

Materials Science & Nanotechnology Conference

February 26-28, 2020







Event Venue

SANA Malhoa Hotel Av. José Malhoa 8, 1099-089 Lisbon, Portugal

Exhibitor

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Few of the Journals offered for publishing under Materials Science:





Editor-in-Chief: Castro, Eulogio

IMPACT FACTOR 2017: 2.172 5-year IMPACT FACTOR: 2.455

CiteScore 2018: 2.30

SCImago Journal Rank (SJR) 2018: 0.535

Source Normalized Impact per Paper (SNIP) 2018: 1.058



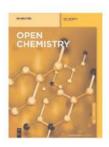
Editor-in-Chief: Fukuyama, Hiroyuki

IMPACT FACTOR 2017: 0.433 5-year IMPACT FACTOR: 0.436

CiteScore 2017: 0.41

SCImago Journal Rank (SJR) 2017: 0.210

Source Normalized Impact per Paper (SNIP) 2017: 0.327



IMPACT FACTOR 2017: 1.425

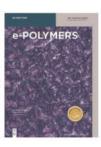
5-year IMPACT FACTOR: 1.511

CiteScore 2018: 1.58

SCImago Journal Rank (SJR) 2018: 0.345

Source Normalized Impact per Paper (SNIP) 2018: 0.684

ICV 2017: 165.27



Editor-in-Chief: Agarwal, Seema

IMPACT FACTOR 2017: 1.111

CiteScore 2017: 1.02

SCImago Journal Rank (SJR) 2017: 0.335

Source Normalized Impact per Paper (SNIP) 2017: 0.430

	Belem-1		
08:30-09:20	Registrations		
09:20-09:30	Opening Ceremony		
	Plenary Presentations		
09:30-10:10 Random Walk to the Nobel Prize and Beyond J. Michael Kosterlitz, Brown University, USA			
10:10-10:30	Coffee Break @ Foyer		
10:30-11:10 Next Generation Antibiotics Ada E. Yonath, Weizmann Institute of Science, Israel			
11:10-11:50 Semantomorphic Science with DNA: Using Molecular Information to Control State Dynamic Molecular Structure Nadrian C. Seeman, New York University, USA			
11:50-12:30	Threats to the Global High Technology Materials Supply Chain in the 21st Century – Challenges and Solutions Michael Silver, American Elements, USA		
12:30-13:15	Lunch Break @ Restaurante Mediterrâneo		
	Keynote Presentations		
	At which which is the control of the		
13:15-13:45	Oxide Materials as the Gateway for the Challenges of the Future Rodrigo Martins, New University of Lisbon, Portugal		
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Mark Tools of Contract of Cont	Oxide Materials as the Gateway for the Challenges of the Future Rodrigo Martins, New University of Lisbon, Portugal Multifunctional Hybrid Carbon Interfaces		
13:45-14:15	Oxide Materials as the Gateway for the Challenges of the Future Rodrigo Martins, New University of Lisbon, Portugal Multifunctional Hybrid Carbon Interfaces Maurizio Prato, University of Trieste, Italy In Pursuit of Colloidal Diamond		
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18:30-19:30	Cocktails			
	Superconductivity in SrTiO ₃ James F. Scott, University of St. Andrews, UK			
17:35-18:05	Turing-type Instabilities in Ferroelectric Domain Walls and a New Model for			
17:05-17:35	Chemical Bond Hierarchy and Disorder: Tuning Up Intricate Transports for Thermoelectrics Lidong Chen, Shanghai Institute of Ceramics, Chinese Academy of Sciences, China			

