



ANM2024 Portugal (24-26 July 2024, University of Aveiro, Portugal)

Venue: complexo pedagógico

(Abstracts are available here- [Abstract Book ANM2024](#))

24 July 2024

(GMT+1) Portugal time 16.00-17.00	Registration (complexo pedagógico)
---	---

25 July 2024

8.00-9.00	Registration (complexo pedagógico)		
	Room A- ANM (Advanced nano Materials)	Room B-AEM (Advanced Energy Materials)	Room C-HE (Hydrogen Energy)
	Program Chairs: Joao Ventura , <i>University of Porto, Portugal</i> , Luiz Pereira , <i>University of Aveiro, Portugal</i> Session Chairs: Alice Sciortino , <i>University of Palermo, Italy</i> , Antonio Avila , <i>Universidade Federal de Minas Gerais, Brazil</i>	Program Chairs: Olena Okhay , <i>University of Aveiro, Portugal</i> , Joao Grilo , <i>University of Aveiro, Portugal</i> Session Chairs: Jeom-Soo Kim , <i>DONG-A University, South Korea</i> , Claudio Terraza , <i>Pontificia Universidad Catolica de Chile, Chile</i>	Program Chairs: Carmen M. Rangel , <i>LNEG, Portugal</i> , Joao Campos Gil , <i>University of Coimbra, Portugal</i> Session Chairs: Muhammad Tawalbeh , <i>University of Sharjah, UAE</i> , Konrad Eiler , <i>Universitat Autonoma de Barcelona, Spain</i>
9.00-9.20	Miao Zhao (Keynote) , <i>King's College London, United Kingdom</i> Pluronic F-127 as Coating Polymer of Conjugated Polymer for PDT Application	Amani Al-Othman (Keynote) , <i>American University of Sharjah, UAE</i> Tungsten trioxide (WO ₃)/Graphene-hybrid Membranes for PEM Fuel Cells Applications	Anand Kumar (keynote) , <i>Qatar University, Qatar</i> Catalytic Evaluation of Nickel Ceria Solid Solutions Prepared by Combustion Method for CO ₂ Conversion by Dry Reforming of Methane
9.20-9.40	Alexander Obraztsov (Keynote) , <i>University of Eastern Finland, Finland</i> Production and properties of MoS ₂ and WS ₂ mesoporous layers	Neelam Srivastava (Keynote) , <i>Banaras Hindu University, India</i> A Loosely Bonded Polymer-A Better Host for Synthesis of Flexible Economical, Environment Benign and Easy to Handle Polymer-In-Salt Electrolyte (PISE)	Fares Almomani (Keynote) , <i>Qatar University, Qatar</i> Green Hydrogen Production via Integrated Triple Technologies: Downdraft Tower, Photovoltaic and Electrolysis
9.40-10.00	Alexey Bezryadin (Keynote) , <i>University of Illinois at Urbana-Champaign, USA</i> Energy Storage, Photoeffect, and Coulomb Barrier Creation in Graphene and Alumina Nanocapacitors		Ivan Cabria (Keynote) , <i>University of Valladolid, Spain</i> Computational Simulations of the Hydrogen and Methane Storage Capacities on novel MOF-521s at Room Temperature

