



Materials for Sustainable Development Conference (MAT-SUS) (NFM22)

#2DNanoMat - 2D Nanomaterials for Energy and Environmental Applications

Barcelona, Spain, 2022 October 26th - 27th

Conference Chairs: Mónica Lira-Cantú and Jordi Arbiol

Conference Program

October 26th - Day 3 (Wednesday)	
19:30 - 22:00	Social Dinner
October 27th - Day 4 (Thursday)	
08:55 - 09:00	Room A2 + A3 - Chair Introduction
	Session 1.1 Chair: Jordi Arbiol
09:00 - 09:30	<u>Aldo Di Carlo</u> (<i>ISM-CNR and CHOSE - Centre for Hybrid and Organic Solar Energy, University of Rome "Tor Vergata", IT</i>) 1.1-11 MXenes and other two-dimensional materials for perovskite photovoltaics
09:30 - 10:00	<u>Zheng Liu</u> (<i>School of Materials Science and Engineering, Nanyang Technological University, 50 Nanyang Avenue, 639798, Singapore.</i>) 1.1-12 2D materials for sustainable word: from 2D materials synthesis to electrocatalysis
10:00 - 10:30	<u>Konstantinos Rogdaki</u> (<i>Department of Electrical & Computer Engineering, Hellenic Mediterranean University (HMU)</i>), Emmanuel Kymakis 1.1-13 Up-scalable conventional and emerging energy conversion technologies enabled by 2D materials: from miniature power harvesters towards grid-connected energy systems
10:30 - 11:15	Coffee Break
	Session 1.2 Chair: Jordi Arbiol
11:15 - 11:30	<u>Tatyana Petrova</u> (<i>Technical University of Darmstadt, Institute of Structural Mechanics, Franziska-Braun-Str. 7, L5/01 347a, 64287 Darmstadt, Germany</i>), Elisaveta Kirilova, Wilfried Becker, Jordanka Ivanova 1.2-T1 Analytical Modelling of Graphene/PMMA Nanocomposite under Hygrothermomechanical Loading
11:30 - 11:45	<u>Ran Shimoni</u> (<i>Department of Chemistry and Ilse Katz Institute for Nanoscale Science and Technology, Ben-Gurion University of the Negev, Beer-Sheva, 8410501, Israel.</i>), Idan Hod 1.2-T2 Tuning Electrocatalytic CO ₂ Reduction Product Selectivity of an FeTCPP-Based 2D Metal-Organic Framework via Secondary Sphere Interactions
11:45 - 12:00	<u>Wenqiang Wang</u> (<i>Center for Materials Research, Justus Liebig University Giessen</i>), Teresa Gatti, Matteo Crisci 1.2-T3 2D BiOBr/MoS ₂ heterojunctions by liquid-phase exfoliation as photoelectrocatalysts for hydrogen evolution
12:00 - 12:15	<u>Michael Volokh</u> (<i>Ben-Gurion University of the Negev, Israel</i>) 1.2-T4 Polymeric Carbon Nitride Based Photoelectrochemical Cells Performing Water-Splitting
12:15 - 12:30	<u>Masoud Karimipour</u> (<i>Catalan Institute of Nanoscience and Nanotechnology (ICN2), CSIC and The Barcelona Institute of Science and Technology (BIST), Spain</i>), Ashitha Paingott Parambil, Kenedy Tabah Tanko, Monica Lira-Cantu 1.2-T5 Stability Enhancement of perovskite solar cells by HTL-perovskite interface modification using functionalize MXene nanosheets
12:30 - 15:25	Lunch
15:25 - 15:30	Room A2 + A3 - Chair Introduction
	Session 1.3 Chair: Mónica Lira-Cantú
15:30 - 16:00	<u>Shahzada Ahmad</u> (<i>IKERBASQUE, Basque Foundation for Science, Bilbao</i>) 1.3-11 Interface Tweaking of Perovskite Solar Cells with 2D-Materials
16:00 - 16:30	<u>Ortiz-Vitoriano Nagore</u> (<i>Center for Cooperative Research on Alternative Energies (CIC energiGUNE), Basque Research and Technology Alliance (BRTA), Parque Tecnológico de Alava, Albert Einstein 48, 01510 Vitoria-Gasteiz, Spain.</i>) 1.3-12 Unlocking the Potential of Graphene-based Cathodes for High-Performing Na-O ₂ batteries
16:30 - 17:00	<u>Núria López</u> (<i>Institute of Chemical Research of Catalonia</i>) 1.3-13 Modeling Materials for Energy
17:00 - 17:05	Symposium Closing
17:15 - 17:30	General Closing
17:30 - 20:00	Poster Session

Poster Contribution

225	<u>Junyi Li, Li</u> (<i>Department of Chemistry and Ilse Katz Institute for Nanoscale Science and Technology Ben-Gurion University of the Negev</i>), Snir Dor, Jesús Barrio, Menny Shalom Efficient water cleaning by self-standing carbon nitride films derived from supramolecular hydrogels
274	<u>Simonas Driukas</u> (<i>Fizinių ir technologijos mokslų centras</i>), Marius Franckevičius, Vidmantas Gulbinas Hole transport dynamics in perovskite solar cells with organic hole transport monolayers