Thursday



February 27, 2020

	Belem-1			
	Session: Electronic Materials and Devices			
Chair:	Kirill Monakhov, Leibniz Institute of Surface Engineering, Germany			
09:00-09:20 Scattering of Conduction Electrons on the Low-Index W and Mo Surfaces Covered w Ordered Hydrogen (Deuterium) Monolayers Sergii Sologub, Institute of Physics of National Academy of Sciences of Ukraine				
09:20-09:40	Chromogenic Properties of Nanostructured Transition Metal Oxide Thin Films Pandurang Ashrit, Université de Moncton, Canada			
09:40-10:00	Linear and Second Order Responses in Topological Semimetals Yan Sun, Max Planck Institute for Chemical Physics of Solids, Germany			
10:00-10:20	Functional Properties of CrFeCoNiCu and GeFeCoNiCu Oxides Patricia Carvalho, SINTEF Industry, Norway			
10:20-10:40	Polyoxometalate-based Electronic Devices for Neuromorphic Computing Kirill Monakhov, Leibniz Institute of Surface Engineering, Germany			
10:40-11:00	Coffee Break @ Foyer			
11:00-11:20	Properties of Polymer Thin Films for Electronic Applications Investigated by Temperature Resolved Infrared Reflection-absorption Spectroscopy Barbora Hanulikova, Tomas Bata University in Zlín, Czech Republic			
11:20-11:40	In-Depth Electron Paramagnetic Resonance Characterization of Defect Behavior in As- Grown and Heat-treated Ga-doped ZnO Films Grown by Sputtering Byung-Teak Lee, Chonnam National University, South Korea			
	Special Talk			
11:40-12:40	Funding Opportunities from the European Research Council Monica Favaro, European Research Council Executive Agency, Belgium			

12:40-13:25

Lunch Break

@ Restaurante Mediterrâneo

^{*}Young Researchers Forum

	Belem-6
	Parallel Symposium
Chair:	Lifeng Liu, International Iberian Nanotechnology Laboratory, Portugal
	Invited Session
09:00-09:30	Silicon Based Photovoltaic-electrochemical Systems for Solar Fuel Production Friedhelm Finger, Juelich Forschungszentrum GmbH, Germany
09:30-10:00	Semiconductor Nanoheterostructures for Photoconversion Applications Yung-Jung Hsu, National Chiao Tung University, Taiwan
10:00-10:30	Unassisted Water Photolysis Exceeding 9% Solar-to-Hydrogen Conversion Efficiency by Double Buffered Cu(In,Ga)(S,Se) ₂ Photocathode and Metal Halide Perovskite Solar Cell Byungha Shin, Korea Advanced Institute of Science and Technology, South Korea
10:30-10:50	Coffee Break @ Foyer
10:50-11:20	Multidimension Carbon Allotropes as Functional Base for Synthesizing New Photocatalysts Joaquim Luis Faria, University of Porto, Portugal
11:20-11:50	Supramolecular Approaches to Improve the Performance of Manganese-Based Water Oxidation Catalysts Marcelino Maneiro, University of Santiago de Compostela, Spain
11:50-12:20	Transition Metal Phosphide Catalysts for Electrochemical and Photoelectrochemical Water Splitting Lifeng Liu, International Iberian Nanotechnology Laboratory, Portugal
12:30-13:30	Lunch Break @ Restaurante Mediterrâneo
	Oral Session
13:30-13:50	Strong Electronic Coupling Between Ultrafine Iridium-Ruthenium Nanoclusters and Conductive, Acid-Stable Tellurium Nanoparticle Support for Efficient and Durable Oxygen Evolution in Acidic and Neutral Media Junyuan Xu, International Iberian Nanotechnology Laboratory (INL), Portugal
13:50-14:10	Ultrafine Oxygen Vacancy-rich Iridium Oxide Nanoclusters Supported on High-surface-Area, Acid-stable Titanium Substrate for Efficient and Durable Water Oxidation at High Current Densities in Acidic Media Zhipeng Yu, International Iberian Nanotechnology Laboratory (INL), Portugal
	Session: Energy and Environmental Materials
Chair:	Hua Wu, ETH Zurich, Switzerland
14:10-14:30	A Water-based Methodology for Preparation of Pvdf-HFP and Ionic-liquid-Based Separator for Lithium-ion Batteries Hua Wu, ETH Zurich, Switzerland
14:30-14:50	An Advanced Mathematical Model to Predict Effective Solar Reflectance in Photoluminescent Materials: A Tunable Parameter to Control Urban Overheating Samira Garshasbi, University of New South Wales, Australia