10.00-10.30	Tea/Coffee break		
	<p>Program Chairs: Joao Ventura, <i>University of Porto, Portugal</i>, Luiz Pereira, <i>University of Aveiro, Portugal</i> Session Chairs: Miao Zhao, <i>King's College London, United Kingdom</i>, Alexander Obraztsov, <i>University of Eastern Finland, Finland</i></p>	<p>Program Chairs: Olena Okhay, <i>University of Aveiro, Portugal</i>, Joao Grilo, <i>University of Aveiro, Portugal</i> Session Chairs: Amani Al-Othman, <i>American University of Sharjah, UAE</i>, Michael Ohadi, <i>University of Maryland, USA</i></p>	<p>Program Chairs: Carmen M. Rangel, <i>LNEG, Portugal</i>, Joao Campos Gil, <i>University of Coimbra, Portugal</i> Session Chairs: Anand Kumar, <i>Qatar University, Qatar</i>; Fares Almomani, <i>Qatar University, Qatar</i></p>
10.30-10.45	<p>Alice Sciortino, <i>University of Palermo, Italy</i> Ultrafast charge carriers dynamics in gold nanocrystal superparticles</p>	<p>Arkaitz Fidalgo-Marijuan, <i>BCMaterials, Spain</i> Ionic liquid laden MOF-based solid-state electrolytes for sodium batteries</p>	<p>Konrad Eiler, <i>Universitat Autònoma de Barcelona, Spain</i> Magnetic field-enhanced hydrogen evolution reaction on Ni foam electrodes</p>
10.45-11.00	<p>Antonio Avila, <i>Universidade Federal de Minas Gerais, Brazil</i> Nanomembranes and Urban Vehicles: A Simple Way to Minimize Urban Noise</p>	<p>Barbora Dousova, <i>University of Chemistry and Technology, Prague</i> Temperature effect on adsorption properties of clay “fly ash composite nanosorbents</p>	<p>Maria Linares, <i>Rey Juan Carlos University, Spain</i> LCA of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3\pm\delta}$ synthesis for green hydrogen production through solar driven thermochemical cycles</p>
11.00-11.15	<p>Diego Duarte, <i>Federal University of Santa Catarina, Brazil</i> Effect of the substrate temperature on the properties of Nb-doped TiO₂ thin films deposited by magnetron sputtering</p>	<p>Claudio Terraza, <i>Pontificia Universidad Católica de Chile, Chile</i> Biaryl asymmetric dialdehydes and 4,4'-(((diphenylsilanediy))bis([1,1'-biphenyl]-4',4-diyl))bis(oxy))bis(2-((2-ethylhexyl)oxy)aniline) as monomers for the preparation of silicon-containing poly(azomethine)s. Synthesis and properties</p>	<p>Muhammad Tawalbeh, <i>University of Sharjah, UAE</i> Collagen/Chitosan Membranes for PEM Fuel Cell Application</p>
11.15-11.30	<p>Izabela-Cristina Stancu, <i>National University of Science and Technology Politehnica Bucharest, Romania</i> Engineering New Nanostructured Hydrogel Precursors for 3D Printing of Artificial Bone Extracellular Matrices</p>	<p>Hassan Agalit, <i>University of Birmingham, United Kingdom</i> Solving the Sintering Problem in the Thermochemical CuO/Cu₂O Redox Cycle Via a Facile-One Pot Nanomaterials Synthesis Process</p>	<p>Pukazhselvan D, <i>University of Aveiro, Portugal</i> Hydrogen storage characteristics of TiB₂ incorporated LiH/MgB₂ nanocomposite</p>
11.30-11.45	<p>Marco Conte, <i>University of sheffield, United Kingdom</i> Nano SnO₂ and Ga₂O₃ clusters supported on zeolite Y for the exploitation of biomass into high-value chemicals</p>	<p>Jeom-Soo Kim, <i>DONG-A University, South Korea</i> Stabilizing Interface of NCM811 by Nb-oxide Coating for Solid-State Batteries</p>	<p>Roger de Paz Castany, <i>Universitat Autònoma de Barcelona, Spain</i> Ni-W thin films for hydrogen evolution reaction in acidic media and optimization using machine learning: insights on electrocatalyst durability.</p>
11.45-12.00	<p>Marco Reale, <i>University of Palermo, Italy</i> Lasing Properties in Self-Assembled Quantum Dot Superparticles</p>	<p>Balqees Al-Saadi, <i>Sultan Qaboos University, Sultanate of Oman</i> Enhanced Intramolecular Charge Transfer and Near-Infrared Fluorescence in New Chalcone Derivatives through Extended Conjugation and Planarity Coupling</p>	<p>Xiaodan Liu, <i>Beijing Jiaotong University, China</i> Development and performance analysis of water electrolysis propulsion system with microwave igniter</p>

