



European Materials Research Society

2026 Spring Meeting

May 25 - 29
Strasbourg Convention Centre

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SYMPOSIUM J

NAoMaterials for Energy applications

Oral sessions : MARIE CURIE A - FIRST FLOOR

Poster sessions : ETOILE - FIRST FLOOR

Symposium Organizers:

Alexandros EL SACHAT, National Center for Scientific Research Demokritos, Greece

F-Xavier ALVAREZ, Autonomous University of Barcelona (UAB), Spain

Giorgia FUGALLO (Main organizer), DUniversité PSL, CNRS, Sorbonne Université, Université Paris Cité, France

Konstantinos TERMENTZIDIS, CETHIL Laboratory, CNRS and INSA of Lyon, France

Monday May 25

J01 Advanced Quantum and Topological Nanomaterials

Chairperson(s): EL SACHAT Alexandros

FUGALLO Giorgia

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- 08:30 1653 Scanning Thermal Microscopy characterization of self-heated nonlinear devices
GOTSMAN Bernd (Invited)
- 09:00 1304 Electrically controlled localized emitters in WSe₂/graphene van der Waals heterostructures
JOUAITI Elise
- 09:15 1201 Intraband Transitions for Mid-Infrared Active Colloidal Quantum Dots and Their Carrier Dynamics
BERA Rajesh
- 09:30 28 Interlayer Electron Redistribution Engineering for Ultralow Friction in 2D Electrides
QI Jingcheng
- 09:45 2440 The Weyl Semimetals M₁Te₄ (M = Nb, Ta) as Efficient Catalysts for Hydrogen Evolution
SAMANTA Manisha

Monday May 25

J02 Low dimensional and vdW Materials for Thermal and Energy Applications

Chairperson(s): FUGALLO Giorgia

TERMENTZIDIS Konstantinos

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- 10:30 993 Unconventional heat transport phenomena in 2D materials at room temperature
TIELROOIJ Klaas-Jan (Invited)
- 11:00 927 Anomalous thermal transport and enhanced thermoelectric performance in 2D layered metal organic frameworks
DETTORI Riccardo
- 11:15 638 Modelling transport properties of SnSe and SnS in bulk and nanofilms
LACROIX David
- 11:30 985 Strain-Dependent Phonon Transport in Monolayer and Bilayer MoS₂-Based van der Waals Structures
SINGH Bhanu Jai
- 11:45 1391 Phonon Hydrodynamics Induced by Surface Reconstruction in Covalent Nanowires
DING Dongliang

Monday May 25

J03 Thermoelectric and Thermal Barriers Nanomaterials

Chairperson(s): ALVAREZ Xavier

TERMENTZIDIS Konstantinos

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- 14:30 3074 Thermal losses in nanocrystalline Si phononic waveguide structures
SOTOMAYOR TORRES Clivia M. (Invited)
- 15:00 269 Enhanced thermoelectric performance of CuI thin films by CsF doping
FENWICK Oliver
- 15:15 3225 Layered carbides and MXenes thin films for thermoelectric applications
BAUDOIN Florent
- 15:30 1854 Experimental and DFT study of doped CrN thin films for thermoelectric applications
SINGH Niraj Kumar
- 15:45 2060 Enhancing the Thermoelectric Performance of Sb₂Si₂Te₆ via High-Entropy Alloying and Yttrium Nanocompositing
SAGLIK Kivanc

Monday May 25

JP01 Poster session 1

[View session abstracts](#)

- 16:30 01_102 Liquid Ga-Pt Electrocatalysts with low Pt Loadings for Ethanol Oxidation
NAZIR Muhammad Hamza
- 16:30 02_1024 Exploring MXenes as Electrodes for Al-ion Batteries: An Ab-initio Study on the Impact of Stacking Configurations and Termination Types
VELUTHEDATH NAIR Amal Raj
- 16:30 03_1082 Temperature-dependent Spin Thermopowers in Pt/Ni₈₀Fe₂₀/Al₂O₃ Heterostructures via the Longitudinal Spin Seebeck Effect
WON Seong Joon
- 16:30 04_1096 Microencapsulated CaCl₂·6H₂O for thermal regulation at 100 nm scale.
MAHAKUL Ansuman J
- 16:30 05_1140 Ion-Selective Moisture Electric Generator with High Current Density and Long-Term Stability
YOO Hojun
- 16:30 06_1146 Proton conducting property of highly oriented MXene membranes
TAKEGAMI Kaito
- 16:30 07_1184 Impact of PbS Quantum Dot Size on the Photovoltaic Performance of PbS/CH₃NH₃PbBr₃ Intermediate Band Solar Cells: An Optimization and Numerical Study
EL AOUAMI Asmae
- 16:30 08_1244 Elucidating Liquid-Phase Dealcalization Effects and Liquid-Solid Interactions in Li/Na-Based O₃-Type Layered Oxide Cathodes
ZHANG Wujia

