

2nd REUNICE Workshop "MULTIFUNCTIONAL MATERIALS and SUSTAINABILITY" Catania 3-5 July 2024

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Workshop Programme			
Day	Time	Contribution (click to see the abstract)	Title Presenting Author, Affiliation
03-Jul (common programme with the Summer School)	12:30-		Shuttle transfer from Piazza Repubblica (https://maps.app.goo.gl/RJ5Bf5aiHwwjFhpw5) one stop at Piazza Borgo (https://maps.app.goo.gl/LscqUXhNmwVRNPY6) to Scuola Superiore Catania (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6)
	13:00-14:30		Registration + Lunch break
	14:30-14:45		Welcome address Prof. Francesco Priolo , Rector UNICT Prof. Salvatore Baglio , Deputy Rector Research UNICT Prof. Lucia Zappalà , Deputy Rector Internationalization UNICT Prof. Daniele Malitana , President SSC
	14:45-15:40	Invited Keynote IK1	Materials and systems for green hydrogen production and storage: challenges and opportunities Sabrina Sartori, University of Oslo
			poster session in the courtyard, open coffee break during the whole session
		poster P1	Application of aluminium-coated membranes for the immobilization of enzyme reactions for the evaluation of enzyme activity Aleksandra Rybak, Poznan University of Technology
		poster P2	Solid-state modification of poly(butylene terephthalate) with a photoreactive Cinnamamide monomer Jacques Kevin Wandji, University of Mons
		poster P3	Novel multimetallic complexes as precursors for fluoride functional materials Claudia Barbagallo, University of Catania
		poster P4	Single-Ion Counting with an Ultra-Thin-Membrane Silicon Carbide Sensor for Quantum Applications Enrico Sangregorio, University of Catania
		poster P5	Boron doped Zinc Oxide thin film as ETL alternative candidate in Perovskite single-junction solar cell Fiorella Tringali, University of Catania
		poster P6	250 µm thick detectors for neutron detection: design, electrical characteristics, and detector performances Gabriele Trovato, University of Catania
		poster P7	Earth-abundant nanostructures for energy storage applications Maria Chiara Spadaro, University of Catania
		poster P8	Work function evaluation of thin films for solar cells by Ambient Pressure Photoemission Yanna Torrisi, University of Catania
		poster P9	Manufacture and optimisation of ZnO-based high-frequency transducers Reda Altayad, Université Polytechnique Hauts-de-France
		poster P10	Can surface-active ionic liquids based on caprylic acid be a green alternative to surfactants in detergent production? Marta Wojcieszak, Poznan University of Technology
		poster P11	Enzymatic membrane reactor supported with ionic liquid as an efficient platform for removal of estrogens Olivia Degórska, Poznan University of Technology
		poster P12	Mechanochemical Synthesis as a Proecological Approach of Production of MOF-type materials Weronika Badzinska, Poznan University of Technology
		poster P13	Synthesis of modern hydrogel polymer electrolytes Wiktoria Zyla, Poznan University of Technology
		poster P14	Mechanism of aqueous electrolyte uptake by the hydrophilic lignin gel and its application as electrolyte for supercapacitor Amelia Klimmek, Poznan University of Technology
		poster P15	Ionic liquids comprising allyl betainate cation and iodosulfuron-methyl anion as novel effective herbicides with reduced environmental impact Adriana Olejniczak, Poznan University of Technology
