

SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

MUR DM 118 - Thermoplasmonic solar membrane distillation for seawater desalination

Funded By	Università degli Studi dell'Aquila [P.iva/CF:01021630668] MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584]
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Context of the research activity	<p>The research focuses on exploring the potential of thermoplasmonics and nanoscale quantum materials for efficient solar-driven water desalination. Photothermal effects will generate nanoscale thermal hotspots, enabling enhanced evaporation and desalination processes. Nanoscale quantum materials offer unique properties for improving desalination membrane performance and selectivity. The doctoral candidate will produce and characterize nanoscale quantum materials for these aims.</p> <p>Progetto finanziato nell'ambito del PNRR – DM 118/2023 - CUP E14D23001840006</p>
Objectives	<p>Progetto finanziato nell'ambito del PNRR – DM 118/2023 - CUP E14D23001840006</p> <p>Scientific Responsible: Antonio Politano, University of L'Aquila, antonio.politano@univaq.it</p> <p>Main seat to carry out research: University of L'Aquila, Department of Physical and Chemical Sciences, L'Aquila</p>
Skills and competencies for the development of the activity	<p>Skills:</p> <p>Describe the skills and characteristics the candidate should have to develop the research topic (max 500 characters) The ideal candidate should possess a strong background in Physics, preferably with a Master's degree in Physics. Proficiency in surface science techniques is crucial for analyzing the surface properties of solid-state materials. Knowledge and experience in working with topological materials and their electronic properties would be advantageous. Additionally, expertise in experimental techniques in the field of condensed matter physics and data analysis is highly desirable.</p>