16:30 09_129 Gate-Tunable Photodetector and High-Mobility Ambipolar Transistor with Ion-gel Gate Dielectrics
OH Gwangtaek

16:30 10_1334 Strain-Engineered Jacutingaite Analogs as Efficient 2D Catalysts for Hydrogen Evolution Reactions
De Oliveira Caique Campos

16:30 11_1341 Tunable Copper Oxide Nanostructures via Spark Ablation Printing
BSAIBESS Eliane

16:30 12_1770 Design of a PDMS based High Performance Symmetric Supercapacitor using 3D Ni(OH)₂/2D Co₃O₄ Hybrid Composite Electrode Architecture
HATI Gourab

16:30 13_1418 Electrolyte-Cathode Synergy for Stable Aqueous Zinc-Ion Batteries Using Propylene Glycol and VO₂@V-MXene
YOO Jungjoon

16:30 14_144 Development of Fiber-Based PVDF/CPE Structures for Wearable Triboelectric Energy Harvesting Technologies
ALIPOORILEMEESLAM Saeideh

16:30 15_1446 Coupling Microstructure Priors with Unified Electrochemical Analysis to Quantify MXene Interfacial Kinetics
Thi Nguyen Hai Yen

16:30 16_145 Design and Characterization of PVA/H₃PO₄ Hydrogel-Based Triboelectric Nanogenerators for Wearable Energy Harvesting Applications
ALIPOORILEMEESLAM Saeideh

16:30 17_1452 Ultrafine IrO_x Nanoparticles Anchored on Pore-Designed Mesoporous TiO₂ Supports for Efficient Acidic Oxygen Evolution
LEE Jeong Seo

16:30 18_1453 Modulating Crystallinity and Surface Oxygen Species of Amorphous Iridium Oxide Nanoparticles for Acidic Oxygen Evolution Reaction
KANG Byung Guk

16:30 19_1460 ?Surface Reconstruction and Dynamic Catalytic-Site Activation in Ferric Ion Doped Mesoporous LaNiO₃ Nanocubes for OER Electrocatalysis
MUN Hyeok

16:30 20_1643 Unraveling Structure-Activity Relationships in Halide Double Perovskite Single Crystal Facet using Operando Electrochemical Microscopic Technique
BHARTI Pragya

16:30 21_1652 Thermal transport in hard carbon using machine learning potential
RAJPUT Neha

16:30 22_169 A defect-engineered light-driven self-charging supercapacitor
MOHANTY Ritik

16:30 23_1708 Oxygen-Driven Electrochemical Pulverization of Li₂RuO₃ and Its Mitigation Using Oxygen-Storage Oxides
NEDYALKOV Martin

16:30 24_174 Decoding The Thermal Evolution of Ni-Hydroxalite Catalysts: A Multi-Scale Strategy for Optimizing Dry Reforming Performance
MROUE Kamal

16:30 25_1933 Glass-Based Luminescent Solar Concentrators for Durable and Aesthetically Compatible Building-Integrated Photovoltaics
ERSUNDU Ali Erçin

16:30 26_1992 Pre-Catalytic Phase Transitions of OER Catalysts elucidated by Operando Spectroscopies
WARTNER Garlef

16:30 27_225 Substrate and Defect Effects on the Mechanical Stability of Nanoporous Graphene for Water Desalination Applications
AMLIEH Mohammed

16:30 28_247 Nanoscale Polar Region Engineering in Lead-Free BNT-Based Relaxor Ferroelectrics for Sustainable High-Performance Energy Storage
KHOKHAR Ankur

16:30 29_253 Titanium based MXenes for Next-generation sodium ion battery anodes
QAYYUN Hafiz Adil

16:30 30_260 Additive-Specific SEI Nanostructures on Silicon Anodes Revealed by Cryo-TEM and EELS under Suppressed Bulk Alloying
ZHANG Zhen

16:30 31_2670 Metal-Assisted Chemical Etching of 2D Nanomaterials for Enhanced Energy Storage and Hydrogen Evolution
AMARAKONDA Siri Chandana

