

SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

MUR DM 117/GEMMATE - Design of photoelectrochemical devices for a direct transformation of sunlight and CO₂ into chemicals for energy storage

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584] GEMMATE TECHNOLOGIES SRL [P.iva/CF:11130700013] Politecnico di TORINO [P.iva/CF:00518460019]
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Contact	Alessio Tommasi - GEMMATE
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Context of the research activity	<p>In the frame of a Horizon Europe funded collaborative research project (SOREC2 - SOLar Energy to power CO₂ REDuction towards C₂ chemicals for energy storage), the research will be focused on understanding of physics phenomena that are important for the photoelectrochemical (PEC) system under analysis. Aided by a multi-physics model, the experimental activity will deal with sensitivity analysis, system optimisation, and performance quantification, aiming to build a stand-alone PEC and afterward leading to the formulation of the up-scaled design at the system and component levels.</p> <p>Progetto finanziato nell'ambito del PNRR – DM 117/2023 - CUP: E14D23002050004</p>
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Objectives	<p>Progetto finanziato nell'ambito del PNRR – DM 117/2023 - CUP: E14D23002050004</p> <p>Scientific Responsible: Alessio Tommasi, alessio.tommasi@gemmate-technologies.com</p>
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Skills and competencies for the development of the activity	<p>We search for a candidate interested in designing, understanding, and optimizing electrochemical systems coupling accurate simulation and experimental analysis. They preferably possess a solid scientific background in Chemical Engineering, Energy Engineering, or related disciplines. They love working in experimental laboratories and possess knowledge in materials generally used in electrochemistry systems and their properties. The knowledge in Multiphysics simulation is considered a plus. They have interest in novel technologies and enjoy working in</p>
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interdisciplinary teams.