containing glasses and glass-ceramics for energy harvesting materials	**D.-K. Dobesh**
	Recyclable photon upconversion bioplastics for broad-band light harvesting	**P. Bharmoria**
	Optical super-absorbers and organic thermoelectrics for energy harvesting	**J. Anguita**
	Thin Films Quaternary materials for photovoltaic applications	**M. Ben Rabeh**
	Charged Nanomaterials via Electrochemical Redox Processes	**P.-B. Amar**
	Photoemission spectroscopy study of BaZrS3 perovskite crystals	**S. Riva**
	Composition-dependent electronic structure changes in CuxInSe2 (x<1) for photovoltaic application	**A.-Y.-S. Mohamed**
	Ga2S3 thin films in UV detector applications: physics vs. technology	**G. Ghiletchii**
	Metal telluride compounds synthesized using a liquid metal-based technique for active hydrogen evolution	**M. Mousavi**
	Presodiation strategy for enhancing performance of metal sulfide anodes	**J. Choe**
	Effect of defects induced by the GLAD technique on the Sb2S3 material on structural and morphological properties: Anisotropy study	**F. Chaffar Akkari**
	Operando Raman Spectroscopy Revealing Lithium Consumption Source and Phase Changes at the Electrode/Electrolyte Interface in Lithium-Ion Battery Systems	**A. Grant**
	A combinatorial approach to the exploration of multi-metallic gradient libraries for the oxygen evolution reaction	**A. Usha Vijayakumar**
	Chiral conjugated polymers based on a helicene moiety for increased performances in organic photovoltaics	**C. Gedeon**
	A Deprotection-free Method for High-yield Synthesis of Graphdiyne Powder to construct a highly active materials for photocatalytic H2 generation	**M.-N. Ghazzal**
	Glassy thermal conductivity in Cs3Bi2I6Cl3 single crystal	**P. Acharyya**
	A Physical Unclonable Function Security Device Generated by Irregular Grain Boundaries of Perovskite Calcium Titanate	**S. Lee**
	Unravel the role of doping in high performance blue organic photodetectors	**T. Zhang**
	Understanding the polysulfide shuttle effect using Ampero-Coulometry	**U. Gulzar**
	Thermal ALD process for Aluminum doped zinc oxide films and their effective silicon surface passivation	**A. Kumar**
	Hydrothermal synthesis of composition controlled (K,Na)NbO3 perovskite particles	**C.-P. Ellawala Kankanamge**
	Optical Properties of Chalcogenide Perovskite Precursor Films	**T. Freund**
	Reactive Metals as Seasonal Energy Storage	**J.-C. Espinosa-Angeles**
	Thermally Compatible High Performance Reversible Protonic Ceramic Cell	**A. Tahir**
	Sustainable highly charged Polyimide in non-contact mode triboelectric nanogenerator	**J.-W. Lee**
	Refined vertical nanodevice patterning to develop robust (spin) electronics across molecules	**T. Zafar**
	Plasma Assisted Reconstruction of Defect-rich Porous Bismuthene Arrays for Highly active Electrocatalytic CO2 Reduction to HCOOH	**S. Bu**
	Redox stability of Sc-doped La0.6Sr0.4FeO3-d for tubular solid oxide electrolysis cells interconnector	**S.-D. Kim**

	Controlling Trap-Assisted Recombination in Organic Photovoltaic Cells for Indoor Application	**S. Rhee**
	Core-shell heterojunction engineering of TiN nanorod arrays@Co-MOF nanoparticles bifunctional electrocatalyst for highly enhanced electrochemical overall water splitting	**D.-C. Nguyen**
	Semiconductive MoS2 nanoparticles/metallic CoS2 nanotube arrays contact induced Mott-Schottky heterostructure for improving the catalytic behavior of water-splitting electrocatalyst	**T.-L.-L. Doan**
	Microwave Dielectric properties of Zn2(Te1-2xNbxScx)3O8	**A. Vinaya Kumar**
	Ultra-small anatase nanoparticles for energy applications	**M. Iesalnieks**
	Topochemical domain engineering to construct 2D mosaic heterostructure with internal electric field for high-performance overall water splitting	**Q. Quan**
	Thermoelectric Properties of Delafossite CuCr1-xFexO2 (0 = x = 1)	**M.-K. Majee**
	Transition Metal Antimonates for Oxygen Electrocatalysis	**W. Alsaidi**