12.00-12.10	Maria do Carmo Rangel , <i>Universidade Federal do Rio Grande do Sul, Brazil</i> Capturing carbon dioxide by MCM-41-supported lanthanum	Nastaran Abbaspour , <i>TUWien, Austria</i> Toluene Conversion over Activated Biochar from a Heavy Metal-Polluted Site	Alejandro Pérez Domínguez , <i>Rey Juan Carlos University, Spain</i> Partial reduction of $\text{La}_{0.6}\text{Sr}_{0.4}\text{Co}_{0.2}\text{Fe}_{0.8}\text{O}_{3\pm\delta}$ perovskite shaped as RPC structure for maximizing green H ₂ production by thermochemical H ₂ O splitting
12.10-12.20	Martina Rihova , <i>CEITEC BUT, Czechia</i> Antibacterial activity of centrifugal spun fibers blended with ZnO nanoparticles for the treatment of Acne vulgaris	Rodrigo Espinosa , <i>Instituto Politécnico Nacional, Mexico</i> Influence of the synthesis method for metal-organic frameworks during CO ₂ electroreduction reaction	Carlos Chirinos , <i>Universidad Rey Juan Carlos, Spain</i> Hydrogen production through oxidative steam reforming of simulated bio-oil aqueous fraction using Co/CeSBA-15 catalysts
12.20-12.30	Alvaro Moreno , <i>Universidad Rey Juan Carlos, Spain</i> Optimization of mesostructured CeO ₂ synthesis using SBA-15 as a template	Andreia Gerniski Macedo , <i>Universidade Tecnológica Federal do Paraná, Brazil</i> Evaluating the impact of solvent vapor annealing in organic thin films through transfer matrix method	Maciej Kubowicz , <i>AGH University of Krakow, Poland</i> The interplay of material form and cation ratios in multimetallic pentlandite catalysts
12.30-12.40		Rasha Ghunaim , <i>IFW Dresden, Germany</i> Development of Transition Metal Dichalcogenides-based nanocomposites (ANM)	Manuela Killian , <i>University of Siegen, Germany</i> Room-temperature defect-engineered titania: An efficient platform for Pt single atom decoration for photocatalytic H ₂ evolution (HE) (15 minutes talk)
12.40-12.50	Ruy Sanz Gonzalez , <i>National Institute for Aerospace Technology, Spain</i> Nanostructures for the thermal and electromagnetic isolation of Space and Ground Instrumentation	Muhammad Tawalbeh , <i>University of Sharjah, UAE</i> Lignin/Nanocellulose composite membranes for polymer electrolyte membrane fuel cells (HE)	Ilenia Rossetti (keynote) , <i>University of Milan, Italy</i> Methanation of Biogas to Store and Distribute Green Hydrogen (HE) (15 minutes talk)
12.50-13.00			
13.00-14.00	Lunch		
	Program Chairs: Estelina Lora , <i>University of Porto, Portugal</i> , Luiz Pereira , <i>University of Aveiro, Portugal</i> Session Chairs: Diego Duarte , <i>Federal University of Santa Catarina, Brazil</i> , Marco Conte , <i>University of sheffield, United Kingdom</i>	Program Chairs: Olena Okhay , <i>University of Aveiro, Portugal</i> , Joao Grilo , <i>University of Aveiro, Portugal</i> Session Chairs: Neelam Srivastava , <i>Banaras Hindu University, India</i> , Arkaitz Fidalgo-Marijuan , <i>BCMaterials, Spain</i>	Program Chairs: Carmen M. Rangel , <i>LNEG, Portugal</i> , D. Pukazhselvan , <i>University of Aveiro, Portugal</i> Session Chairs: Maria Linares , <i>Rey Juan Carlos University, Spain</i> , Patrick DA COSTA , <i>Sorbonne Universiti, France</i>
14.00-14.15	Adriana Lungu , <i>National University of Science and Technology Politehnica Bucharest, Romania</i> Engineering New Nanostructured Multi-Material Inks for 3D Printing for Bone-Regeneration	Maria do Carmo Rangel , <i>Universidade Federal do Rio Grande do Sul, Brazil</i> Production of bio-oil from grape residues over montmorillonite catalysts	Bashir Ahmmad (Keynote) , <i>Yamagata University, Japan</i> Visible-light-driven Photocatalytic Oxygen Production from Water by Using BaTiO ₃ based Ferroelectric Photocatalyst

