



European Materials Research Society

2025 Spring Meeting

May 26 – 30 | Strasbourg Convention Centre

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SYMPOSIUM J

Engineered nanomaterials for energy and environment:
from synthesis to applications

Oral sessions : SCHWEITZER HALL – GROUND FLOOR
Poster sessions : ETOILE – FIRST FLOOR

Symposium Organizers:

Alberto VOMIERO (Main organizer), Luleå University of Technology, Sweden

Elisa MORETTI, Ca' Foscari University of Venice, Italy

Sanjay MATHUR, Department of Chemistry, University of Köln, Germany

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Monday May 26

J01 Oral session

Chairperson(s): MORETTI Elisa

VOMIERO Alberto

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08:30	3216	Engineered nanomaterials for carbon capture requirements Morante Joan Ramon (Invited)
08:50	1345	Advanced Materials for Clean Energy Transition QURASHI Ahsan UI Haq (Invited)
09:10	2704	Sustainable metals and electronics SANTATO Clara (Invited)
09:45	2681	From powder to large-area films - A scalable route for production of semiconducting 2D TMDs for solar-to-chemical energy conversion WELLS Rebekah
10:00	2925	Oxide Semiconductor Nanostructures for Water Splitting and Optoelectronics Applications TON-THAT Cuong

Monday May 26

J02 Oral session

Chairperson(s): SANTATO Clara

[View session abstracts](#)

10:30	3035	Electrochemiluminescence of Transition Metal Complexes and Organic Dyes: Features, Applications, Pros and Cons. POLO Federico (Invited)
10:50	3217	Electrocatalytic behavior of self-supported tantalum-based nitrides and other compositionally complex ceramics Kumar Ravi (Invited)
11:10	2208	The Chemistry of Nickel-Rich Intermetallic Compounds for CO ₂ Hydrogenation to CH ₄ FRECCERO Riccardo (Invited)
11:30	1868	Methanol production via CO ₂ hydrogenation with Cu-based co-doped CeO ₂ catalysts SUAREZ ANZORENA Rosario
11:45	2416	Nanoconfined hybrid Cu ₂ O nanoreactors for stable electrocatalytic CO ₂ reduction FRANCO Federico
12:00	2637	Biological and bio-inspired templating of highly ordered metal oxides KISAILUS David (Invited)

Monday May 26

J03 Oral session

Chairperson(s): MORETTI Elisa

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13:30	921	Synthesis of molecule-like Eu-oxide defects in ZnO WESTIN Gunnar (Invited)
13:50	1442	From Molecules to Devices: Reversible NH ₃ Binding Influences Coordination, Vapochromism, and Magnetochemistry in Ni(II) Paddlewheel Complexes with Thiopyridazine Ligands Carlotto Silvia (Invited)
14:10	2236	Ion Doping to Visible-light Responsive Peroxo-modified Titanate Nanotube for Enhancing Photochemical Functions SEKINO Tohru (Invited)
14:30	297	Tuning electronic properties in defected MoS ₂ films by electrochemical patterning for superior electrocatalysis in hydrogen evolution reaction CAVALLINI Massimiliano (Invited)
15:10	478	Novel Fe-based semiconductors and electrocatalysts for solar energy conversion MARSCHALL Roland
15:25	405	Magnetically grown iron oxide thin film as improved template for designing hematite-anatase heterostructures MATHUR Sanjay
15:40	3051	Role of Sn in low-temperature processed hematite photoanodes for water splitting MAURIZIO Chiara
15:45	1479	Preparation and optimization of ZnO/ZnS nanostructures as supercapacitors FISCHETTI Alessia
16:00	1131	Deposition, processing and functionalization of vertical graphene nanowalls and their application on electrocatalytic hydrogen evolution. CHAITOGLU Stefanos
16:30	1990	LiMn ₂ O ₄ nanoparticles as a model system to understand the Mn dissolution mechanism during water oxidation BISEN Omeshwari

Monday May 26

JPO1 Poster session

[View session abstracts](#)

16:30	01_104	CO ₂ -Derived Edge-Boron-Doped Hierarchical Porous Carbon Catalysts for Highly Effective Electrochemical H ₂ O ₂ Production KIM Jong Min
16:30	02_1069	Nanostructured Anatase on Porous Silicon as a Functional Composite for Environmental Applications TURDALIEV Temur
16:30	03_1115	Multi-Cationic High Entropy Perovskite Oxides for Electrocatalytic Oxygen Evolution and Oxygen Reduction Reactions ERDIL Tuncay
16:30	04_1117	Enhancing Zinc-Air Battery Performance with High Entropy Oxide Electrocatalysts by Investigating the Role of Oxygen Vacancies and Porosity OZGUR Cagla
16:30	05_1184	Novel sustainable porous organic polymer for multifunctional water treatment: Adsorption and disinfection applications THOTTATHIL Swathi
16:30	06_1177	SnO ₂ Nanowires for CO ₂ Reduction: Exploring Substrate and Electrolyte Optimization IGA Gustavo
16:30	07_1207	Design of Multi-Phase TiO ₂ /Carbon Composites Derived from Titanium-Based Metal-Organic Frameworks Synthesized by Surface Potential-Controlled Process for High-Rate Lithium Storage YANG Won Seok
16:30	08_952	Visible Light Photocatalysis Using 3D-Printed Carbon Nitride-Based Composite for Antibiotic Removal DEY Debanjali
16:30	09_130	High-Temperature Stable NO _x Sensor for Exhaust Gas Monitoring in Automobiles LEE Chil-Hyoung
16:30	10_131	Hybrid-Protected Perovskite Quantum Dot Films with Ultra-High Efficiency and Stability for LED Backlighting NGO Thi Loan
16:30	11_1342	Enhanced HER performance via Three-Phase Hetero-junction Ni/Ni ₄ N/Ni _{0.2} Mo _{0.8} N in AEMWE LEE Ui Young
16:30	13_1364	Development of Fabrication Processes for High-Thermal-Conductivity Boron Arsenide Ceramic Targets LEE Bona