14:50-15:10	Hard Carbons with Optimal Properties for Na-ion Batteries Camélia Mataei Ghimbeu, IS2M, CNRS, France
*15:10-15:20	Hydrogen-substituted Graphdiyne (HsGDY) as Cathode Materials for Rechargeable Al-ion Batteries Shaikat Debnath, The University of Queensland, Australia

	Session: Structural Materials		
Chair:	Sanjiwan Bhole, Ryerson University, Canada		
15:20-15:40	Development and Characterization of a High Carbon Nanobainitic Structural Steel Sanjiwan Bhole, Ryerson University, Canada		
15:40-16:00	Surface Modifications to Improve the Performance of Titanium Alloy Ti-6Al-4V in Biomedical Applications Alaeddine KAOUKA, Ecole Normale Supérieure de Laghouat, Algeria		
16:00-16:20	Reactive Magnesium Oxide as Dimensional Stabilizer in Cementitious Composites Containing Recycled Aggregates Rui Vasco Silva, CERIS, IST-ID, Portugal		
16:20-16:50	Coffee Break and Poster Presentations @ Foyer		
16:50-17:10	Activation Volume in Glass-forming System Aleksandra Drozd-Rzoska, Institute of IHPP PAS 'Unipress', Poland		

16:05-16:50 Poster Presentations @ F	0	þ	y.	e	1	r
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- FM-01 Synergetic Effects of Cr, Zr, Mg and Zn Microalloying on Microstructure and Mechanical Behavior of AlSi9Cu3 Alloy
 - Enric Martin, Polytechnic University of Catalonia (UPC), Spain
- FM-02 Partial Melting Semisolid Manufacturing to Obtain Billets for Thixocasting Extrusion
 Oscar Martin-Raya, Polytechnic University of Catalonia (UPC), Spain
- FM-03 Magneto-optic Waveguides With a-Si:H Guiding Layer for Optical Nonreciprocal Devices Hideki Yokoi, Shibaura Institute of Technology, Japan
- FM-04 Is Iron Ores Concentration Open to Nanotechnology?
 Antonio Peres, Federal University of Minas Gerais UFMG, Brazil
- FM-05 Effect of Gold Nanoparticle Based Anchor on Performance of Enzymatic Biofuel Cell Yongjin Chung, Korea National University of Transportation, South Korea
- FM-06 Ab Initio Modeling of Materials Parameters: An Application to Magnesium Silicide Alloys Juan M. Guerra, Justus-Liebig-University, Germany
- FM-07 Development of Hyaluronic Acid-catechol Conjugate for Tissue Engineering Kyungpyo Park, Seoul National University, South Korea
- FM-08 Effect of Surface Charge of a Particle During Translocation Through a Micropore Under Various
 Aspect Ratio Conditions
 Junsang Moon, Korea University, South Korea

^{*}Young Researchers Forum

FM-09	Triboelectric	Effect	of PVC-0	Gel and	its Apr	olication
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Ho Jung Lee, Korea University, South Korea

FM-10 Mechanical and Biodegradation Properties of a Biocompatible Soft Elastomer

Marcia Cristina Branciforti, University of São Paulo, Brazil

FM-11 Conductivity Inversion of Zno Nanoparticles in Zno-carbon Nanofiber Hybrid Thin Film Devices by Surfactant-Assisted C-Doping and Non-rectifying, Non-linear Electrical Properties Via Interfacial Trap-Induced Tunneling for Stress-grading Applications

Sang Woo Joo, Yeungnam University, South Korea

FM-12 Investigation of the Electrical Properties of As-grown and Rapid Thermal Annealed Dilute (GaAsPN/ GaPN) Quantum Wells Solar Cells

Saud Alotaibi, University of Nottingham, UK

FM-13 Fabrication of Scaffolds of Poly (E-caprolactone) / Bioglass® / Cellulose Nanofibre Biocomposites by Generative Manufacturing Process and their Characterizations

Marcia Cristina Branciforti, University of São Paulo, Brazil

FM-14 Just Add Ligands: Self-sustained Size Focusing of Colloidal Semiconductor Nanocrystals

Nida Sundrani, Bowling Green State University, USA

FM-15 Programmable Negative Differential Resistance (NDR) Device Based on Two-dimensional Materials with Charge Tap Layer