16:30 32_273 2D/2D Mo_{0.5}W_{0.5}S₂/Ti₃C₂T_x Asymmetric Micro-Supercapacitors for Flexible High-Energy Storage Devices
MANDAL Animesh

16:30 33_282 Improved light harvesting in polymer solar cells through the incorporation of Bi_{1.9}Pt_{0.1}S₃ nanocrystals into a PCDTBT:PCBM active layer
HAMED Mohammed

16:30 34_284 Emerging Rare earth perovskite nanostructures for energy conversion
DIRROUCH Badr

16:30 35_355 Designing a nanofibrous binder network via directional hydrogen bonding of TOCNF/PAA for high-performance silicon anodes
OLIDAN Syryll Maynard

16:30 36_37 Algae-derived nanoporous Si-based anodes for Li-ion batteries
Blanco Valeria

16:30 37_38 Complex-Formation-Regulated Calcium Disilicide Decalcification and Enhanced Exfoliation Strategy for Stable Bare Silicon Nanosheet Anode Lithium-ion Batteries
LAU Victor Jr

16:30 39_39 Turning Residual Chlorides into Exfoliation Agents: Fully Gas-Phase Exfoliation of Silicon Nanosheets via Amine-Driven Expansion for Lithium-Ion Batteries
LAN Chung-Wen

16:30 40_411 Waste-to-Energy Nanomaterials via Liquid-Metal Reaction-Diffusion Chemistry
ZAVABETI Ali

16:30 42_472 Crystal structure and photoluminescence characteristics of Sm³⁺-activated ScVO₄ phosphors prepared by hydrothermal synthesis
CHANG Yee-Shin

16:30	43_480	Platinum nanostructures supported on MoO ₃ for electrochemical energy conversion and storage applications BARMAN Sudip
16:30	44_497	Valley-Selective Nernst Response Induced by Berry Curvature in Monolayer WSe ₂ JANG Donghoon
16:30	45_503	Polyvinylpyrrolidone-functionalized copper benzene-1,3,5-tricarboxylate metal-organic framework as self-improving, durable lithium battery electrodes TAN Laudimer Tye
16:30	46_513	Engineering Hybrid Electrocatalyst Materials for Highly Efficient Urea Oxidation-Assisted Hydrogen Production VIZCAÍNO ANAYA Lucía
16:30	47_517	Rational Design of Nanostructured Carbon Anodes: Optimal Interlayer Spacing for Li-ion vs. Na-ion Storage RADCHENKO Ihor
16:30	48_549	Applying many-body physics methods to understand and mitigate degradation in battery cathodes BANERJEE Hrishit
16:30	49_580	Pd-Loaded Layered Double Hydroxides as Efficient Catalysts for CO ₂ Hydrogenation to Formic Acid: A Focus on Surface Hydroxyls NEHRA Pooja
16:30	50_625	Facile Integration of Colloidal Nanoparticles into Bulk Thermoelectric Materials via Ligand Exchange LEE Ji Eun
16:30	51_63	Surface Engineering of Metal-Organic Frameworks Electrocatalyst at Room Temperature for Direct Seawater Splitting MAHMUD Sofu
16:30	52_653	Sintering-Assisted Fabrication of Ti-Based MAX Phases and Their Transformation into MXenes ROH Ki-Min
16:30	53_701	Spectral Engineering of Agrivoltaic Systems Using Luminescent Glass Nanocomposites with Embedded Perovskite Quantum Dots ERSUNDU Ali Erçin
16:30	54_76	Fabrication of an indirect Z-scheme ZnO-Au-WO ₃ thin film for PEC water Oxidation FATTY Muhammed L
16:30	55_776	How Morphology and Structure Shape Local Thermal Transport in Low-Dimension Organic Semiconductors - study on ZnPc films TREFON-RADZIEJSKA Dominika
16:30	56_781	Mie-Resonant Dielectric Scatterers Enable Color Neutrality and Power Enhancement in Solar Windows SONG Zheheng
16:30	57_841	Low-Cost, High-Performance Flexible Supercapacitors Based on Vanadium Oxynitride Reactively Sputtered on Porous Polymeric Substrate for Sustainable Energy Storage Applications RAHMAN Habeebur
16:30	58_849	Interfacial and Morphological Engineering of MnO ₂ @C@NiSe ₂ Core-Shell Electrodes for High-energy Asymmetric Hybrid Supercapacitors AMPASALA Surya Kiran
16:30	59_933	The importance of side chain geometry on the aggregation of dipyrrolonaphthyridinedione dyes studied by solid state nuclear magnetic resonance spectroscopy BARTOSCH Sascha
16:30	60_995	Molecularly Engineered Semiconductors for Enhanced Photocatalytic Activity ZOGRAFAKI Maria