14.15-14.30	Narendra Kumar , <i>Åbo Akademi University, Finland</i> Ru modified MCM-41 mesoporous material extrudate shaped catalysts for synthesis of menthol: Design of catalytic active sites, physico-chemical characterizations and reaction mechanism	Matthias Schmidt , <i>German Aerospace Center, Germany</i> Thermochemical energy storage with Calcium Hydroxide, experimental demonstration of storage system for decentralized heat supply in buildings	Fares Almomani , <i>Qatar University, Qatar</i> Bio-Hydrogen Production from Sewage Sludge: A Sustainable Solution for Qatar's Wastewater Treatment Plants
14.30-14.45	Neha Sardana , <i>Indian Institute Of Technology Ropar, India</i> Raman Response of Gold Nanodisk Arrays	Muhammad Tawalbeh (Keynote) , <i>University of Sharjah, UAE</i> Proton Conductivity Studies of H-ZSM-5 /PVDF Composite Membranes for PEM Fuel Cells	Amani Al-Othman , <i>American University of Sharjah, UAE</i> Mxene/Zirconium Silicate Membranes for PEM Fuel Cells Applications
14.45-15.00	Serdal Kirmizialtin , <i>New York University, UAE</i> Elucidating the Mechanisms of Water Adsorption and Release in Metal-Organic Frameworks through Simulation and Machine Learning	Giulia Di Gregorio , <i>Fondazione Bruno Kessler, Italy</i> Radio Frequency Magnetron Sputtering deposition of MoS ₂ electrocatalyst thin films for Anion Exchange Membrane Water Electrolysis	Patrick DA COSTA (Keynote) , <i>Sorbonne Universiti, France</i> Prominence of Ni Substitution in Ni _x Co _{3(1-x)} O ₄ on CO ₂ Methanation activity
15.00-15.15	Yannis Cheref , <i>ENS Lyon, Universiti Claude Bernard Lyon 1, France</i> Nanoparticle-based Scintillating Aerogels for Real-time Radioactive Gas Detection		Jose Ortiz-Landeros , <i>Instituto Politecnico Nacional, Mexico</i> Syngas production via oxidative reforming of methane and propane using a dual-phase inorganic membrane reactor
15.30-16.00	e-posters (Room A)		
	Session Chairs: Luiz Pereira , <i>University of Aveiro, Portugal</i> , Estelina Lora , <i>University of Porto, Portugal</i>		
	Alba Nelly Ardila Arias , <i>Politecnico Colombiano Jaime Isaza Cadavid, Colombia</i> Preliminary Economic Feasibility Study for Graphene Synthesis from King Grass at Laboratory Scale (AGM)		
	Alba Nelly Ardila Arias , <i>Politecnico Colombiano Jaime Isaza Cadavid, Colombia</i> Spend batteries valorization for obtaining graphene by exfoliation in the liquid phase (AGM)		
	Ana A. Navarro , <i>CIEMAT, Spain</i> Energy Decarbonisation through Direct-biogas Solid Oxide Fuel Cell and Microalgae Technology (HE)		
	Anuar Zhukeshov , <i>al-Farabi university, Physics departament, Kazakhstan</i> The clusters formation in metal thin layers deposited by pulse arc plasma in vacuum (ANM)		
	Dencho Spasov , <i>Institute of Solid State Physics, Bulgarian Academy of Sciences, Bulgaria</i> Performance Characteristics of HfO ₂ /Al ₂ O ₃ Nanolaminated Stacks for Application in Non-Volatile Flash Memories (ANM)		
	Dirleia Lima , <i>Federal University of Rio Grande do Sul, Brazil</i> Microwave-assisted hydrothermal synthesis of ZSM-5 zeolite (AEM)		
	Dirleia Lima , <i>Federal University of Rio Grande do Sul, Brazil</i> Sustainability and innovation: CO ₂ conversion by dry reforming of methane using nickel and nickel-cobalt catalysts on sustainable HZSM-5 supports (AEM)		
	Dirleia Lima , <i>Federal University of Rio Grande do Sul, Brazil</i>		

From waste to clean energy: Development of cost-effective and sustainable catalysts for hydrogen production via glycerol steam reforming (HE)
Maria Francisca Queiros , <i>IFIMUP, Department of Physics and Astronomy, Faculty of Science, University of Porto, Porto, Portugal</i> Theoretically probing structural and electronic properties of Pr-based crystals for energy applications (AEM)
Olena Okhay , <i>University of Aveiro, Portugal</i> Reduced graphene oxide - based electrodes for energy storage (AGM)
Pukazhselvan D , <i>University of Aveiro, Portugal</i> Characteristics of vanadium pentoxide added magnesium hydride as active Li conversion material in a Li ion battery (AEM)
Yan Resing Dias , <i>Federal University of Rio Grande do Sul - UFRGS, Brazil</i> Combining Ni, Co, and Cu on LDH-derived catalysts for CO ₂ methanation (AEM)
Yan Resing Dias , <i>Federal University of Rio Grande do Sul - UFRGS, Brazil</i> NiAl-LDH: Effect of basic metals incorporation on methane decomposition (HE)
Yan Resing Dias , <i>Federal University of Rio Grande do Sul - UFRGS, Brazil</i> Effect of Ca on LDH-derived Ni-Al catalysts for low-temperature CO ₂ methanation (AEM)
Yassine Elaadssi , <i>University of Toulon, France</i> Co _x Fe _{3-x} O ₄ thin films for Photoelectrochemical degradation of rhodamine B : Experimental and response surface methodology approaches.

