

Curriculum Vitae

Education:

2025 - ongoing: PhD student in 41st cycle of PhD Programme in “Nanoscience for Medicine and Environment”, working within the research project “*Solar PolyGeneration Collector for combined heat, power, hydrogen fuel and wastewater treatment – SPECTRUM*”. Funded by the European Union [under grant agreement no. 101172891]. www.project-spectrum.eu

2025 - Master in Physics, curriculum “Material Physics and Nanoscience”, *cum laude*, Alma Mater Studiorum - University of Bologna

2022 - Bachelor in Physics, University of Trento

Research experience:

2023 - Research assistant at Fondazione Bruno Kessler (Trento) in the Sustainable Energy (SE) research center.

Conferences:

2026 - MatSUS26 Spring (Barcelona, ES) - **Poster** “*Operando Spectroscopy of Redox Dynamics in Hematite/NiMo Photoanodes*”

2026 - EcatalytiX-II (Strasbourg, FR) - **Oral** “*Operando Spectroscopy of Redox Dynamics in Hematite/NiMo Photoanodes*”

Beamtime participation:

2026 – Proposal ID: CH-7943 (STD) “*Operando PEC-XAS analysis of Cu SAPCs supported on defective TiO₂ photoanodes*”. PI: R. Mazzaro

2026 - Proposal ID: **CH-7821** (STD) “*Probing the limits of frequency-modulated operando PEC characterization of charge carriers dynamics in heterostructured photoanodes*”. PI: R. Mazzaro

2025 - Proposal ID: **A08-1-1129** (CRG) “*Operando PEC-XAS characterization of Ni-based co-catalysts on hematite photoanodes: shedding light into substrate/catalyst electronic coupling*”. PI: R. Mazzaro.