Tuesday May 26

J05 Multiscale Modeling of Phonon, Electron, and Exciton Dynamics

Chairperson(s): ALVAREZ Xavier

FUGALLO Giorgia

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08:30	3039	Putting the spin on energy materials: thermoelectric and entropic effects with magnetism VERSTRAETE Matthieu (Invited)
09:00	310	Many-Body Insights into Anion-Ordering Effects on Electronic and Exciton Dynamics in CaTaO ₂ N G Sudha Priyanga
09:15	3170	Ab Initio Investigation of the Electrocatalytic Performance of Al-Cu-Fe-Ni-Ti High-Entropy Alloys AUTRETO Pedro
09:30	2272	Ab Initio methods for phonon defect scattering ALESSANDRO Ciavatta
09:45	1270	Monte Carlo Modeling of Phonon Drag Effects on Thermoelectric Transport in Silicon Nanostructures GHANEM Mohammad

Tuesday May 26

J06 Controlling Interfacial and Confinement Effects on Transport

Chairperson(s): ALVAREZ Xavier

PAPAGELIS Konstantinos

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10:30	2826	Energy transfer at interfaces: an atomistic perspective MERABIA Samy (Invited)
11:00	2721	Thermal Transport at Functionalized and Nanostructured Solid-Liquid Interfaces: An Atomistic Perspective ISAIEV Mykola
11:15	3229	Polymer nanotubes with modulable conductive properties for radiation and particle detectors: interplay between confinement-induced orientation and interfacial effects SERGHEI Anatoli
11:30	1689	Capillarity beyond 200 °C: unexpected temperature trends of water intrusion-extrusion in hydrophobic nanopores GOURMAND Cléopée

Tuesday May 26

J07 Low dimensional and vdW Materials for Thermal and Energy Applications

Chairperson(s): DETTORI Riccardo

TERMENTZIDS Konstantinos

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- 13:45 2831 Scanning thermal microscopy: heat transfer in nanostructures
GOMÉS Severine (Invited)
- 14:15 586 Mechanical-force-driven charge redistribution for hydrogen release at ambient conditions in transition-metal-intercalated bilayer graphene
MAHAMIYA Vikram
- 14:30 1070 Superb storage and energy saving separation of hydrocarbon gases in boron nitride nanosheets via a mechanochemical process
MATETI Srikanth
- 15:00 1696 Electric-field-assisted phase switching in GaAs nanowires
YU Qiang
- 15:15 2214 Confined crystallization in PEDOT:PSS: tailoring charge and heat transport for thermoelectric energy harvesting
LISCIO Fabiola
- 15:30 621 Solvent Affinity-Driven Phase-Selective Doping of DPP-based N-type Polymer for Organic Thermoelectrics
JANG Soyeong
- 15:45 1243 Monolayer iron halides for thermoelectric applications
SINGH Shubham Rakesh

Tuesday May 26

J08 Thermoelectric and Thermal Barrier Nanomaterials

Chairperson(s): LACROIX David

TERMENTZIDS Konstantinos

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- 16:30 2975 Structure, Dynamics, and Diffusion-Driven Thermal Transport in Cu⁺ and Ag⁺/Cu⁺ Based Superionic Argyrodites
GHATA Anupama
- 16:45 1640 Highly Oriented Mg₃Bi₂ Thin Films by sequential evaporation: Structural and Thermoelectric Properties
JEJEN Katherine
- 17:00 255 Phase-Dependent Thermoelectric Performance of Magnetic MnIn₂Te₄
SINGH Shubham Rakesh

Wednesday May 27

J09 Transport, characterization and dissipation phenomena in nanomaterials and devices

Chairperson(s): BEN ABDALLAH Philippe

EL SACHAT Alexandros

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- 08:30 1594 Microfabricated Si-based planar μ TEG platform for novel thin-film thermoelectric materials
ABAD MUÑOZ Libertad (Invited)
- 09:00 2629 Probing Phononic Heat Transport at the Atomic and Molecular Scale
GRIECI Valentina
- 09:15 1074 X-ray tomography to study the impact of In interlayer on Li deposition of anode-less batteries with Li₆PS₅Cl electrolyte
RAFIQUE Amna
- 09:30 1381 Electronic shell symmetry controls heat transport in lanthanoid oxides
YOSHIMURA Mitsuki
- 09:45 626 Resolving Thermal Anisotropy in Single-Crystal WSe₂ Films via 1D Line-Heater Beam-Offset Frequency-Domain Thermoreflectance
XU Kai