16:30	14_1368	NiCo PBA-derived Co/P dual-doped Nickel Sulfide on Nickel Foam as an efficient electrocatalyst for water splitting KWON Kyeongmin
16:30	15_1374	Nickel Cobalt oxide/sulfide heterostructure electrocatalyst for the oxygen evolution reaction. KWON Hyeonji
16:30	16_1390	Upcycling Municipal Waste into Disordered Carbon for Rechargeable Batteries : Structural and Electrochemical Insights PARK Hyunju
16:30	17_142	Nitrogen-Functionalized reduced-Graphene Oxide as highly selective and sensitive material for nitrate determination SUTAR Swarup
16:30	18_1433	Optimizing Mesoporous Silica-Supported Au/CeO ₂ Nanocatalysts for CO ₂ Oxidation LASALA Pierluigi
16:30	19_1453	Enhancing Hydrophobicity and Shielding Effectiveness of MXene Films Through Surface Plasma Treatment LEI Xiaoting
16:30	20_1461	Ni-MOF and its composite electrode for Energy storage applications RAJKAMAL Rajkamal
16:30	21_1468	Efficient VRFB electrolytes using recycled V ₂ O ₅ ISKANDAROV Shukhrat
16:30	22_1470	Piezo-photocatalytic Degradation of Polyfluoroalkyl Substances and Organic Dyes using Bismuth Ferrite Nanoparticles KOKKILIGADDA Jhansi
16:30	23_1475	Nickel-cobalt layered double hydroxide-SiO ₂ core-shell nanoparticles for applications in supercapacitors TIWARI Mohini
16:30	24_1484	Advancing Electrochemical Catalysis: Innovative Joule Heating Methods for Multi-Metallic Nanoparticles and MXene Hybrid Nanocomposites KIM Chansol
16:30	25_1527	A fiber optic-plasmonic sensor for monitoring environmental pollutants in water ANTOHE Iulia
16:30	26_1552	New thermochromic films for smart windows technology TSEBRIENKO Tamara
16:30	27_157	High Performance Fe-MoS ₂ Electrocatalyst for Efficient Nitrate Reduction to Ammonia: Synergistic Design for Sustainable Ammonia Production MARINO Nino
16:30	28_1576	Formation of SbSeI thin films by two-stage approach VAINAUSKAS Deividas

16:30	29_1597	Nanostructured β -B ₂ O ₃ /Bi Electrodes via Sol-Gel Processing and Controlled Reactive Annealing CONDORELLI Guglielmo Guido
16:30	30_1602	Enhanced (Photo)catalytic Activity of Ceria Nanoparticles by Manganese Doping TALHA Khalid
16:30	31_1612	Synthesis and Characterization of Fe/Ni-based Catalysts for Methane Pyrolysis: Prospects for Sustainable Hydrogen Production TUCKUTE Simona
16:30	32_1802	A novel Approach for Synthesizing Au/Pd Core-Shell Nanoparticles Thin Films AL FADHIL Danah
16:30	33_1805	A novel Approach for Synthesizing Au/Pd Core-Shell Nanoparticles Thin Films AL FADHIL Danah
16:30	34_1857	Enhanced CO Gas Sensing Performance of Titanium-Doped Tin Dioxide Thin Films Synthesized via Aerosol Chemical Vapor Deposition LITAIM Yosre
16:30	35_1863	Influence of particle alignment on electrical transport and photoconductivity in 2D halide perovskites. QUINTERO Leonardo
16:30	36_1864	Effect of heating mode on the synthesis of heterogeneous molybdates-based catalysts GROSS Silvia
16:30	37_1903	Chemically Networked Cellulose Nanofibers for Environmentally Sustainable Hydrovoltaic Energy Harvesting SHIN Eunae
16:30	38_1956	High Crystallinity Quasi-spherical Single-phase Vanadium Dioxide Nanoparticles for Thermochromic Smart window. LEE Sangwook
16:30	39_2036	The influence of electron beam irradiation on polyaniline-based chemiresistive sensors for ammonia detection POPA Ana-Maria
16:30	40_2198	Morphological impact on the photocatalytic and supercapacitive performance of ZnO nanostructures STEFAN Maria
16:30	42_2238	Fabrication of low-temperature fuel cells using proton-conducting silicate nanosheets electrolyte IDA Shintaro
16:30	43_2241	Enhancement in hydrogenation performance of Mg by the growth of heterogenous Ni-Co doping structure WU Ying

16:30	45_2304	A 1T -MoS ₂ -Modified Kinetic-Accelerating and Shuttle-Limiting Separator for High-Capacity and Long-Cycling Lithium-Sulfur Battery DONG Dan
16:30	46_244	Mesoporous Zinc Vanadate: A Promising Electrode Material for Advanced Functional Energy Storage Devices DIVI Haranath
16:30	47_2454	Optimized ball milling synthesis of efficient NiMo -based bimetallic electrocatalysts for hydrogen evolution reaction in alkaline condition URSO Mario
16:30	48_2466	Vertically Aligned Carbon Nanotubes Microstructures based S-cathodes for Stable operation of Li-S Micro-batteries MONDAL Bikram
16:30	49_267	CuO nanoparticles-decorated femtosecond laser-irradiated WS ₂ -WO ₃ heterojunctions to realize selective H ₂ S gas sensor KIM Jae-Hun
16:30	50_2789	Enhancing CO ₂ Reduction Efficiency with CF/PAni/Metal Ion Composites: Inhibition of HER and Catalytic Performance VERNASQUI Laís
16:30	51_2813	An endurable sensor for non-invasive detection of anticancer drug, " A nontraditional solution " in healthcare ROY Dona
16:30	52_2874	Lignin-derived Carbon Dots Upgraded Bacterial Cellulose Membrane as an All-in-one Interfacial Evaporator for Solar-driven Water Purification SHAIKH Mobin M.
16:30	53_2898	Coupling of magnesium nanoparticles and carbon nanofibers to treat water contaminated with heavy metals BEN RABHA Mohamed
16:30	54_2949	Laser-induced photodegradation of microplastics as promising approach for their removal from aquatic environments SMARANDACHE Adriana
16:30	55_3127	Meldrum's Acid-Derived Engineered Carbon Materials for Energy Storage Applications YILMAZ Elif Begüm
16:30	57_3133	Development of spinel-based nanonures for microclimate sensing applications KLYM Halyna
16:30	58_3143	Development of CF/PAni/ion composites as electrodes for HER inhibition in vanadium redox flow batteries S DOS SANTOS Suelem
16:30	59_356	Polycaprolactone-based Redox-Active Polymers: From Lithium-Ion Batteries to Aqueous Electrochemical Systems CHO Sangho

16:30	60_663	Implementing sustainability in laboratory: Life Cycle Assessment of membrane materials for hydrogen separation MOHTASHAMIFAR Ali
16:30	61_677	Laser and solvent modification of Graphene Oxide for Oxygen Evolution Reaction. LO PÒ Cristiano
16:30	62_800	Bismuth Based – MOF Photoelectrodes for Efficient Energy Conversion CASTRO Antonella
16:30	63_82	Deposition of CZTS Thin Films by Sol-Gel Spin Coating: Evaluating the Effect of Different Precursor Types GUPTA Shubham
16:30	64_90	Study of De-/Anti-icing Characteristics of Superhydrophobic Coating and Lubricant Impregnation SHIN Jiyoung
16:30	65_951	Visible Light-Responsive Advanced Ternary Composite for Efficient Photocatalytic Degradation of Endocrine Disrupting Chemical in Aqueous Environment SAIN Manisha
16:30	66_31	Tailored Coupling of Graphene Oxide and Ionic Covalent Organic Framework for Efficient Environmental Remediation KHAN Niaz Ali
16:30	67_1235	Investigation of the Formation of ZIF-8-Derived ZnS@MoS ₂ Composites for Energy Applications THOMAS Alen Sam