16.00-17.00	Print Poster session (Hall)
1 AEM	Diego Duarte , <i>Federal University of Santa Catarina, Brasil</i> Evaluation of Ni metallic states in Ni/Al ₂ O ₃ catalysts obtained by chemical routes and magnetron sputtering
2 AEM	Henrique Tidei , <i>Universidade de Aveiro, Portugal</i> Unveiling the role of microstructure on the electrical properties of ceria-based composites
3 AEM	Jihui Oh , <i>Korea Testing Laboratory, South Korea</i> Optimization of Thickness for Alumina-Coated Separators for Lithium-ion batteries
4 AEM	Jihui Oh , <i>Korea Testing Laboratory, Korea</i> Correlation Between the Properties of ceramic-coated separators for Lithium-ion batteries and Powder Characteristics
5 AEM	Kodai Sakaguchi , <i>University of Fukui, Japan</i> The effects of surface fluorination on the sintering and electrochemical properties of oxide-based solid electrolytes (LLTO, Li _{3-x} La _{2/3-x} TiO ₃)
6 AEM	Naima Naffati , <i>Laboratorio Nacional de Energia e Geologia, Portugal</i> Chitosan doped membranes for electrochemical devices
7 AEM	Stanislav Slavov , <i>University of Chemical Technology and Metallurgy, Bulgaria</i> Bismuth-titan-silicate oxide glass-ceramics for energy storage
8 AEM	Tomohiro Ishikawa , <i>University of Fukui, Japan</i> Effects of ZrO ₂ addition and surface fluorination on the electrochemical properties of LiNi _{0.5} Co _{0.2} Mn _{0.3} O ₂ , cathode materials.
9 AEM	Youngkwon Kim , <i>Korea Electronics Technology Institute, Republic of Korea</i> Polyimide Nonwoven Separators with Higher Electrochemical Performance for Lithium Ion Battery Applications
10 AEM	Luiz Pereira , <i>University of Aveiro, Portugal</i>

	Lithium-ion Battery State of Health Prediction from Partial Discharge Curves Using Artificial Neural Networks
11 ANM	Luiz Pereira , <i>University of Aveiro, Portugal</i> AI-Based Multiclassification Electronic Nose for Detection of Volatile Organic Compounds
12 ANM	Adriana Marinoiu , <i>National Research and Development Institute for Cryogenic and Isotopic Technologies, Romania</i> Graphene-based Electrodes for PEM Fuel Cells as Integrated Catalytic Layers
13 ANM	Aleksandra Michałowska , <i>University of Warsaw, Poland</i> The nanostructured GaN template sputtered with thin metal film: new SERS DNA biosensor for detecting mutations in real clinical samples
14 ANM	Ancin Maria Devis , <i>King's College London, United Kingdom</i> Development of Low-cost Combinatory method for nanomaterial assembly and control
15 ANM	Anna Kornushchenko , <i>University of Münster, Germany</i> Formation of porous metals with nano- and microsized structural elements under near-equilibrium condensation conditions
16 ANM	Ji-Yeon Park , <i>Korea Institute of Energy Research, Korea</i> Efficient depolymerization and deoxygenation of lignins using MgNiMo/AC catalyst in supercritical ethanol
17 ANM	Julio Zuriel Gonzalez Vazquez , <i>ESIME Culhuacan, Instituto Politecnico Nacional, Mexico</i> DFT-Determined Chemi and Physisorption Degrees of Adsorption of Alkali Metals by a SnC Monolayer
18 ANM	Miguel Angel Gonzalez Morales , <i>National Polytechnic Institute (IPN), Mexico</i> Molecular beam epitaxy growth of InAs nanowires on graphene/Si (111) substrates
19 ANM	Miloslav Lhotka , <i>University of Chemistry and Technology Prague, Czech Republic</i> Characterization of nanomaterials using adsorption technique
20 ANM	Mirian Fusinato , <i>Universidade Federal de Pelotas, Brazil</i> Effect of freeze-drying on the drying stage of silica extracted from industrial waste
21 ANM	Nayeli Colin Becerril , <i>National Polytechnic Institute (IPN), Mexico</i> Van der Waals Epitaxy-Assisted Growth of GaSb Nanowires on Graphene Monolayers
22 ANM	Ricardo Bermeo-Campos , <i>Instituto Politecnico Nacional- ESIME Culhuacan, Mexico</i> DFT-Determined Chemi and Physisorption Degrees of H ₂ Adsorption on a PbC Monolayer Decorated with Alkali Metals
23 ANM	Vera R.L. Constantino , <i>University of Sao Paulo, Brazil</i> Curcumin Loading on Surface-modified Layered Zinc Hydroxide
24 ANM	Victor Balcao , <i>University of Sorocaba, Brazil</i> Structural and functional stabilization of lytic bacteriophages in biopolymeric nanoparticles: potential for biocontrol of Pseudomonas syringae pv. garcae in coffee plants
25 ANM	Man-Hoe, Kim , <i>Kyungpook National University, Korea</i> Thermal Performance of Carbon Nanotube Radiant Film Heater in Automotive Heating Applications
26 ANM	Biliana Georgieva , <i>Institute of Optical Materials and Technologies "Akad. J. Malinowski" Bulgarian Academy of Sciences, Bulgaria</i> , Some initial results on the effect of native SiO ₂ on the formation of SiC on Si substrates
27 APM	Anton Uzunoff , <i>King's College London, England</i> Heterogeneous, multi-layered conjugated polymer nanoparticles for theranostic applications
28 APM	Ensieh Hosseini , <i>Durham University, UK</i> PVDF-BaTiO ₃ Nanofiber-based Piezoelectric Sensor for Wearable Applications
29 APM	Jiri Brus , <i>Institute of Macromolecular Chemistry CAS, Czech Republic</i> Alginate-pectin composites: highly ordered fragments as revealed by NMR crystallography and advanced DFT calculations
30 APM	Marianela Escobar , <i>University of Duisburg-Essen, Germany</i> Ferroelectric and dielectric properties of P(VDF-TrFE) composites with molecular ferroelectric 2-(hydroxymethyl)-2-nitro-1,3-propanediol as filler material
31 APM	Marius Bodor , <i>Universidade da Coruna, Spain</i> Obtaining and Analyzing of Flexible and High Conductive Bio-based Polymers, Doped with PANI-CNT