Wednesday May 27

J10 Transport, characterization and dissipation phenomena in nanomaterials and devices

Chairperson(s): GOMEZ Severine

MERABIA Samy

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- 10:30 1573 Programmable Radiative Heat Transport via Floquet Interference
BEN ABDALLAH Philippe (Invited)
- 11:00 84 Probing ionic migration in Perovskite solar cells via bias switching and Voc analysis
MARECHAL Lucile
- 11:15 616 In-plane and cross-plane thermal conductivity of amorphous SiO₂ films by first-principles molecular dynamics
MARTIN Evelyne
- 11:30 349 Improving the Conductivity and Stability of Silver Nanowires Through Spontaneous Ligand Exchange for Joule Heating
KWON Junheyok
- 11:45 2529 Nanoscale characterization of GaAs nanostructures with unexpected above-bandgap light emission
PIAZZA Valerio

Wednesday May 27

J11 Nanostructured Materials for Energy Harvesting and Storage

Chairperson(s): FUGALLO Giorgia
GOTSMAN Bernd

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- 13:45 3135 Inverse metasurface design for ultrathin solar cells
ALARCON-LLADO Esther (Invited)
- 14:15 1912 Metal halide perovskite heterostructures for stable solar cells
EVEN Jacky
- 14:45 3019 Low-cost III-V photovoltaics through a novel epitaxial lift-off process using photochemically etched sacrificial thin layers
IVASHTENKO Oleh
- 15:00 1919 Photon-Enhanced Thermionic Solar Conversion With All-Inorganic Perovskite Photovoltaic Cathodes
ASHOK KUMAR Sangeetha
- 15:15 1934 Real-Time Electron Dynamics of Plasmon Coupling in Metallic Nanostructures for Light-Driven Energy Applications
ALKAN Fahri
- 15:30 1960 NIR-responsive colorless-to-colored photochromic materials
DINDA Diptiman
- 15:45 2255 Guanidinium-Assisted Ambient Purification of Phase-Stable CsPbI₃ Perovskite Quantum Dots
JAHANGEER Khan

Thursday May 28

J12 Advanced Synthesis Routes and Nano-Coating Strategies for Enhanced Energy Efficiency

Chairperson(s): ALVAREZ Xavier
MUÑOZ-ROJAS David

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- 08:30 3316 Probing Optical and Phonon Responses of Two-Dimensional Materials under Mechanical Strain
PAPAGELIS Konstantinos (Invited)
- 09:00 1817 Towards large area epitaxial growth of superconducting REBa₂Cu₃O_{7-x} coated conductors by ultrafast Transient Liquid Assisted Growth (TLAG)
BERTINI Vittorio
- 09:15 2550 Tuned Synthesis and In-Situ XRD Investigation of metastable α -Fe₂O₃ Nanostructures for Solar Energy Conversion
NAAZ Aeiman
- 09:30 82 Synthesis and Characterization of Nanostructured Carbides for HER
GRASSET Fabien
- 09:45 774 Synthesis, structural, thermodynamic and theoretical investigation of Ak₂Se (Ak = Li, Na, K)
DELSANTE Simona

Thursday May 28

J13 Advanced Synthesis Routes and Nano-Coating Strategies for Enhanced Energy Efficiency

Chairperson(s): PAPAGELIS Konstantinos
TERMENTZIOS Konstantinos

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- 10:30 2253 Open-Air Spatial Atomic Layer Deposition for Self-Textured ZnO and Multi-Material Nanolaminates: Advances in Piezoelectricity and Doping Control
MUÑOZ-ROJAS David (Invited)
- 11:00 357 Tuning water dissociation and intermediate binding in Ru nanocluster coupled oxophilic metal oxides for accelerated alkaline water splitting
YADAV Vipin
- 11:15 3149 Liquid surface synthesis of ultrathin two-dimensional metal halide perovskite
LI Jiaxiong
- 11:30 1355 Solution Based Chemical Synthesis of Nanostructured Bi₂Te₃ Thermoelectric Materials via Microwave Assisted Heating
HAMAWANDI Bejan
- 11:45 453 Tailoring Electrified Interfaces for Selective Electrochemical Hydrogenation on Earth-Abundant Metals
GARCIA-MELCHOR Max