Tuesday May 27 J05 Oral session Chairperson(s): CONCINA Isabella		
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[View session abstracts](#)

08:30	3126	Multifunctional Rare Earth Doped Nanoparticles: Exploring Their Potential Applications VETRONE Fiorenzo (Invited)
08:50	2600	Light-emitting materials: from near infrared optoelectronics to circularly polarised light MAURO Matteo (Invited)
09:10	275	Disordered versus ordered niobates as electrode materials for rechargeable batteries PINNA Nicola (Invited)
09:30	1591	Nanostructured CeO _{2-x} thin films for ion storage layer in electrochromic devices, optical characterization, and morphology modeling CRACIUN Cristina

09:45	1055	Emergence of Novel Synergetic Optical and Electrical Properties at Near-Equal Ratios for Composition-Tuned Atomic Layer Deposited Pt:TiO ₂ Composite Thin Films GHIYASI Ramin
10:00	2822	Foam anodes to couple glycerol oxidation reaction to carbon dioxide electroreduction in continuous flow. ANDREU Teresa

Tuesday May 27 J06 Oral session Chairperson(s): MORETTI Elisa POLO Federico		
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10:30	418	Low cost nanoporous materials for CO ₂ capture RODRIGUEZ CASTELLON Enrique (Invited)
10:50	2001	Graphitic carbon nitride derivatives for water decontamination using visible light SGARBOSSA Paolo (Invited)
11:10	1706	Water remediation through materials-by-design: successes and falls CONCINA Isabella (Invited)
11:30	3110	Biochars from Coffee Silverskin Remediate E. Coli from Contaminated Water SCETTRI Anna (Invited)

Tuesday May 27 J07 Oral session Chairperson(s): VETRONE Fiorenzo		
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13:30	256	The inorganic chemistry playground: optimising inorganic materials for a clean environment by navigating the experimental parameters space. GROSS Silvia (Invited)
13:50	3214	Computational Advancement towards Efficient Catalytic Materials: Connecting a Few Dots Chakraborty Sudip (Invited)
14:10	1116	Functional MOFs with Mono- and Bimetallic Centers for Sensing, Environmental Control and Energy Production CONDORELLI Guglielmo Guido (Invited)
14:30	240	From Single Sensor to Arrays: E-Nose Sensors for Environmental Sensing and Healthcare GUPTA Ritu (Invited)

14:50	2227	Engineering of metal oxide nanostructures for hydrogen gas sensing AWASTHI Kamendra (Invited)
15:10	3169	Advances in Photon-harvesting Perovskite Absorbers Thin Films Chaudhary Dharendra K.
15:25	2478	Silk fibroin-derived sustainable hybrid materials for next-generation sensing technologies GALSTYAN Vardan
15:55	2819	Study of nano materials for the development of optical nano sensors. Application to the detection of hydrogen leaks JAVAHIRALY Nicolas

Tuesday May 27
JPO2 Poster session

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16:30	01_1090	3D printed gas diffusion electrodes from colloidal nano-inks BATOOL Nadia
16:30	02_1358	Synthesis of Nanosphere structured ReS ₂ on NiOOH nanosheets for Overall water splitting GUDAL Chandan Chandru
16:30	03_1397	Electrochemical synthesis of N-based products (green ammonia, green urea & nitric acid) under ambient conditions: Fundamental-to-Pilot scale application GHORAI Uttam Kumar
16:30	04_1443	Enhancing the Electrochemical Performance in Prussian White Sodium Ion Battery Cathodes through Fe Redox Activation YUK Jong Min
16:30	05_1444	Conducting Polymers in Thermosensitive Hydrogels: A Multiscale Approach Towards Solar Evaporation Applications Naranjo David
16:30	06_1459	Synthesis of MoS ₂ @NdS heterostructures featuring augmented field emission performance MAHAJAN Anima
16:30	07_1474	Ultrafast Sodium Storage of Copper Sulfide and Phosphorus Composite as High-Performance Anode for Sodium-Ion Batteries YUK Jong Min
16:30	08_1520	A holistic approach to utilize spent lead acid battery for producing volume-contractible PbCl ₂ negative electrode for long-lasting Li-ion batteries A Andrews Cyril
16:30	09_1544	Enhanced charge carrier transport in electronic structure modulated 2D MoS ₂ catalyst CHA Seungnam

16:30	10_1559	NiMnLDH-Based Core-Shell Composites with CuO, Co ₃ O ₄ , and CuCo ₂ O ₄ Oxides as positive Electrodes Supercapacitor Application AMAN Mohammad
16:30	11_1573	Tuning the OER Catalytic Activity of AgNiO ₂ Through Electronic Structure Engineering and Fe Surface Modification JIANG Chang-Ming
16:30	12_1610	Directional Superlubricity in Bi/HOPG: Realisation of Nanohighways LE STER Maxime
16:30	13_1611	Size regulation of Ru nanocluster and EMSI via 0.6nm pore concentrated lignin derived carbon support for robust hydrogen evolution reaction electrocatalysts CHOI Hyuck Gu
16:30	14_1642	Sustainable Lignin-Derived Carbon Anodes for Long-Cycle Potassium-Ion Batteries RAVIOLO Sofia
16:30	15_1661	Hemp shives conformally-coated by ALD ZnO for wastewater treatment LAFERRERA Chiara
16:30	16_1664	Role of organic linkers in Metal-Organic frameworks (MOFs) for electrocatalytic water splitting HALDER Anupam
16:30	17_1687	Giant Magnetocaloric Properties of Gd-based Double Perovskite Compounds in Cryogenic temperature range MEENAKSHI Meenakshi
16:30	18_1871	Catalytic Performance of Engineered CoFe ₂ O ₄ Thin Films in Electrochemical Ammonia Synthesis KARIMPOUR Touraj
16:30	19_1917	Surface Modification of BaTiO ₃ with Polydopamine for Piezocatalytic H ₂ Production SEKINO Tohru
16:30	20_1943	Enhanced High-Rate Performance of V ₂ O ₅ @C Cathodes via CSP for Lithium-Ion Batteries SEKINO Tohru
16:30	21_1946	Self-Doped Yellow TiO ₂ for DSSC: From Outdoor to Indoor Light Harvesting V P Aneesha
16:30	22_2015	Structural Analysis of In ₂ O ₃ Nanowires grown by the VLS Mechanism KIM Chung Soo
16:30	23_2040	Helium-assisted deposition of Cu-doped TiO ₂ for Conductometric Hydrogen Sensing via DC Magnetron Sputtering KUMAR Akash
16:30	24_2060	Design and synthesis of monodisperse plasmonic-magnetic heteronanostructures WANG Xiao
16:30	25_2068	High Entropy Alloys porous coatings by Glancing Angle Deposition - Magnetron Sputtering technology for solid state Hydrogen Storage DEAMBROSIS Silvia Maria