32 APM	Martina Urbanova , <i>Institute of Macromolecular Chemistry CAS, Czech Republic</i> Interactions of paramagnetic ions with alginates chains and their microstructure as probe very fast solid-state nmr spectroscopy
33 APM	Chaekyung Kim , <i>Department of Energy Convergence Engineering, South Korea</i> Poly(2,2,6,6-tetramethylpiperidine-N-oxyl-4-vinyl ether)-impregnated carbon nanotube cluster for high-properties organic battery
34 HE	Alejandra Granja Del Ri-o , <i>Universidad de Valladolid, Spain</i> Computational Simulations of the Hydrogen and Methane Storage Capacities on novel JLU MOFs at Room Temperature
35 HE	Andre Barros , <i>University of Campinas, Brazil</i> Hydrogen Production Using Al-4Mg-1Sn(-1Fe) [wt.%] Alloys: Influence of Microstructural Features and Insights for the Recycling of Al Alloys
36 HE	Angel Montoya , <i>Instituto Politecnico Nacional, Mexico</i> Effects of doping in alkali-metal-decorated SnC monolayers and its application to H2 storage
37 HE	Angel Montoya , <i>Instituto Politecnico Nacional, Mexico</i> AB-initio study on the hydrogen storage in transition-metal-decorated 2D-SnC doped with B, Al, Ga
38 HE	Bashir Ahmmad , <i>Yamagata University, Japan</i> Organic molecule Embedded Nanocomposite of CdxZn1-xS Solid Solution as a Highly Active Photocatalyst for Hydrogen Production via Water Splitting
39 HE	Carmen Rangel , <i>National Laboratory for Energy and Geology, Portugal</i> The H2Excellence Project - Fuel Cells and Green Hydrogen Centers of Vocational Excellence towards affordable, secure, and sustainable energy for Europe
40 HE	Huanqing Zhang , <i>Department of Materials Science, Chair of Materials Physics, University of Leoben, Austria</i> Tailoring Rapid Thermal Synthesis of Noble Metal Nanoparticles on Carbon Support for Energy Applications
41 HE	In-Gu Lee , <i>Korea Institute of Energy Research, South Korea</i> Hydrogen production by supercritical water gasification of alcohols and aqueous fraction of fast pyrolysis bio-oil over NiY/activated charcoal catalyst
42 HE	Milosz Kozusznik , <i>AGH University of Krakow, Poland</i> Theoretically-assisted evaluation of (Fe,Ni)3Se4 for water-splitting applications
43 OLED	Luiz Pereira , <i>University of Aveiro, Portugal</i> White TADF based OLED by Exciplex Principle in Wet-processed Devices
19.30-22.00	Conference Dinner (Melia Ria Hotel Aveiro) Music moments: Mariana Oliveira, Fado singer

26 July 2024

8.00-9.00	Registration (complexo pedagógico)		
	ANM/AMM/APM (Room A)	AEM/AGM (Room B)	HE/SEM/OLED (Room C)
	Program Chairs: Joao Ventura , <i>University of Porto, Portugal</i> , Luiz Pereira , <i>University of Aveiro, Portugal</i> Session Chairs: In-Sang Yang , <i>Ewha Womans University, South Korea</i> , Hiroyuki Aoki , <i>J-PARC, Japan</i>	Program Chairs: Olena Okhay , <i>University of Aveiro, Portugal</i> , Devaraj Ramasamy , <i>INL, Portugal</i> Session Chairs: José, Germino , <i>University of Aveiro, Portugal</i> , Eralci Moreira Therezio ,	Program Chairs: Carmen M. Rangel , <i>LNEG, Portugal</i> , Joao Campos Gil , <i>University of Coimbra, Portugal</i> Session Chairs: Concepcion Caravaca , <i>CIEMAT, Spain</i> , Milda Petruleviciene , <i>Center for Physical</i>