		poster P16	Interaction of surfactants of natural origin with phospholipid membrane Adam Grzywacz, Poznan University of Technology
		poster P17	Precipitation of Biotin System Metal Nanoparticles in Plasmid Inspired Systems Wiktoria Stachowicz, Poznan University of Technology
		poster P18	Impact of potentially protective agents on lactic acid bacteria in probiotic formulations Natalia Burlaga, Poznan University of Technology
		poster P19	Perovskite-based surfaces as photoanodes for an enhanced solar-driven CO₂ reduction to formate Jose Antonio Abarca, University of Cantabria
		poster P20	Potential integration of osmotic pumps and magnetic nanoparticles in the development of novel drug delivery systems David Navarro Turmat, University of Cantabria
		poster P21	Valorization of polluted biomass waste for the fabrication of Gas Diffusion Electrodes for CO₂ electroreduction to formate Iker Uriarte-Porras, University of Cantabria
		poster P22	Photoelectrochemical conversion of CO₂ with perovskite-based materials Mario Alonso Muñoz, University of Cantabria
		poster P23	Enhancing Electrochemical CO₂ Reduction: Improved Performance of a Three-Compartment Reactor for Formic Acid Production Mario Coz-Cruz, University of Cantabria
		poster P24	Sustainable technologies for the extraction and separation of strategic raw materials for lithium-ion batteries: an innovative development. Nerea Garcia Gómez, University of Cantabria
		poster P25	Ni-decorated TiO₂/WO₃/BiVO₄ layered photoanodes for photoelectrochemical applications Sara Crespo, University of Cantabria
		poster P26	Evaluation of photoexcited charge carriers of CdS/TiO₂ heterojunction for photocatalytic hydrogen production Gabriela Garcia Basté, University of Cantabria
		poster P27	Sodium alginate surface-modified magnetic materials for microplastics separation Daniel Aragón, University of Cantabria
	poster P28	Synthesis and multi-scale characterization of Zinc Oxide Nanowires Imen Benkhaled, University of Mons	
	poster P29	On the Importance of a Correct Data Acquisition Protocol of the Electromechanical Properties of Materials for Energy Harvesting Applications: Piezoelectric Nanocomposites as a Case Study Pierre Nickmilder, University of Mons	
	poster P30	Synthesis of New Biocompatible Materials Based on Lactic Acid with Antibacterial Activity Erika Saccullo, University of Catania	
	poster P31	Root-associated microorganisms for optimizing biological control in tomato Mariangela Milorda, University of Catania	
	poster P32	Nanostructuring of GaN: A Promising Route to Quantum Single-Photon Sources Antouman Sallah, University of Catania	
	poster P33	Enhancing Energy Consumption Forecasting Accuracy through Automated Machine Learning Francesco Zito, University of Catania	
	poster P34	Frontiers in nanomedicine: unlocking wound healing potentials with PVP-capped gold and silver nanoparticles and nanorods Alice Foti, University of Catania	
	poster P35	Spin orbit coupling effects in a graphene Josephson junction Federico Bonasera, University of Catania	
	poster P36	Circuit Quantum Electrodynamics with two-dimensional materials-based devices Vincenzo Varrica, University of Catania	
	poster P37	Fully integrated galvanic isolation interface in GaN technology Katia Samperi, University of Catania	