16:30	26_2075	Synthesis and Investigation of CALGO and CALYO Crystals Doped Lanthanides SKRUODIENE Monika	16:30	42_2783	In-situ Investigations of the Thermal, Optical, and Photovoltaic Properties of Functional Perovskite Solar Cells during Degradation NIE Jiazhao
16:30	27_2165	MOF- Based on Delafossite electrode material for Energy storage applications. DAGAR Tanya	16:30	43_2806	Functionalised Cellulose Membranes for Low-Grade Heat-to-Electricity Conversion ASHOKAN Anjali
16:30	29_2191	Impact of Nickel Impurities on Lithium Iron Phosphate Cathodes Synthesized from Iron Sulfate Recovered from Stainless-Steel Scrap KIM Minjin	16:30	44_2882	Plasmon resonance detection of vapor adsorption isotherms CATANZARO Lucrezia
16:30	30_2196	Processing of molybdenum industrial waste into sustainable and efficient nanocatalysts for water electrolysis reactions Ursino Federico	16:30	45_2883	Piezoelectric Zinc Oxide Nanowires : Materials Optimization and Multi-scale Characterizations BEN KHALED Imen
16:30	31_2206	Advancing Cu ₂ O Films for PEC Water Splitting Using Reactive HiPIMS: Enhanced Crystallinity and Photocurrent Performance VOSEJPKA Jan	16:30	46_2885	Impedance-assisted multivariate analysis technique for enhanced gas sensing with 2D dichalcogenides SLEDZINSKA Marianna
16:30	32_2254	Investigation of heat and hydrogen generation via the reaction between aluminium and water ZAHID Muhammad	16:30	47_2890	Computational Optimization of MBene-Based Nanostructures for Enhanced Solar Energy Harvesting SORATHIYA Vishal
16:30	33_2282	Transforming Light into Action: Enhanced Adsorption and Visible Light Photocatalytic Dye Degradation with Sustainable Heterojunction Synthesis of Phenyl-Modified Carbon Nitride and Strontium Titanate. BAGCHI Saswati	16:30	48_2914	Electrochemical routes to nanostructured catalysts for CO ₂ hydrogenation PICCA Rosaria Anna
16:30	34_2302	Metal Halide Perovskites: Compositional and Morphological Engineering for Enhanced Gas Sensing Applications KOSTOPOULOU Athanasia	16:30	49_406	Connecting the dots in hematite-anatase heterostructures toward photoelectrodes with low turn-on voltages MATHUR Sanjay
16:30	35_2401	Corrosion-resistant and electrically conductive Ti-Nb-O-based coatings for metal bipolar plates and porous transport layers in PEM electrolyzers KOLENATÝ David	16:30	50_431	Development of Ultra-Resistant Alloy for Enhanced Corrosion and Oxidation Applications HAKEEM Abbas
16:30	36_2486	Metal-Organic Frameworks-derived Materials for Next-Generation Alkali-Ion Batteries ZEB Akif	16:30	51_435	Design of MAPbBr ₃ /Ga ₂ O ₃ heterostructure self-powered photosensors with enhanced selective responsivity HIDOURI Tarak
16:30	38_2514	Antimicrobial epoxy resins: a new tool against healthcare associated infections BERTANI Roberta	16:30	52_446	Scalable Fabrication of Dense Palladium-Copper Alloy Membranes for Hydrogen Permeation and Separation EHSAN Muhammad Ali
16:30	39_2664	Enhanced Electrochemical Performance of Printed LaFeO ₃ Perovskite Electrodes for Hybrid Supercapacitors NAIR Reshma	16:30	53_448	In situ study of lithium plating and stripping dynamics on 2D carbon surfaces SHI Lu
16:30	40_268	Sub-minute carbonization of polymer/carbon nanotube films by microwave induction heating for ultrafast preparation of hard carbon anodes for sodium-ion batteries RYOO Gyeongbeom	16:30	54_519	Highly efficient and durable carbon-cap PdNi catalysts for Hydrogen Oxidation Reaction ZEMTSOVA Viktoriia
16:30	41_27	Molecular sieving membrane for selective hydrogen sensing JOYEN Kenza	16:30	55_526	Photothermal and Hygroscopic Double-Network Hydrogel for Enhanced Atmospheric Water Harvesting PARK Hyunchul
			16:30	56_553	Effect of Cocatalyst Deposition on the Photocatalytic Activity of Oxynitride Particles ZAHABI Parya

16:30	57_558	3D-printed Ni-catalysts for bioconversion of cellulose NEACSU Vlad-Andrei
16:30	58_585	Glycerol oxidation coupled hydrogen production using PtBi electrocatalysts derived from photoactive BiOI LEE Hak Hyeon
16:30	59_593	Sustainable Methods for Recovering Metal Values from Spent Lithium-Ion Batteries PARK Hee Sun
16:30	60_609	Facile synthesis of NiCuMn hybrid oxyhydroxide for high performance supercapacitors KUMAR Arunesh
16:30	61_675	Integration of Oxygen-Deficient Tungsten Oxide and MXene for High-Performance Electrochromic Energy Storage Devices via Spray Coating DUTTA Pritha
16:30	62_688	Synergistic Role of Ni-Pt Alloy and Defective γ -Al ₂ O ₃ Support in Tri-Reforming of Methane for Syngas production BERTOLDO Gabriela
16:30	63_690	First principle studies of SrTiO ₃ engineering with Bi based heterostructures for efficient photostimulated hydrogen production KOTOMIN Eugene
16:30	64_699	Back surface passivation of superstrate Sb ₂ Se ₃ solar cells by applied organic hole transport layer NAUJOKAITIS Arnas
16:30	65_741	Sol-gel Synthesized Pyrochlore Zn ₂ V ₂ O ₇ for Surface Hydrogenation promoted Dinitrogen Electroreduction to Ammonia GOYAL Naina
16:30	66_870	Sustainable Synthesis and Catalytic Activity of High-Entropy Spinel Oxides: A Path Toward Next-Generation Energy Catalysts GROSS Silvia
16:30	67_913	Laser-Patterned Biphilic Silicon Surfaces: Combining Cold Plasma and Laser Engraving for Enhanced Defrosting MORADI Omid
16:30	68_2741	Exploring Metal Oxide-Ferroelectric Interfaces for Cutting-Edge Piezocatalytic Water Splitting and Pollution Control KRISHNAMURTHY Abinaya