		<i>Universidade Federal de Mato Grosso, Brazil</i>	<i>Science and Technology, Vilnius, Lithuania</i>
9.00-9.15	Aliaksandra Rakovich , <i>King's College London, United Kingdom</i> Conjugated polymer nanoparticles for theranostic applications	Alba Maria Fernandez Sotillo , <i>CIEMAT, Spain</i> Potential of Graphene Oxide Laminates as Ion Exchange Membranes for electrochemical cells (AGM)	Bostjan Pregelj , <i>Josef Stefan Institute, Slovenia</i> Real data based scalable simulation model of HydroPowerPlant with Solar field and Electrolyser - Slovenia case study (HE)
9.15-9.30	Elena Mishina , <i>MIREA-Russian Technological University, Russia</i> Magnetic nanostructures for THz emitters with amplitude and polarization control	Fabrizio Messina , <i>Dipartimento di Fisica e Chimica - Università di Palermo, Italy</i> Fluorescent nanographene-based nanocomposites: unclonable photonic microlabels for anti-counterfeiting, metrology and microsensing (AGM)	Concepcion Caravaca , <i>CIEMAT, Spain</i> Performance evaluation of an AEM electrolysis cell using a reinforced Sustainion® X37-50 membrane (HE)
9.30-9.45	Fatih Dogan , <i>Munzur University, Turkey</i> Coating of sintered Nd-Fe-B magnets used in E-motors; improving magnetic properties and corrosion resistance	José, Germino , <i>University of Aveiro, Portugal</i> How can Rb+ Atomic-level Deep-trap Passivation Creates Delayed Emission Processes on Amine-free CsPbBr3 Nanocrystals? The Role of Charge-carrier Trapping and Detrapping on PeLEDs Efficiency (ANM)	Milda Petruleviciene , <i>Center for Physical Science and Technology, Vilnius, Lithuania</i> Investigation of WO3/BiVO4 heterojunction for photoelectrochemical decomposition of organic compounds and production of hydrogen (HE)
9.45-10.00	Hiroyuki Aoki , <i>J-PARC, Japan</i> Nanometric Structure of Adhesion Interface in Humid Environments Studied by Neutron Reflectometry	Eralci Moreira Therezio , <i>Universidade Federal de Mato Grosso, Brazil</i> Analysis of hysteretic behavior in hybrid and inorganic perovskites (AEM)	Chiara Pierantoni , <i>University of Padova, Italy</i> Recycling Carbon-based Water Filters for Hydrogen Storage: a sustainable approach (HE)
10.00-10.15	In-Sang Yang , <i>Ewha Womans University, South Korea</i> Spin rotational excitations in hexagonal LuMnO3	Juliana Heiniger-Schell , <i>European Organization for Nuclear Research (CERN), CH-1211 Geneva, Switzerland, Switzerland</i> The Solid State Physics Programme at ISOLDE-CERN: an Important Update (AEM)	Joanna Banas-Gac , <i>AGH University of Krakow, Poland</i> TiO2/CuOx thin film bilayers in different configurations for photoelectrochemistry (SEM)
10.15-10.30	Carlos Callatay , <i>IFIMUP, Portugal</i> Understanding contact-separation triboelectric nanogenerators with nanoparticle doped materials using finite-element simulations	Kamdeo Mandal , <i>Department of Chemistry, Indian Institute of Technology (Banaras Hindu University), Varanasi (U.P.), India</i> Dielectric and electrical properties of complex perovskite Nano-materials (AEM)	David Botana , <i>CIEMAT, Spain</i> Assessment of degradation effects of intermittent supply in PEM electrolyzers. (HE)