Kil-Su Jung, Sungkyunkwan University, South Korea

FM-16 Microstructure and Mechanical Properties of Fe-based Metallic Glass Coatings

Agnieszka Piekara, Foundation of Nanoscience and Nanotechnology Support NANONET, Poland

FM-17 Synthesis of Tellurium-doped α -MoO $_3$ Nanostructures and Ferromagnetic Ordering

Dong Jin Lee, Dongguk University, South Korea

FM-18 FTO Electrodes Modification with a NiO-In₂S₃ P-N Junction and a Hydrogenase for Photoelectrocatalytic H₂ Production

Gabriel Luna-López, Institute of Catalysis and Petrochemical, Spain

FM-19 A Flexible, Smart and Self-evolving Actuator Based on Polypropylene Mesh for Hernia Repair and a Thermo-sensitive Gel

Sonia Lanzalaco, University of Catalonia, Spain

FM-20 Optimization of Charge Carrier Mobility in Nanoporous Titania Films

Joyashish Debgupta, University of York, UK

FM-21 Mechanical Characterization of Bioceramics Gutta-percha and Endodontic Sealer

Adriana Marques Nunes, Fluminense Federal University, Brazil

FM-22 Hydrogenase-assisted Catalysis on Titania Electrodes Oxides

Patricia Carvalho, SINTEF Industry, Norway

FM-23 Chitosan Microparticles Loaded Tannic Acid for Wound Treatment

Sara Baptista-Silva, Catholic University of Portugal, Portugal

FM-24 Nanofabrication of In Situ TEM Cartridges for Heating and Biasing Applications

Mario V. Navas, International Iberian Nanotechnology Laboratory, Portugal

FM-25 Development of Innovative Electrodes for Bio-electrochemical Systems Intended for Bio-Hydrogen Production

Shmuel Rozenfeld, Ariel University, Israel



	Belem-1			
	Session: Materials Chemistry			
Chair:	Manuel Souto, University of Aveiro, Portugal			
09:00-09:20	The Effect of Durability and Corrosion Behavior on the Concrete Treated with Chemical Inhibitor Tahani Al-Gharib, Kuwait Oil Company, Kuwait			
09:20-09:40 Green and Roasted Coffee Beans: Antioxidant and Antimicrobial Activity on H Pathogens Raseetha Siva, MARA University of Technology, Malaysia				
09:40-10:00 Effect of Pack-boriding on the Tribological Behavior of Hardox 450 and HiTur Bülent Aktaş, Harran University, Turkey				
10:00-10:20 Electronic Structure Engineering of Carbon Nitrides for the Photocatalysis an electrochemical Applications Neeta Karjule, Ben-Gurion University of the Negev, Israel				
10:20-10:40	Electroactive Metal-organic Frameworks for Electronic Applications Manuel Souto, University of Aveiro, Portugal			
10:40-11:00	Coffee Break @ Foyer			
11:00-11:20	Microstructural Characterization of Boehmite Sol-gel Coated ADIs after High Temperate Oxidation in Water Vapor Olga Tsurtsumia, Georgian Technical University, Georgia			
11:20-11:40	Microwave-Assisted Synthesis of Metal-organic Frameworks, their Transformation to Carbon-based Nanocomposites and their Application in Electrochemical Power Sources David Skoda, Tomas Bata University in Zlin, Czech Republic			
11:40-12:00	Fine Particle Aerosol as Radiation Detection Medium in Gaseous Proportional Counters Fernando Amaro, University of Coimbra, Portugal			
12:00-12:20	Alkali Activation of Municipal Solid Waste Incinerator Bottom Ashes: Optimization of the Alkali Activator Rui Vasco Silva, CERIS, IST-ID, Portugal			
12:20-12:40	Solution Combustion Synthesis of Copper Ferrite Nano Crystallites for the Development of Electro Chemical Sensor for Neurotransmitter Epinephrine Nygil Thomas, Nirmalagiri College, Kerala, India			
12:40-13:00	Inorganic, Hybridized and Living Macrocellular Foams: "Out of the Box" Heterogeneous Catalysis though the Integrative Chemistry Input Rénal Backov, University of Bordeaux, France			
*13:00-13:10	Efficient TiO ₂ /BiOBr Heterojunction for Photocatalytic Oxidative Coupling of Amines and Its Mechanistic Study Saranya Juntrapirom, Chiang Mai University, Thailand			
*13:10-13:20	Facile Electrochemical Deposition of Platinized Cyanographene/Multi-Leg TiO ₂ Nanotube Arrays with Enhanced Photoelectrochemical Performance Mahdi Shahrezaei, Palacky University, Czech Republic			
13:20-14:05	Lunch and Departures @ Restaurante Mediterrâne			