Wednesday May 28		
J09 Oral session		
Chairperson(s): NAPPINI Silvia		
View session abstracts		
08:30	2218	Nanostructured alloys: a contribution to the synthesis, characterisation and investigation of thermal stability DELSANTE Simona (Invited)
08:50	1923	In-Situ and Operando Study of Solid/Liquid Interfaces with Soft X-Ray Spectroscopy for Energy and Environmental Applications MAGNANO Elena (Invited)
09:10	2742	computational design of energy materials using first-principles calculations and machine learning techniques HAN Byungchan (Invited)
09:30	2734	Fluorinated mesostructured titania via molecular precursor strategy for photo/acid-base catalysis MISHRA Shashank (Invited)
09:50	2628	Overcoming the Conductance versus Crossover Trade-off in State-of-the-Art Proton Exchange Fuel-Cell Membranes by Incorporating Atomically Thin Chemical Vapor Deposition Graphene KIDAMBI Piran
Wednesday May 28		
J10 Oral session		
Chairperson(s): PINNA Nicola		
View session abstracts		
10:30	1369	Flexibility of Core-Shell Nanostructures for Clean Energy and other applications CHUA Daniel (Invited)
10:50	2673	TiO ₂ -coated gold nanostars: A paradigm shift in the synthesis of photocatalysts for green hydrogen production FERRARI Debora (Invited)
11:10	1303	Cubic Silicon Carbide: An Emerging Photoanode for High-Performance Solar Water Splitting SUN Jianwu (Invited)
11:30	1171	Photocorrosion in membrane-photoelectrode assemblies for water splitting with BiVO ₄ photoanodes VALENZA Roberto
11:45	2077	Fabrication of Large area Ultrathin Co/Ni(OH) ₂ Flexible Nanosheets: Electrode Material for the Charge Storage and Water Splitting SAXENA Manav

Wednesday May 28

JPO3 Poster session

[View session abstracts](#)

13:45	01_1004	Unlocking Copper-Free Interfacial Asymmetric C–C Coupling for Ethylene Photosynthesis from CO ₂ and H ₂ O SONG Wentao
13:45	02_1018	Synergistic Effects of Mixing in High Entropy Spinel Oxides for Oxygen Evolution Reaction SONG Jiwoo
13:45	03_1054	Co ₉ S ₈ /CoTe ₂ n-n Type Heterojunction: A Heterogenic Interfacial Integration of Co ₉ S ₈ and CoTe ₂ Phases for Energy-Efficient Hydrazine Oxidation Assisted Hydrogen Production MAHALINGAM Venkataramanan
13:45	04_1173	Sustainable Quercetin-based Porous Organic Polymers for Environmental Remediation; Experimental modelling by Artificial Neural Network Analysis. THOTTATHIL Swathi
13:45	05_1428	Development of Sulfurized NiFeCo-Based Non-Precious Metal Catalysts for Efficient Seawater Electrolysis and Integrated Systems Lim Im jiheon
13:45	06_1505	Analysis and Selection of Sorbents for Cleaning Small Water Bodies from Petroleum Contamination KHURSANDOV Umidjon
13:45	07_1545	Durable N-doped Graphene Nanosheets/CeO ₂ @Ti ₄ O ₇ Heterojunction Composite Membrane Encapsulating N-doped Graphene Nanosheets for Efficient Electrooxidation of GenX and other PFAS in Fluorochemical Wastewater WANG Anqi
13:45	08_1635	3D Printed Hierarchically Porous Silicon Carbide Photocatalyst for Efficient Microplastics Degradation VILLA Katherine
13:45	09_1636	Mechanistic Analysis of Peroxymonosulfate-Activated Photocatalytic Degradation of Fluoroquinolone Antibiotics Using Bi ₂ O ₂ CO ₃ /MXene-Ti ₃ C ₂ Heterojunction JENA Girija Shankar
13:45	10_1721	Energy Storage from Spent MXenes and reduced Graphene Oxide Wastewater Adsorbents A. ANDRADE Marcelo
13:45	11_1766	Self-Assembled TMD Nanoparticles on N-Doped Carbon Nanostructures for Oxygen Reduction Reaction and Electrochemical Oxygen Sensing Thereof ATIF Shahan

13:45	12_1780	Phosphoferrene for Mancozeb Detection: A natural 2D phosphate mineral enhancing Pesticide Sensing SLATHIA Surbhi
13:45	13_1788	Tuning Electrical Properties Through Nano-Structural Design: Two Successful Cases of Thermally Stimulated Polarized Materials ARNAU ROCA Marc
13:45	14_1816	Simultaneous H ₂ Generation and Pollutant Degradation Under Visible-Light by Gradient Core-shell Structured PhCN/TiO ₂ Nanohybrid HAZRA Moulika
13:45	15_1818	A novel Approach for Synthesizing Au/Pd Core-Shell Nanoparticles Thin Films AL FADHIL Danah
13:45	16_1846	Electrochemical evaluation of silver supported FeCo oxide derived from Prussian blue analogues for oxygen evolution and urea oxidation reaction PALLILAVALAPPIL Sreedhanya
13:45	17_1853	Solution-based synthesis of inorganic metal chalcogenide particles: Methods and thermoelectric properties analysis SIDDIQUI Mohammad Waquar Uddin
13:45	18_1967	Efficient Electrocatalysts with Multi-elemental single Atom Sites for NH ₃ production WU Pei-Cheng
13:45	20_2000	Integration of Tungsten Oxide and 2D materials for High-Performance Electrochromic Energy Storage Devices via Spray Coating DUTTA Pritha
13:45	21_2028	Effect of electrostatic interaction between analyte and SERS substrate on the coffee ring patterns and SERS enhancement PARSAIN Tapan
13:45	22_2039	Exsolution-driven synthesis of hierarchical Bi/BiOxF ₃ -2x nanostructures for photocatalytic applications. ERBLAND Thomas
13:45	23_2043	Advanced Magnetoelectric Nanogenerator For Magnetically Enhanced Hydrogen Evolution Reactions MURALI Nandan
13:45	24_2051	MXene-reinforced composites for power generation by waste heat recovery and conversion DIXIT Pragya
13:45	25_2061	Fabrication of binder free carbon coated Fe ₃ O ₄ anodes ULLAH Hameed
13:45	26_2065	Ni alloyed RuO ₂ porous electrode for efficient overall water splitting BISWAS Sudipta
13:45	27_2074	Upcycling Agricultural and Industrial Waste: Advanced Composite Materials for Supercapacitor Electrodes SINGH Akshita

