SUSTAINABLE MATERIALS, PROCESSES AND SYSTEMS FOR ENERGY TRANSITION

Multiscale characterization of advanced materials and innovative devices for energy transition

Funded By	MINISTERO DELL'UNIVERSITA' E DELLA RICERCA [P.iva/CF:97429780584]
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Context of the research activity	Definition of characterization protocols and development of tomography techniques for the multiscale study of advanced materials and innovative devices for the energy transition
Objectives	This PhD grant is fully supported by the Project “Infrastructure for Energy Transition and Circular Economy @ EuroNanoLab” (iENTRANCE@ENL) in the framework of the NextGenerationEU (NGEU) program (call RI-PNRR). CUP: B33C22000710006 Main seat to carry out the research: Sapienza University of Rome Supervisor: Marco Rossi, marco.rossi@uniroma1.it The general objective is to contribute to the developing of a future generation of nanomaterials, processes and systems to limit the environmental impact of production, storage, distribution and use of energy from the perspective of a sustainable and circular economy. This requires to develop multiscale and multi-techniques protocols for chemical-physical-functional-mechanical characterization of materials and related devices for applications of interest for the energy transition, in a perspective of a sustainable and circular economy. In such a framework, the specific objective of this PhD grant will be the use and development of Tomography-based techniques and related protocols for the multiscale study of advanced materials and innovative devices for the energy transition.
Skills and competencies for the development of the activity	Knowledge and/or experience on at least one of these topics: Materials Science, Physics of the Matter, Inorganic Chemistry, Multiscale Characterizations, Electron Microscopies, Scanning Probe Microscopies, Tomography