Thursday May 28

J14 Ferroelectrics, Storage & Thermal Management

Chairperson(s): EL SACHAT Alexandros
SOTOMAYOR TORRES Clivia

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- 13:45 207 Structure-Property Relationships in Fluorite-Based and Antiferroelectric ZrO₂ Materials for Nanoscale Energy Storage
VILQUIN Bertrand (Invited)
- 14:15 1695 (Anti)ferroelectric thin films by pulsed laser deposition for the control of thermal conductivity
ANIL Anusri
- 14:30 1900 Surface Ferroelectricity in Oxide Perovskites: From Atomic Structure to Catalysis
WRANA Dominik
- 14:45 3304 Relationship between chemistry, microstructure and processing for green flexible piezoelectric energy harvester based on lead free KNN nanoparticles
DEBEDA H el ene
- 15:00 1224 Covalent Engineering of Ti₃C₂T_x MXenes for Enhanced Energy Storage Performance
Montes Garc ia Ver onica
- 15:15 119 From materials to prototype: Advancing photoelectrochemical systems for green hydrogen
TROCINO Stefano
- 15:30 2398 Dimensionally Tailored Ultrathin Metal Organic Framework Nanosheets for Enhanced Energy Storage
KHAN Soumen

15:45 2247 Enhancing Interfacial Stability and Conductivity of Silicon Anodes via MOF-Derived N-Doped Carbon/
Pitch Shells and a Conductive CoSi₂ Buffer Layer.
NYAMTARA Kelvin Jenerali

Thursday May 28
JPO4 Poster session 4

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16:30 01_2364 Bio-Compatible Albumin-Ag Nanocluster Dielectrics Enabling Stable Organic Synaptic Transistors
NAYAK Richeek

16:30 02_1403 Dual Mg²⁺/Li⁺ Intercalation in 1T-MoS₂ Nanoflowers for Multivalent Energy Storage
GUPTA Gazal

16:30 03_1411 DNA Electrolyte and Electrode Fabrication for Energy storage Systems
KOKKILIGADDA Samanth

16:30 04_1527 Ion-implantation-based prelithiation of silicon thin film anodes for lithium-ion batteries
CHERKOUK Charaf

16:30 05_1664 Engineering closed-pores in hard carbon nanofibers for improved SIB anode performance
SILVA Vinicius

16:30 06_1725 Ag₂Se-Based Organic-Inorganic Thermoelectric Composites
MAURUCAITE Adriana

16:30 07_1731 Atomic-Scale Insights into Electrolyte Modulation of Pseudocapacitive Behavior in Ag₂₉ Nanoclusters.
YADAV Anukool

16:30 08_1759 Design of a PDMS based High Performance Symmetric Supercapacitor using 3D Ni(OH)₂/2D Co₃O₄
Hybrid Composite Electrode Architecture
HATI Gourab

16:30 10_1793 Exploring the Use of Machine-learning Interatomic Potentials for Studying Thermal Transport in ThO₂
in the Presence of Defects
VIRAKANTE Nidheesh

16:30 11_1838 In-situ Local Probe Mass Spectrometry of an Oxygen Evolution Catalyst in an Environmental TEM
IVANOV Timofei

16:30 12_1928 Co and Zr Codoping to Improve the Electrochemical Performance of NVPF as a Cathode Material for
Sodium-Ion Batteries
KASHYAP Bristisnata

16:30 13_1958 Chemical pressure effects in novel doped rare-earth manganites
SIMEONI Giovanna Giulia

16:30 14_1998 Copper tungstate alloying and optoelectronic/PEC consequences
MOHAMMAD ARHAM SHAMIM Fnu

16:30 15_1999 Semimetal-TCO laser processed nanomaterials for photovoltaics and sensing.
CHACÓN-SÁNCHEZ Fernando

16:30 16_2015 Synthesis and Physicochemical Characterization of Advanced Semiconductors
SFAKIANOU Angeliki

16:30 17_2034 Negative Spin-Charge Conversion Enabled by Interface-Induced Spin-Orbit Effects in Pt/1T-TiSe₂/
Graphene/Yttrium Iron Garnet Multilayer Structures
CHOI Juntae

16:30 18_2071 Accelerated carbonization of waste tire via microwave heating: Carbon anode derived from waste tire
for sodium-ion battery
Yang Yongjun