13:45	28_2088	Tailoring functionalization of Ti_3C_2 via tuneable EIE route for enhanced electrochemical performance CHINTAKINDI Jhansi
13:45	29_2097	Investigating hydrogen diffusion in ceramic thin film materials RÜCKESHÄUSER Phillip
13:45	30_2151	Non-thermal Magnetic Deicing Using Two-Dimensional Chromium Telluride CHOWDE GOWDA Chinmayee
13:45	31_2178	Water Vapor Electrolysis Using Clay-Derived Silicate Nanosheet Membranes as Solid Electrolyte KINOSHITA Sho
13:45	32_2479	Sustainable Multifunctional Water-Based Nanofluids: Potential of Xanthan Gum and Graphene Oxide MORAES FERNANDES Nathália Maria
13:45	33_2542	Precise coevaporation process for depositing superconducting NbTi nanolayers at room temperature KURDZESAU Fiodar
13:45	34_2544	Morphology Controlled Perovskites Synthesis and Applications VINOD C. Prabhakaran
13:45	35_2549	Tailoring N, P, and O Co-Doped Activated Carbons from spent Coffee Grounds for Electrochemical Applications LANERO Francesco
13:45	36_2566	Functionalized Metal Organic Framework Enabled High Performance Antifouling Hybrid Ultrafiltration Membranes for Water Treatment GUPTA Vinay
13:45	39_2671	Maleic Anhydride Copolymer Aerogel with Photoluminescence Characteristics and Its Application in Phase Change Energy Storage QIAO Jinliang
13:45	40_2710	Self-assembled coating of nanoporous polymer membranes with “sacrificial” polyelectrolyte nanolayers: a novel approach to mitigate biofouling KOCHKODAN Viktor
13:45	41_2722	Ion Migration and Phase Segregation in Mixed Halide Perovskite Quantum Dots for Supercapacitor Applications KUMAR Arun
13:45	42_2758	Inorganic-Organic Nanohybrid for Robust Photocatalytic Degradation of Toxic Dyes from Textile Wastewater SARKAR Sudarshan
13:45	43_2825	Coiled double amyloid-like fibrils allosterically catalyze hydrolysis of beta-lactam antibiotics MAMBRAM KUNNATH Sisira

13:45	44_2828	Breaking the Pt Electron Symmetry and OH Spillover towards PtIr Active Center for Performance Modulation in Direct Ammonia Fuel Cell BARIK Sidharth
13:45	45_2837	Optimizing the growth parameters of ZnO thin films JAFAROV Maarif
13:45	46_2841	Pd-Dispersed MOF Catalyst for Ammonia-free Hydrogen Evolution from Chemical Hydrides in Different Solvents Medium BANERJEE Seemita
13:45	47_2939	Advanced CuO Thin Film Gas Sensors Fabricated via GLAD Technique: Enhanced Characterization and High-Sensitivity Ethanol Detection BENAMOR Moncef
13:45	48_2950	Fabrication of flexible catalysts based on transition metal alloys for water splitting TAMASAUSKAITE-TAMASIUNAITE Loreta
13:45	49_2982	Deriving Chiroptical Properties from Intrinsically Achiral Building Blocks of One-Dimensional CsPbBr ₃ Perovskite Nanowires ACHARYA Somabrata
13:45	50_2988	Specific, Label-Free and Real-Time Sensing of Organophosphates using a Novel Field-Effect Biosensor POOJA
13:45	51_3001	In vitro assessment of Graphene Oxide-Microplastic hybrid mediated biotoxicity inferred by Oxidative stress SINHA Adrija
13:45	52_3043	Comprehensive Comparative Study of Charge Dynamics in Monolayer and Bulk WS ₂ Unveiling the Potential of Monolayers SHARMA Saloni
13:45	53_3052	Physical and chemical interactions during water sorption in MgAl ₂ O ₄ ceramics KLYM Halyna
13:45	54_3058	Aging dynamics in temperature-sensitive nanostructured thick films based on ceramics KLYM Halyna
13:45	55_3071	Challenges in the Evaluation of Electrocatalyst Performance for Alkaline Water Electrolyzer Applications YAVUZ Cafer Tayyar
13:45	56_3091	Continuous electro-oxidation of lignin to vanillic acid MONTILLA VERDÚ Salvador
13:45	57_3092	Photocatalytic lignin valorization using colloidal quantum dots: the influence of the ligand shell on the reactivity RICO Elio
13:45	58_517	Inorganic-Organic Nanohybrid for Robust Photocatalytic Degradation of Toxic Dyes from Textile Wastewater SARKAR Sudarshan

13:45	59_747	Enhanced oxygen evolution reaction of 2-dimensional metal-organic frameworks with tunable nitrogen functionalities by ion beam sputtering BU Jeewon
13:45	60_836	Characterization of ZnIn ₂ S ₄ thin films synthesized by two-stage process BRONUSIENE Asta
13:45	61_86	Robust atomic catalysts with ensemble sites and metallic states for pollution remediation JEONG Hojin
13:45	62_893	Strongly correlated electron system NiWO ₄ : A new family of materials for triboelectrics using inherent Coulombic repulsion JI Yunseong
13:45	63_917	Sustainable Electrospun Biobased Semi-aromatic Polyamide Nanofibers for Water Treatment: Swelling Behavior and High-Efficiency PFOA Adsorption DING Xiang
13:45	64_931	Influence of Synthesis Parameters on the Properties of Ni-Fe Layered Double Hydroxides PARK Gyeongbae
13:45	66_953	Lanthanides Promoted Nickel on Al ₂ O ₃ Catalysts for Ammonia Decomposition SHAIKH M. Nasiruzzaman
13:45	67_969	Phase Engineering of High-Entropy Alloy Nanomaterials towards Enhanced Hydrogen Evolution Reaction HAN Peng
13:45	68_972	Enhanced Hydrogen Production with Electrodeposited CoNi-based Catalysts LLOREDA Judit
13:45	69_1247	A study on palladium-doped 2d g-c3n5 materials for increased electrocatalytic activity towards hydrogen evolution reaction Kumar Ajay
13:45	70_789	Interface Modification with ALD-Coated ZnO-TiO ₂ Films: Toward Higher Thermoelectric Performance Eun Su Min

Thursday May 29

J12 Oral session

Chairperson(s): SPEGHINI Adolfo

[View session abstracts](#)

08:50	1400	'Layered' transition metal oxides as electrode materials for Na-ion batteries: Composition - Structure - Environmental stability - Electrochemical behaviour/ performance MUKHOPADHYAY Amartya (Invited)
09:10	133	The Energy Challenge from a Materials Perspective ROSEI Federico (Invited)

09:30	3125	Assessing Different Types of Silica Networks for the Complete Protection of NIR-Luminescent Molecular Rubies from Oxygen Quenching in Air RESCH-GENGER Ute
09:45	1191	SnS anodes with high volumetric capacity for Na-ion batteries and their characterization in ether and ester electrolytes WANG Hui
10:00	2687	Design of nanostructured cathodes functionalized with organic molecules for sustainable batteries MIANULLI Giuseppe

Thursday May 29

J13 Oral session

Chairperson(s): MAURO Matteo

[View session abstracts](#)