10.30-11.00	Tea/Coffee break		
	Program Chairs: Joao Ventura , <i>University of Porto, Portugal</i> , Estelina Lora , <i>University of Porto, Portugal</i> Session Chairs: Sanja Tepavcevic , <i>Argonne National Laboratory, United States</i> , Masahiko Minoda , <i>Kyoto Institute of Technology, Japan</i>	Program Chairs: Olena Okhay , <i>University of Aveiro, Portugal</i> , Devaraj Ramasamy , <i>INL, Portugal</i> Session Chairs: Didier Fasquelle , <i>ULCO, France</i> , M M Sinha , <i>Sant Longowal Institute of Engineering and Technology, India</i>	Program Chairs: Carmen M. Rangel , <i>LNEG, Portugal</i> , Luiz Pereira , <i>University of Aveiro, Portugal</i> Session Chairs: Joanna Banas-Gac , <i>AGH University of Krakow, Poland</i> , Ilenia Rossetti , <i>University of Milan, Italy</i>
11.00-11.15	Masahiko Minoda , <i>Kyoto Institute of Technology, Japan</i> Preparation and Some Properties of Polymer Films with Hierarchically Ordered Surface Structure by a Combination of Nanoimprinting and Surface-Initiated Graft Polymerization	Didier Fasquelle (Keynote) , <i>ULCO, France</i> Optimization of Metal-Supported Intermediate-Temperature Solid Oxide Fuel Cells (MS-IT-SOFCs) for electrical energy production (AEM)	Gianguido Ramis (keynote) , <i>University of Milan, Italy</i> Photoreduction of CO ₂ to formic acid in a high pressure photoreactor (SEM)
11.15-11.30	Sanja Tepavcevic , <i>Argonne National Laboratory, United States</i> Advancing Understanding of Composite Polymer Electrolytes with LLZO Nanofibers	Lorena G. Cuellar-Herrera , <i>Instituto Politecnico Nacional, Mexico</i> Chemical synthesis and electrochemical performance of Hausmannite-Mn ₃ O ₄ /rGO materials for supercapacitor applications (AEM)	Luiz Pereira (Keynote) , <i>University of Aveiro, Portugal</i> Rules for Designing Active Layers of Efficient Solution-deposited OLEDs Based on the host: guest Concept: from Simulations to Real Data (OLED)
11.30-11.45	Ricardo Lima , <i>Universidade do minho, Portugal</i> Towards sustainable epoxy based self-sensing polymer composites for high responsibility applications	M M Sinha , <i>Sant Longowal Institute of Engineering and Technology, India</i> Structural, Electronic and Vibrational Properties of CuScSi Half Heusler Compound: A First Principle Approach (AEM)	Satam Alotibi , <i>Prince Sattam Bin Abdulaziz University, Saudi Arabia</i> Enhancing Photocatalytic Water Purification through Optimized Thermal Reduction of Graphene Oxide: Synthesis and Sunlight-driven Application of rGO-TiO ₂ Nanocomposites (SEM)
11.45-12.00	Mona Fadel , <i>Oviedo university, Spain</i> Carbon-supported Ni Nanoparticles: Synergizing of Magnetism and Adsorption for Advanced Water Decontamination	Mariano Alarcon , <i>University of Murcia, Spain</i> Study of Thermal Fields Inside Pipes in Solar Collectors Working with Ionanofluids by Means of the HEATTÂ® Platform (AEM)	Sivabalan Maniam Sivasankar , <i>University of Aveiro, Portugal</i> Interface and surface engineering of CIGS films to improve cell performance (SEM)
12.00-12.15	Kenny Padron Aleman , <i>University of Oviedo/Institut Laue-Langevin, Spain</i> Unraveling the Mechanisms of the First-Order Phase Transition in Near-Equiatomic Fe-Rh Alloys	Yassine Elaadssi , <i>University of Toulon, France</i> Synthesis of cobalt ferrite nanoparticles for the photodegradation of Rhodamine B under simulated sunlight irradiation : Optimization by Response Surface Methodology. (AEM)	Satish Kumar , <i>Deenbandhu chhotu ram university of science & technology, India</i> Luminescent Properties of Mix Rare Earth Ion Doped Alkali Fluoro Borate Glasses for Solid State Lighting Applications (OLED)

12.15-12.30	<p>Jose Luis Garrido Álvarez, <i>University of Oviedo, Spain</i> Magnetocaloric effect on nanocrystalline melt spun R₂Fe₁₇ (R= Pr, Nd) ribbons</p>	<p>Timon Guenther, <i>University of Augsburg, Germany</i> Nanostructured Raney-Nickel electrodes for highly active and cost-efficient hydrogen evolution in alkaline media (AWE) (AEM)</p>	<p>Sakti Prasanna Muduli, <i>National Institute of Technology, Rourkela, India</i> Advanced Silicon Nanowire Fabrication and Annealing Temperature Optimization for Improving Solar Cell Efficiency (SEM)</p>
12.30-12.40	<p>Joao Maganinho, <i>IFIMUP - Institute of Physics for Advanced Materials, Nanotechnology and Photonics, Portugal</i> Production of a Galinstan Based Ferromagnetic Fluid for Thermal Applications</p>	<p>Nastaran Farahbakhsh, <i>University of Siegen, Germany</i> Design and Fabrication of One-Dimensional Nanostructured Nickel Suboxides for Improved Oxygen Evolution Reaction (AEM)</p>	<p>Majid Shahsanaei, <i>University of Siegen, Germany</i> Light-induced defected TiO₂ nanosheets decorated with Pt single atoms for enhanced photocatalytic hydrogen production (HE)</p>
12.40-14.00	Lunch		