16:30 19_2110 Tailoring Colloidal Silver nanowires (Ag NWs) Dimensions for Optimization of Transparent Heaters
KADIRVEL Lashminarayanan

16:30 20_2115 First-Principles Insights into Active Site Diversity of High-Entropy Alloys for Hydrogen Evolution
ALI Muhammad

16:30 21_2187 Vacancy-engineered ZnS/N-Doped carbon on rGO as a multifunctional separator coating for high stable
Lithium-Sulfur Batteries.
KARIMA Neema Cyril

16:30 22_2262 Particle-Scale Optimization and Impurity Control in Liquid-Phase Synthesis of High-Purity Li₆PS₅Cl
Solid Electrolytes for All-Solid-State Batteries
PARK Jun-Ho

16:30 23_2269 Advanced Functional Materials in Energy Storage and Conversion Systems
QURASHI Ahsan UI Haq

16:30 24_2296 TiO₂/Ni Nanoparticles for Enhanced Polysulfide Regulation in Lithium-Sulfur Batteries
BAIKALOV Nurzhan

16:30 25_2312 Energy harvesting technologies and materials for low power generation
CHILIBON Irinela

16:30 26_2314 Partial Selenization of NiCr-LDH to Ni_{0.85}Se@NiCr-LDH Heterostructure as an Efficient Electrocatalyst
for Hydrogen Generation in AEM electrolyser
. Nitika

16:30 27_2331 Electrospun Pt free nanofibers as bifunctional electrocatalysts
DE RICCARDIS Maria Federica

16:30 29_2426 Donor-acceptor covalent organic frameworks as active material for aluminum energy storage device
VALENTINI Cataldo

16:30 30_2483 Intrinsic Excitonic Properties of Eco-friendly AgInS₂ Quantum Dots
MANN Julian Georg

16:30 31_2507 Reduced graphene oxide-polyoxometalate nanocomposite: a high-performance electrode material for
microsupercapacitor
DEBIEMME-CHOUVY Catherine

16:30 32_2508 Hybrid nanofluids combining laser pyrolysis SiC nanoparticles with Ag as advanced heat transfer
agents
DUMITRACHE Florian

16:30 33_2543 Polysulfide Anchoring in Sodium-Sulfur Batteries by Non-Metal Doped VS₂: A DFT Study
GORAI Deepak

16:30 34_2602 A heuristic model for hydrogen physisorption on and in nanomaterials
LIU Wai Kwan

16:30 35_2610 Laser Beam Induced Current (LBIC) measurements of Nanowire Solar Cells Correlated With Targeted
FIB/SEM Structural Analysis
DIAZ Luis

16:30 37_2656 Local adhesion and thermal transport measurements at the nanoscale using Atomic Force Microscopy (AFM) – Scanning Thermal Microscope (SThM)
DIANÉ Seydina

16:30 38_2659 SThM Investigation of Heat Conduction in Hexagonal Boron Nitride flakes of Varying Thickness
ANDRIEUX Théo

16:30 39_2724 Investigation of thermal transport in porous silicon / PCM composites using photoacoustics
ISAIIEV Mykola

16:30 40_2729 Engineering ZnO nanostructures via post-synthesis treatments for sustainable energy storage applications
RUSSO Daniela

16:30 41_2754 Modified Titanium Dioxide Photocatalysts for Smart Coatings Targeting Indoor Air Quality Applications
SFAKIANOU Angeliki

16:30 42_2795 Molecular Dynamics Study of Thermal Rectification in trapezoid h-BN monolayers
BENGA ONDZAGHA Héritié Christopher

16:30 43_2801 Structure–property relationships in silver nanowire networks for energy-efficient low-E coatings
BUYUN Zheng

16:30 44_2822 Self-Consistent Quantum Transport Simulation of Nanotransistors with Superlattice Channels
PALAI Dimougna

16:30 46_2905 Sustainable Transition Metal Carbides: Investigating the Impact of Alloying on MAX and MXene Derivatives
Ravindran Rahul

16:30 47_2919 Direct salt precursor mechanochemical synthesis of oxide perovskites as innovative synthetic strategy for solid oxide cell electrodes
ZOURIDI Leila

16:30 48_2927 Interfacial Strain Engineering in Multiphase Oxide–Titanate/Graphene Composites Enables High-Capacity and Long-Life Photo-Assisted Lithium Storage
NAZIR Mudasar

16:30 49_2994 Surface-engineered High Performance MgCo₂O₄ Nanostructured Electrode for Flexible and Wearable Supercapacitor Applications
Koppula Naresh