10:30	736	Nanostructures and upconversion: exploiting NIR lasers for the degradation of emerging contaminants SPEGHINI Adolfo (Invited)
10:50	562	Organic Luminophores for Sustainable Applications RIZZO Fabio (Invited)
11:10	2607	Organoferrous Photosensitizers for DSSC Applications: A Promising Future? CEBRIAN AVILA Cristina (Invited)
11:30	145	Cost-Effective Synthesis of Hematite Photoelectrodes for Scalable and High-Performance Photoelectrochemical Devices SOUZA Flavio L (Invited)
11:50	3025	Large-area and transparent plasmonic nano-electrodes via Ar plasma irradiation for flexible architectures FERRANDO Giulio

Thursday May 29

J14 Oral session

Chairperson(s): GROSS Silvia

[View session abstracts](#)

14:20	1196	Fe(III) Promotes Metallic Copper Inclusions within CuWO ₄ Photoanodes for Improved Water Oxidation LAMBERTI Francesco (Invited)
14:40	118	Photocatalytic liquid metal particles generated under different sonication conditions and voltages NOR-AZMAN Nur-Adania

14:55	689	The Role of Coprecipitation and Sol-Gel synthesis in Double Perovskite Design for Tri-reforming of Methane BERTOLDO Gabriela
15:10	119	New fluorination methods of molybdenum disulfide (MoS ₂) for enhanced H ₂ production performances BUZDON Tara
15:25	2380	The role of nanostructuration to enhance piezocatalytic properties of PVDF MASSAGLIA Giulia
15:40	1608	MnFe ₂ O ₄ -Na ₂ CO ₃ Thermochemical Cycle: From Materials Improvement to H Production in a Fixed-Bed Reactor TORRE Francesco

Thursday May 29
JPO4 Poster session

[View session abstracts](#)

16:30	01_1	Facile One-step Synthesis of Cu ₂ O Photocathode Coated with ZnO Nanoparticles for Enhanced Photoelectrochemical Properties LIAO Chien Neng
16:30	02_1784	In ₂ S ₃ /FeVO ₄ /CNT Photoelectrode with Optimized Type-II Heterostructure Band Alignment for Enhanced Visible Light Driven Photoelectrochemical Oxygen Evolution GARG Nitika
16:30	03_1047	Optimization of Electrodes and Performance Improvement of TiO ₂ -based Capacitor Using Plasma-enhanced Atomic Layer Deposition and Plasma Pre-treatment JUNG Si Eun
16:30	04_1128	Development of Conductive Oxide Coatings to Reduce the Use of PGMs in Bipolar Plates of PEM Electrolyzers Using Hipims CALERO-ALMEYDA Christian
16:30	05_1160	Hydrogen storage in 90 wt. % Mg- 5wt. % Ni- 5wt.% NiGO prepared by ball milling GRIGOROVA Eli
16:30	06_3231	Multifunctional electrospun nanofiber patches for biomedical use in imaging and drug delivery Gattucci Francesca
16:30	07_1187	Electronic pyroelectricity in a supramolecular polymer of acceptor-donor-acceptor type chiral ambipolar π -system DATTA Anuja
16:30	08_1204	Mapping Fundamental Optoelectronic Properties in 2D Lead-Free Double Perovskites MARTINS DE FREITAS Andre Luiz
16:30	09_1208	Efficient CO ₂ Electroreduction to CO Using Nanostructured Silver-based Catalysts BAJOUK Ola

16:30	10_1213	Self-Rechargeable Aqueous Zn ²⁺ /K ⁺ Electrochromic Energy Storage Device via Scalable Spray-Coating Integrated with Marangoni Flow ROY Rahuldeb
16:30	11_1218	From Stability to High Performance: Pressure-induced high-energy Emission in Quasi-3D Halide Perovskites TOFANELLO Aryane
16:30	12_1236	Controlling the conductivity of sputtered Al doped ZnO to modulate area selective deposition of Cu and Cu ₂ O IGLESIAS-JAIME Alejandro Carlos
16:30	13_124	BODIPY Directed One-Dimensional Self-assembly of Gold Nanorods and Their Potential Application HEMANT Hemant
16:30	14_1274	Kraft Black Liquor Used as Precursor for the Carbon Coating of Na ₃ V ₂ (PO ₄) ₂ F ₃ -type positive electrode materials for Sodium-Ion Batteries POUPART Romain
16:30	15_1310	Artificial interfacial layer of ethyleneamine-based compound for corrosion resistance and zinc ion modulation in zinc metal anodes YOON Sukeun
16:30	16_132	Hybrid-Protected Perovskite Quantum Dot Films with Ultra-High Efficiency and Stability for LED Backlighting NGO Thi Loan
16:30	17_1367	Vanadium doped CoSe ₂ on mesoporous hollow carbon spheres with selenium vacancies for Zn-air Batteries CHEONG Sungkyun
16:30	18_1375	Phosphorous vacancy rich Fe doped Ni ₂ P embedded in N, P dual doped carbon as a highly efficient electrocatalyst for the oxygen evolution reaction LEE Boyeong
16:30	19_1623	CNC-TiO ₂ Nanocomposites for Sustainable Antibiotic Remediation: From Synthesis to Application SAHA Abhijit
16:30	20_168	Insights into C-N Bond Formation through the Co-Reduction of Nitrite and CO ₂ KARAMAD Mohammadreza
16:30	21_1756	Catalysis and Controllable Constructed Strategy of Pd Single Atom and Sc ₂ O ₃ Nanoparticles for the Hydrogen Storage Performance of Mg WU Ying
16:30	22_183	Well-arrayed ZnO Nanorods Synthesized on AZO Substrate Applying for Water Treatment LI Chaoyang
16:30	23_1904	Antimicrobial air filter with highly perforated nanofiber architectures fabricated via self-assembled electrospinning process PARK Dae Hoon

16:30	24_1908	Synthesis and evaluation of Co ₉ S ₈ /CoS supported on N,S-Co-doped carbon as a bifunctional electrocatalyst for Zn-air batteries LEE Hyunjin
16:30	25_1912	Automated Washing Machine Filter System Using Cyclone Structure and Barb Fiber for Microplastic Reduction SIM Jaewoo
16:30	26_1939	Innovative Approaches to Color Alloy Design: Al-Mg-Si Alloys Derived from ADC12 and AZ91 KANG Gyeol Chna
16:30	27_1951	Giant Stark effect assisted Radio frequency energy harvesting using atomically thin earth-abundant iron sulphide (FeS ₂) R Karthik
16:30	28_1973	Tuning the effectiveness of electrocatalytic nitrate reduction by employing π - π interactions in parallel stacking molecular systems GHORAI Uttam Kumar
16:30	29_1976	Synergistic Design of InVO ₄ /Ti ₃ C ₂ MXene Hybrid for Superior Photocatalytic Hydrogen Generation KALITA Sanmilan Jyoti
16:30	30_1992	Synergistic Interaction Between the Active Phase and Pentacoordinated Alumina for Alkane Dehydrogenation: A Simple Synthesis Approach for Enhanced Activity DEWANGAN Nikita
16:30	31_2081	Aspect ratio-controlled synthesis of ultrasmall Au nanorods GU Ping
16:30	32_21	Efforts Toward Developing Self-Powered Electrochromic Devices with Energy Storage Functionality for Smart Window Applications SINGH Ashutosh K.
16:30	33_2122	Salt-assisted synthesis of interconnected porous carbons for high energy density supercapacitors SAINI Himani
16:30	34_226	Synthesis of Copper Nanowires in a Semi-Batch Reactor KUMAR Shekhar
16:30	35_228	Hybrid Gas Sensors Integrated with Machine Learning for Enhanced NO ₂ Detection and Urban Air Quality Forecasting KUMAR Rishi Ranjan
16:30	36_2289	Synthesis, Structural, and Optical Characterization of FeWO ₄ Prepared by Sol-Gel Method CAN Musa Mutlu
16:30	37_2324	Impact of different exposed surfaces of ZnO single crystals and nanowires on photocatalytic activity and processes. APPERT Estelle