B1_12	08:45 - 10:00	Schweitzer (Ground floor)
	Development, Characterization, and Applications - Micro to Macroscale	**Chairman** J. Kirchner A. Martin
08:45	Flexible Wireless Energy Transfer Printable Devices based on Thermoelectricity: from Concept to Application	**A. Pereira**
09:15	High throughput 3D printed based Ferro, piezo and pyroelectret structure for mechanical and thermal energy harvesting	**A. Kumar**
09:30	Influence of grain size on functional properties of BCZT: A multiscale analysis using Spark Plasma Sintering and Aerosol Deposition	**J. Maier**
09:45	Self-powered Nanogenerator as an Aqueous Processable Printable Ink and Strain-Induced Piezo-phototronic Effect	**H.-K. Mishra**

D1_15	08:45 - 10:00	Cassin (Ground floor)
	Water splitting/HER OER 6	**Chairman** P.-C. Ricci
08:45	Tailoring oxygen evolution performances of carbon nitride systems fabricated by electrophoresis through Ag and Au plasma functionalization	**G.-A. Rizzi**
09:15	Facile Electron Transfer in Atomically Coupled Heterointerface for Accelerated Oxygen Evolution	**K.-B. Ibrahim**
09:30	Hydrogen and Oxygen Evolution Reactions on stepped SrTiO3 surface.	**Y.-A. Mastrikov**
09:45	Boosting the Hydrogen Evolution Reaction Kinetics of CdS Nanorods via Integration of ZIF-67 Derived Co-C Nanostructures and 2D WS2 Nanosheets	**P. Varma**

D2_15	08:45 - 10:00	Boston (1st floor)
	Transparent Materials 1	**Chairman** M. Dolcet Sadurní
08:45	Chemical Control of Correlated Metals as Transparent Conductors	**J. Alaria**
09:15	Transparent conductive n+ZnO polycrystalline layers fabricated by RF magnetron sputtering in methane ambient	**A. Nazarov**
09:30	Tuning Graphene Oxide electral properties through low-temperature thermal annealing	**C. Valentini**
09:45	Development of Sustainable Biogenic Calcium Silicate Glasses and their Properties	**G. Sharma**

F17	08:45 - 10:00	OPS (Ground floor)
	Photonics/Optoeletronics 1	**Chairman** A. Beniwal Y.-K. Mishra
08:45	Reconfigurable THz Metamaterials: Present and Future	**S. Sharma**
09:15	Beyond Metal-Halide Perovskites: Metal Free Halide Perovskites as Materials for THz Photonics	**N. Gallop**
09:30	Kerker Conditions in Mid-index Mesoscale Dielectric Materials	**U. Manna**
09:45	Patternable Physical Unclonable Functions Based on Racemized Photonic Crystals	**H. Park**

L15	08:45 - 10:00	Etoile A (1st floor)
	Laser-Induced Forward Transfer	**Chairman** P. Sopena
08:45	The Power of Light: Creation of Polymer-based Nanocomposites with Bactericidal Effect	**J. Siegel**
09:15	LIFT printing of conductive patterns on reconfigurable substrates	**J.-M. Fernández-Pradas**
09:30	Shape control for laser-printed microlenses through substrate reconfiguration	**E. Martí**
09:45	Laser-Induced Forward Transfer for the creation of relevant bio-models	**L. Duvert**