	poster P38	Towards sustainable polyester resins: from vitrimerization to bio-based additives for a greener thermoset and composite manufacturing Giuliana Rizzo, University of Catania	
	17:40-		shuttle transfer from Scuola Superiore (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6) to Monastero Benedettini (https://maps.app.goo.gl/PrX4udpjs07HEGj8i)
	18:00-20:00		Guided tour of Monastero Benedettini
	20:15-		Social dinner, city center (Idria Events Center)

04-Jul	09:00-		Shuttle transfer from Piazza Repubblica (https://maps.app.goo.gl/RJ5Bf5aiHwwjFhpw5) one stop at Piazza Borgo (https://maps.app.goo.gl/LscqUXhNmwVRNPY6) to Scuola Superiore Catania (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6)
	09:30-10:10	Invited Talk IT1	Plastic sustainability : old methods – new trends Rosica Mincheva, University of Bism
	10:10-10:30	Oral O1	Sol-Gel elution synthesis of bismuth oxide thin film for high energy storage performance Giovanna Pellegrino, University of Catania
	10:30-10:50	Oral O2	Formation of an inorganic membrane-enzyme system for environmental applications Olivia Roznowska, Poznan University of Technology
	10:50-11:10	Oral O3	Characterization of SiC free-standing membrane for X-rays intensity monitor in synchrotron radiation beamlines Gabriele Trovato, University of Catania
	11:10-11:30		coffee break
	11:30-11:50	Oral O4	Study of the carbon materials formation during the pyrolysis of methane in a gliding arc discharge Assan Abdirakhmanov, University of Mons
	11:50-12:10	Oral O5	Comprehensive Analysis of Energy Conversion in NiO/CVD-Deposited Eu-Doped Barium Fluoride Thin Film Francesca Lo Presti, University of Catania
	12:10-12:30	Oral O6	High-performance Graphene/PVA Spray-Coated Electrode for Wearable Triboelectric Nanogenerators Hongyang Dang, University of Catania
	12:30-14:30		lunch break
	14:30-15:10	Invited Talk IT2	Microneedle graphene field-effect transistors for wearable biosensing Martin Holicky, Imperial College
	15:10-15:30	Oral O7	Biocidal compounds – effects on cell membrane Julia Sroczyńska, Poznan University of Technology
	15:30-15:50	Oral O8	Production and characterization of nanostructured spinel ferrite mofvd films and their application for water splitting Matteo Bombaci, University of Catania
	15:50-16:10	Oral O9	Light-emitting Silicon nanowires array as versatile optical biosensors Maria José Lo Faro, University of Catania
	16:10-16:30		coffee break
	16:30-16:50	Oral O10	Application of aluminium-coated membranes for the immobilization of enzymes: model reactions for the evaluation of enzyme activity Aleksandra Rybak, Poznan University of Technology
	16:50-17:10	Oral O11	Graphene and Copper Nanoparticles based electrochemical sensors for the detection of Glyphosate in Water Uswah Yasin, University of Catania
	17:10-17:30	Oral O12	Sputtered MoO_x Films: A Dopant-Free Approach to Passivation and Hole Selectivity in SHJ Solar Cells Salvatore La Manna, University of Catania
	17:30-		Shuttle transfer from Scuola Superiore Catania (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6) to Piazza Repubblica (https://maps.app.goo.gl/RJ5Bf5aiHwwjFhpw5)
	18:00-		Free time, autonomous dinner

05-Jul (common programme with the Summer School)	09:00-		Shuttle transfer from Piazza Repubblica (https://maps.app.goo.gl/RJ5Bf5aiHwwjFhpw5) one stop at Piazza Borgo (https://maps.app.goo.gl/LscqUXhNmwVRNPY6) to Scuola Superiore Catania (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6)