FUNCTIONAL NANOPOROUS CARBONACEOUS MATERIALS WORKSHOP

Day 3 - (Belem-6), Sana Malhoa Hotel, Lisbon, Portugal

Organised by
LEITET
managing technologies

www.porous-4app.eu

Opening

09.20h David Amantia, Leitat

Theoretical Advances

09.30h Sabina Nicolae, Imperial College of London

Dark solutions for a brighter future: Sustainable carbon materials for energy storage and environmental application

09.50h Alain Ngandjong, Université de Picardie / Centre National de la Recherche Scientifique Multiscale Modelling of the Fabrication Process of Lithium Ion Batteries

Labscale Demo

10.10h Sandra Martínez, Leitat

Mesoporous carbons: porosity control

10.30h Hubert Mutin, Université de Montpellier / Centre National de la Recherche Scientifique

Recent developments in non-hydrolytic sol-gel

10.50h COFFEE BREAK

11.20h Nieves López Salas, Max Planck Gesellschaft

Noble carbons potential in the field of carbocatalysis

11.40h Duncan Macquarrie, University of York

Synthesis of N-doped Starbons

12.00h Vanessa Fierro, Université de Lorraine / Centre National de la Recherche Scientifique

Ordered and disordered mesoporous carbons derived from tannins: synthesis and applications

Upscale Demo

12.20h Peter Hurst, BDC

Biorenewables from gram to kilo: optimising feedstocks, improving processes and valorising by-products

12.40h Vicenç Pomar, Leitat

Assessing the potential exposure to airborne emissions of engineered nanomaterials

12:40 - LUNCH BREAK

Applications

13.40h Harald Kren, Varta

New Materials for New Generations of Lithium Ion Batteries

14.00h Gregory Goodlet, Johnson Matthey

Catalytic Applications of Tuneable Carbons

14.20h Camelia Ghimbeu, Université de Haute Alsace / Centre National de la Recherche Scientifique

Important factors impacting the performance of carbon materials in energy storage devices

14.40h Inmaculada Murillo, Ibercat

Nanoporous carbonaceous catalysts for biomass conversion processes

Closure

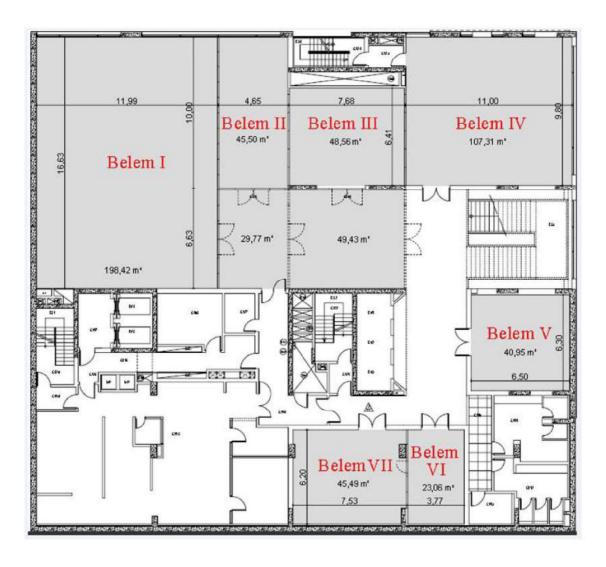
15:00h. David Amantia, Leitat

FUTURE MATERIALS

*Please note the satellite session is open to all attendees of Future Materials with no additional fees.



Floor Plan



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