M16	08:45 - 10:00	Schuman (1st floor)
	Power Devices II	**Session Chair** D. Pagano
08:45	Advanced Processes for Power Devices	**W. Schustereder**
09:15	Heteroepitaxy 3C-SiC/Si Power Devices - Key Materials Challenges	**P. Ward**
09:30	Defect formation in 3C-SiC grown on compliance Si substrates	**S. Boninelli**
09:45	Impact of doping on the stress evaluation of Si/3C-SiC hetero-epitaxy	**F. La Via**

O11	08:45 - 10:00	Churchill (1st floor)
	Perovskites for photonic applications 4	**Chairman** G. Grancini A. Petrozza
08:45	Low-dimensional perovskites: from structural design to photonic applications	**D. Cortecchia**
09:15	Highly Stable Cesium Lead Halide Perovskites in Mesoporous Liquid Crystal Polymer Particles	**G. Lee**
09:30	High Performance All Inorganic Perovskite Solar Cells Based on Oxide/Halide/Oxide Architecture	**M.-J. Jeong**
09:45	Simultaneous encapsulation of halide perovskite in polyethylene lamellar capsule through facile hot-injection method	**J. Yoo**

I14	09:00 - 10:00	Bruxelles (Ground floor)
	Tutorial Frontiers in Biodiagnostics	**Chairman** P. Chen B. Pichon
09:00	Probing Circulating Tumor Cells in Animal Model Using Quantum Dots and Real-time Intravital Imaging	**C. Kuo**
09:30	Investigation of high refractive index non plasmonic nanoparticle assemblies supported onto a metal thin film as a promising platform for SPR biosensor	**B. Pichon**

CB9	10:00 - 10:30	Exhibition area (Ground floor)
	Coffee Break	

B1_13	10:30 - 12:00	Schweitzer (Ground floor)
	Development, Characterization, and Applications - Micro to Macroscale	
10:30	All-Textile Triboelectric Nanogenerators for Next Generation Wearable Electronics	**R.-D.-I.-G. Dharmasena**
11:00	Sol-gel-derived Ordered Mesoporous High Entropy Spinel Ferrites and Assessment of their Photoelectrochemical and Electrocatalytic Water Splitting Performance	**M. Einert**
11:15	A Sol-gel inkjet printable PZT ink for additively fabricated mechanical transducers for energy harvesting, sensing, and mechanical actuation	**M. Fadlelmula**
11:30	Impact of the polymer matrix in GaN nanowire-based devices for energy harvesting	**A. Chevillard**
11:45	Patch-type thermoelectric for energy harvesting with efficient thermal contact properties	**T.-S. Lee**

D1_16	10:30 - 12:00	Cassin (Ground floor)
	Water splitting/HER OER 7	**Chairman** G.-A. Rizzi
10:30	Transition metal oxide core-shell nanoparticles as a new approach to design efficient OER electrocatalysts for the H2 production by water electrolysis	**I. Makarchuk**
11:00	Highly N doped carbon shell-encapsulated Cobalt iron nano cube as efficient for hydrogen evolution reaction	**U.-Y. Lee**
11:15	Efficient oxygen evolution reaction catalyzed by Ni/NiO nanoparticles produced by pulsed laser ablation in liquid environment	**V. Iacono**
11:30	Evaluating Electrocatalytic Activity of Metal-Substituted Metal Diborides (M1-xTMxB2; TM = Ni and Co) toward Water Splitting	**U. Aydemir**
11:45	Optimized electroless deposition of NiCoP electrocalysts for enhanced water splitting	**S. Battiato**