	09:30-10:10	Invited Talk IT3	Nature-mimicking intelligent micro/nanorobots Mario Urso, University of Catania
	10:10-10:30	Oral O13	Facile synthesis of sulfurized MoO₃ nanostructures from industrial waste powder for energy storage application Federico Ursino, University of Catania
	10:30-10:50	Oral O14	On the Electromechanical Properties of Hybrid Piezoelectric Nanocomposites by Scanning Probe Microscopy Pierre Nickmilder, University of Mons
	10:50-11:10	Oral O15	Impact of rare earth doping in transition metal oxide nanoparticles and electrochemical sensing of aromatic alcohols in polluted wastewater Angelo Ferlazzo, University of Catania
	11:10-11:30		coffee break
	11:30-11:50	Oral O16	Utilizing contact lens-TiO₂ Nanocomposites for sustainable wastewater remediation Ernestino Lufriano, University of Catania
	11:50-12:10	Oral O17	Creative management of waste from production of sugar - glycine betaine as the future for the agrochemicals and surfactants market Michał Niemczak, Poznan University of Technology
	12:10-12:30	Oral O18	Fluka Monte-Carlo simulations of Neutron Detection for Fusion Reactors Alfo Samuele Mancuso, University of Catania
	12:30-12:50	Oral O19	New lidocaine derivatives showing antimicrobial activity as new APIs with low environmental impact Adriana Olejniczak, Poznan University of Technology
	12:50-14:30		lunch break
	14:30-14:50	Oral O20	Exploring the Nanoscale Electromechanical Properties of Lead-free Thin Films and Nanostructures for Energy Harvesting Applications Philippe Leclaire, University of Mons
	14:50-15:10	Oral O21	Cu Nanoparticles by Laser Ablation in Liquid for green hydrogen production Cristiano Lo Po', University of Catania
	15:10-15:30	Oral O22	Design of porous carbon electrodes for energy storage systems Amelia Klimmek, Poznan University of Technology
	15:30-15:50	Oral O23	Iron Oxide based Nanocomposites for sustainable fertilization Yanna Torrisi, University of Catania
	15:50-16:10	Oral O24	Photocatalysts for Green Hydrogen Production: Electrochemical and Morphological Study Gabriela Garcia-Basté, University of Cantabria
	16:10-16:30		coffee break
	16:30-16:50	Oral O25	Intrinsic Doping and Ageing of Sputter Deposited In2O3 thin films Andrea Lo Mastro, University of Catania
	16:50-17:10	Oral O26	Magnetic Nanoparticles with green surface modifications for the efficient capture of polyethylene microplastics Daniel Aragón, University of Cantabria
	17:10-17:30	Oral O27	Photocatalytic Thermoplastic Coatings Layered onto Cement Surfaces for Gaseous Pollutants Abatement Giulia Raciti, University of Catania
17:30-17:40		Closing works	
17:40-		shuttle transfer from Scuola Superiore Catania (https://maps.app.goo.gl/JzmDyW8pX3QkQBqV6) to Piazza Repubblica (https://maps.app.goo.gl/RJ5Bf5aiHwwjFhpw5)	
18:00-		free time, autonomous dinner	

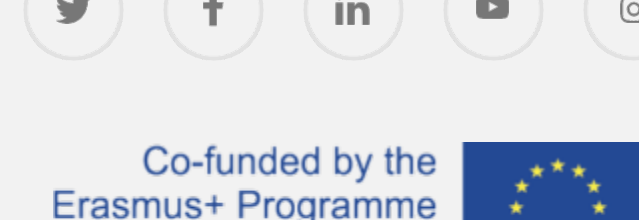
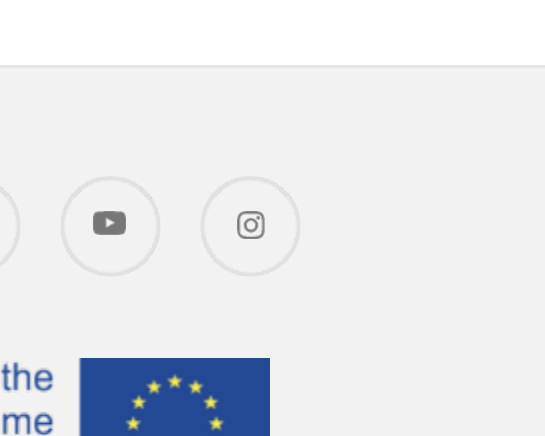
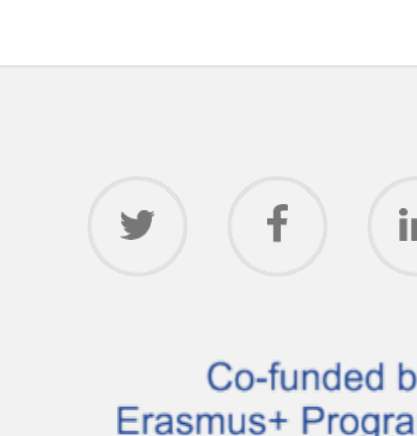
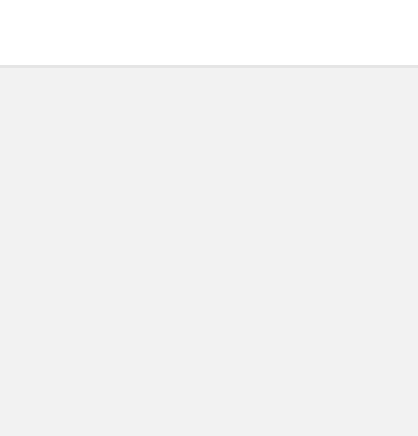
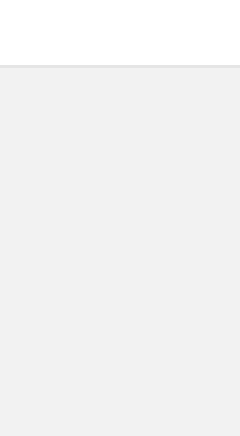
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- Prof. Philippe Leclère – Institut Matériaux – University of Mons
- Prof. Denis Rémiens – IEMN-Valenciennes – Université Polytechnique Hauts-de-France



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