16:30 50_3015 Unlocking Fast Potassium Ion Kinetics: High-Rate and Long-Life Potassium Dual-Ion Battery for Operation at -60°C
XIA Yang

16:30 51_3024 Solvent Architecture–Driven Control of Solvation and Lithium Nucleation at Subzero Temperatures
PARK Seung Eun

16:30 52_3054 Influence of KOH Concentration on Ion Transport and Charge Transfer Behavior in MXene Film Electrodes
AKILLI SAMUR Aleyna

16:30 53_3070 Enhancing Synergistic Effects in Electrochemical Refinery Processes via Electron-Bridge Engineering on 2D Materials
HAN Xiuxiu

16:30 54_3076 Utilizing Chaotropic Nanoelectrocatalyst to Chemically Disrupt Water Intermolecular Network for Enhanced Green Hydrogen Production
NG Li Shiuan

16:30 55_3095 Charge-transfer-assisted Enhanced NIR Light-Matter and Electronic Interaction in van der Waals 2D hybrids
MAJI Tuhin Kumar

16:30 56_3164 Electrophoretic Deposition of Ti₃C₂T_x MXene Thin Film on Aluminium Foil for Supercapacitor Application
VIJAYAN Varsha

16:30 57_3189 Influence of RF Magnetron Sputtering Deposition Parameters on the Optimization of the Physicochemical Properties of Ternary Lithiated Oxide Thin Films Deposited on Flexible Kapton Substrates
Urbano Alexandre

16:30 58_3210 Diffusion Dynamics of Volatile Organic Compounds into Integrated Surface-Supported Metal–Organic Frameworks Heterojunctions
CESCON DOS SANTOS Thamiris

16:30 59_3231 Synthesis of NiO@Ti₃C₂ MXene for High Power and Energy Density Applications in Supercapacitors
JIAN Wen-Bin

16:30 60_3249 Diffuse light concentration by collimation
METHORST Daan

16:30 61_3259 Improved Triboelectric Performance in Ferroelectric Filler-Modified PVDF Composites via Interfacial Polarization Modulation
KULE Ankita

16:30 62_3269 Rechargeable Aqueous Iron-Sulfur Battery
RANI M Jhansi

16:30 63_3298 Core-Shell Segregation in FeCoCrMnNi High-Entropy Alloy Nanoparticles: A Molecular Dynamics Study
GURIAN DARIANI Guilherme

16:30 64_3314 Computational insights into oxide support effects on the reverse water-gas shift reaction over In₂O₃ catalysts
TOLSTOVA Polina

16:30 65_3332 Designing Topochemical Conversion of the Zintl Phase CaSi₂ into Substrate-Free Silicon Nanosheets for Lithium-Ion Battery Anodes
CAN Asli Ceren

16:30 66_3342 Tailoring MXene Chemistry through Composition and Undercoordination for Applications in Hydrogen Chemistries
MORENCY Yamilee

Friday May 29

J16 Advanced Materials for next-generation batteries

Chairperson(s): ALVAREZ Xavier

TERMENTZIDIS Konstantinos

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08:30	1378	Toward Understanding and Regulating the Electrode-Electrolyte Interfacial Chemistry of Layered Oxide Cathodes under High-Voltage Operation for Sodium-Ion Batteries CHEN Zhigao (Invited)
09:15	1557	Green Voltage Revolution: LNMO Cathodes Insight for Water-Based Li-Ion Batteries GIRALDO David
09:30	2018	Interface design of Na β " Alumina/YSZ composite electrolytes for high-performance sodium batteries: A core-shell architecture with air-fired carbon black NUROHMAH Anisa Raditya
09:45	115	Exploring the Multifunctionality of Co and Ni Selenospinel: Unveiling Co ₃ Se ₄ as an Excellent Trifunctional Electrocatalyst for Glycerol, Hydrazine, and Water Oxidation Reactions RAVEENDRAN Diya

Friday May 29

J17 Advanced Materials for next-generation batteries

Chairperson(s): EL SACHAT Alexandros

FUGALLO Giorgia

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10:30	1702	Facet-Specific Surface Engineering Enables Stable Cycling of High-Voltage LiNi _{0.5} Mn _{1.5} O ₄ Cathode Materials ZHU Jifu
10:45	1440	Biphasic MoO ₂ /Mo ₂ C Passivated Graphite Anodes for Fast-Charging Lithium-Ion Batteries BAE Sang Hyeok