

# SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

## MUR DM 118 - Green hydrogen production with water splitting catalyzed by quantum materials

<b>Funded By</b>	Università degli Studi dell'Aquila [P.iva/CF:01021630668] MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584]
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<b>Context of the research activity</b>	<p>The proposed research focuses on the development of innovative electrode materials for hydrogen production through water splitting. By exploiting quantum properties of novel topological materials, the aim is to enhance the efficiency and sustainability of hydrogen production, starting from the synthesis of materials for electrodes and experimental characterization. The physicochemical mechanisms ruling quantum materials-enhanced hydrogen production will be unveiled by surface science techniques.</p> <p>Progetto finanziato nell'ambito del PNRR – DM 118/2023 - CUP E14D23001860006</p>
<b>Objectives</b>	<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>
<b>Skills and competencies for the development of the activity</b>	<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 quantum and 2D 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>