D2_16	10:30 - 12:00	Boston (1st floor)
	Transparent Materials 2	**Chairman** J. Alaria
10:30	Preparation and characterization of SbSeI thin films	**M. Dolcet Sadurní**
11:00	Wafer-scale tunable porous Ge: Emerging engineered substrate for epitaxial growth of freestanding membranes	**T. Hanus**
11:15	Fast switching kinetics of silver nanowires-based transparent electrode films: A comparison of various electrochromic materials	**A. Ambreen**
11:30	ALD of conformal, transparent conducting BaSnOx?passivation layers on textured Si	**B. Mandol**
11:45	Hydrogel based stretchable and self-healing triboelectric nanogenerator	**B. Bagchi**

F18	10:30 - 12:00	OPS (Ground floor)
	Nanomaterials Growth and Applications	**Chairman** Y.-K. Mishra R. Puglisi
10:30	Nature-inspired Shapes Using Integration of Electrospinning and Additive Processing for Atmospheric Water Harvesting	**A. Vaseashta**

11:00	Materials at Nanoscale: Manifestations of Quantum Phenomena and Other Aspects	**S.-K. Srivastava**
11:15	Disposable Sensors for Non-invasive Disease Detection: Current Trends and Future	**A. Beniwal**
11:30	Green and Facile Synthesis of Hyperbranched Gold Nanostructures for SERS Applications	**M.-D. Regulacio**
11:45	Low Energy Ions Induced Structural Modifications in Tungsten Carbide (WC) thin films	**S. Bist**

I15 10:30 - 12:00 Bruxelles (Ground floor)

Tutorial Frontiers in Biodiagnostics

10:30	Development of an Ag@Au core/shell system as label-free SERS investigation tool for malignant/non-malignant cells assessment	**I. Chilibon**
11:00	Air-Stable Bio-Protonic Devices with Ion Channels for Electronic Control of Hydrogen Ion Flow through Phospholipid Membranes	**R. Sadhukhan**
11:30	Behaviour of citrate-capped gold nanoparticles at biomembranes – atomic insight at supported lipid bilayer and liposome interfaces.	**A. Elbourne**

L16 10:30 - 12:00 Etoile A (1st floor)

Laser Surface Processing

Chairman
J. Bonse

10:30	Laser-induced periodic surface structures in polymers with tailored laser fields	**R. De Nalda**
10:45	Laser induced periodic surface structuring of Germanium with circularly polarized femtosecond pulses	**J. Jj Nivas**
11:00	Spatially Regulated Pressure of Shockwave for the Generation of 2D Micro Patterns	**J. Lee**
11:15	Effect of Si Addition on the Microstructure and High Temperature Oxidation Resistance Property of Titanium Aluminide	**J. Dutta Majumdar**

M17 10:30 - 12:00 Schuman (1st floor)

High-Mobility Electron Devices

Session Chair
E.-M. Bazizi

10:30	Enabling High-capacity 6G Wireless Communication: Harnessing the Potential of InP Semiconductors	**N. Collaert**
11:00	Isolation of Bidimensional Electron Gas in AlGaN/GaN Heterojunction using C, Fe and Ar Ion Implantation	**A. Scandurra**
11:15	Fabrication of Self-aligned Quantum Well InGaAs MOSFETs for High Frequency Applications	**N.-S. Garigapati**
11:30	Qualitative and quantitative defect analysis of high mobility InGaZnO oxide thin film transistor with polyimide insulator	**M.-J. Kim**
11:45	Mechanical Stress Confinement Effects on Microelectronics Reliability	**A. Haque**

O12 10:30 - 12:00 Churchill (1st floor)

Perovskites for photonic applications 5

Chairman
G. Grancini
A. Petrozza

10:30	Next materials for future photonics devices	**M. Girtan**

11:00	Accelerating the development of stable vapor-deposited perovskite thin-films via combinatorial UV–Vis degradation studies	**A. Wieczorek**
11:15	Ionic liquid-based molecules and macromolecules to improve the performance of hybrid perovskite solar cells	**E. Cloutet**
11:30	Thermal Evaporation of Self-Assembled Monolayers for Lossless Interfaces in p-i-n Perovskite Solar Cells	**T. Feeney**