16:30	38_233	Analysing the variation in OER activity from hypovalent system to hypervalent systems in ceria carbon doped composites for Zinc Air battery applications MOHAN Ajay
16:30	39_2341	Study of the prospects of using composite ceramics as thermal insulation materials KOZLOVSKIY Artem
16:30	40_2409	Electrocatalytic oxidation of nitrogen to nitric acid by using C ₃ N ₄ Wrapped cobalt phthalocyanine GHORAI Uttam Kumar
16:30	41_2423	Enhanced Hydrogen Sensing Performance of Cs ₃ Pd ₂ I ₅ OD Perovskite via Hydrogen Annealing-Induced Vacancy Engineering LEE Seoung-Ki
16:30	42_246	Conversion of silver-based coordination polymer to silver nanoparticles by green method for energy storage applications KAUR Amanpreet
16:30	43_2493	Shaped Perovskite Synthesis and Applications KUMAR Pawan
16:30	44_2546	Enhanced Formic Acid Dehydrogenation through N-Porous Carbon Supported Pd-Cu Nanoparticles ISLER BINAY Melda
16:30	45_255	Significant improvement in piezocatalysis with BiFeO ₃ -based nanoparticles AMDOUNI Wafa
16:30	46_291	Silver Dichromate-Geopolymer Nanocomposites for Sustainable Fuel Processing SENGUPTA Sonali
16:30	47_327	Enhanced mechanical performance and hydrothermal corrosion resistance in SiC/SiC composite joints with a CaO-modified Y2O3-Al2O3-SiO2 glass interlayer under simulated PWR conditions YANG Shaobo
16:30	49_382	Environmentally-friendly Nanomaterials in Humans: 30,000 Cases of Eliminating Implant Failure and Still Counting WEBSTER Thomas
16:30	50_402	Fe(TCNQ) ₂ nanorod arrays: an efficient electrocatalyst for electrochemical ammonia synthesis via the nitrate reduction reaction GHORAI Uttam Kumar
16:30	51_427	Design and Synthesis of Solar-mediated Phase Changing Materials for the Improvement of 'Light-to-heat' Energy Conversion and Storage KIM Hern
16:30	52_439	Designing Robust Oil/Water-Selective Dissolvable Metal Coatings on Aluminum Balls via Mechanical Coating Technique ALSHARAEH Edreese

16:30	53_440	Study the Impact of Processing Parameters on TiO ₂ Film Formation on Aluminium Balls Using Planetary Ball Milling ALSHARAEH Edreese
16:30	54_462	Optical Modulation with Phase-Change Vanadium Oxides: Foundations, Photodetectors, Photonic Switches, and Advances in Optomechanics TAHA Mohammad
16:30	55_47	Pseudocapacitive Storage in Molybdenum Oxynitride Nanostructures Reactively Sputtered on Stainless-Steel Mesh towards an All-Solid-State Flexible Supercapacitor RANJAN Bhanu
16:30	56_525	Photothermal and Hygroscopic Double-Network Hydrogel for Enhanced Atmospheric Water Harvesting PARK Hyunchul
16:30	57_582	Continuous Flow Synthesis of Elongated Silica Microstructures Using a Microemulsion-Based CSTR MAJI Nitai C.
16:30	58_66	Intrinsic metal-support interactions break the activity-stability dilemma in electrocatalysis for hydrogen production ZHOU Lingxi
16:30	59_71	Co2P Decorating Metallic Cobalt with a NC Nano-shell Surpasses Platinum Group Metals for Oxygen Electrocatalysis Applications TAHIR Muhammad
16:30	60_73	Digitization of Free-shapable Graphene Foam with Damage Tolerance XU Xi
16:30	61_75	Multiscale structure design of nanomaterials through metal-organic framework derivation for future energy devices LIU Ximeng
16:30	62_79	Vertically Aligned MoSe ₂ -WS ₂ Nanoworms Heterojunction towards Room Temperature NO ₂ Gas Sensors KODAN Sonika
16:30	63_976	Laser-Activated Graphite/Ni-P Microstructures for Photo-Thermocatalytic Gamma-Valerolactone Production RIGUAL Jordi
16:30	64_929	Flexible plasmonic transparent conducting thin films for boosting solar cell efficiency PAL Bhola Nath
16:30	48_2802	Sustainable Porous Materials from Waste for Water Micropollutant Removal through Advanced Oxidation Processes ANDRONIC Luminita

Friday May 30		
J16 Oral session		
Chairperson(s): IBRAHIM Kassa belay		
View session abstracts		
08:30	3162	Laser Ablation Synthesis of Cu ₂ O Nanoparticles for High-Performance Copper Photocathodes in Water Splitting. LAMBERTI Francesco (Invited)
09:05	2249	Photocatalytic Microplastic Degradation and Hydrogen Generation in Seawater Using TiO ₂ Nanorod Arrays BAE Ho-Sub
09:20	665	On the grown kinetics of Au/TiO ₂ Nanowires ZIMBONE Massimo
09:35	2277	Nanostructured features in Sn-based phase change materials for thermal energy storage BASSANI Paola
09:50	2889	Insight the correlation between structure and Hydrogen storage properties of Superlattice ABx compounds ZHANG Junxian
Friday May 30		
J17 Oral session		
Chairperson(s): SHIFA Tofik ahmed		
View session abstracts		
10:30	879	Synthesis and Characterization of Double-Walled Carbon Nanotubes/Graphitic Carbon Nitride for Enhanced Photocatalytic Water Splitting FLAHAUT Emmanuel (Invited)
10:50	53	Frontiers in Water Splitting Catalysis: The Role of 2D Materials and Emerging Paradigms IBRAHIM Kassa Belay (Invited)
11:10	89	Tuning the intrinsic catalytic activity of W and V doped MoSx for hydrogen evolution reaction CHENEVIER Pascale
11:25	1482	Pulsed laser-annealed VO ₂ thin films for smart windows and gas sensors applications MARTUCCI Alessandro (Invited)