# Seminari IRSA

## Mercoledì 5 Marzo 2025 ore 15:00

# Novel sustainable strategies for the removal of emerging contaminants by photocatalysis

Prof. Wael Hamd,  University of Balamand - Lebanon

This seminar will provide an overview of my research journey in photocatalysis and environmental sustainability. Emphasizing the role of nanostructured materials in advanced photocatalytic applications, the focus is on the synthesis and characterization of nanomaterials and thin oxide layers, including ZnO, SnO2, TiO2, and Fe2O3, engineered in mesoporous, nanorod, and nanoparticle structures. A key aspect is the development of ZnO nanorods for the efficient degradation of organic pollutants and microplastics in water. Ongoing research in Bari involves a solar-driven photocatalytic reactor for treating emerging contaminants in groundwater, with degradation pathways and byproducts tracked using LC-MS/MS.

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