

SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

MUR DM 118 - Next-generation solar cells based on quantum materials

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>This research aims to explore the use of excitonic insulators, a novel class of quantum materials, for photovoltaics. The objective is to investigate the physicochemical properties of these materials and assess their environmental impact. The research will combine the production of nanoscale quantum materials and their characterization by surface-science experimental techniques (especially, high-resolution electron energy loss spectroscopy). Activities will also involve synchrotron radiation.</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</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>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>