

Deep Knowledge on photophysical and photochemical properties and processes in advanced low dimensional nanostructured materials for energy applications (i.e. new generation photovoltaic semiconductors like organic nanocomposites, hybrid organic inorganic perovskites nanocrystals and thin film; quantum dots);

Specific Technical skills on the development of state-of-the-art ultrafast optical spectroscopy and microscopy systems for space and time resolved photophysical characterization of thin films and solutions (fs to ns time resolution).

Broad competence on steady state and time resolved photoluminescence spectroscopy and microscopy, Raman spectroscopy, steady state optical and structural characterizations (Uv-Vis, AFM).

Wet chemistry expertise in the development and fabrication of pilot line for the fabrication of thin film-based devices (i.e. solar cells) on laboratory-scale including solution-processed and vacuum deposition techniques. Device opto-electronic characterization (by solar simulator, external quantum efficiency tool).

Lab-Manager Experience of spectroscopy facilities and wetlab: experience in developing spectroscopy laboratory, including the design and implementation of optical set-up; development and management of wetlab facility for thin film device fabrication. Experience in lab orders, lab management, maintenance and troubleshooting;

Project Manager Experience in leading Master and PhD-students research; leading international collaboration; Project leading (SNSF Project (780k CHF) and **ERC Starting Grant 2018 (1.5 M€)**) responsible of writing research proposal, leading kickoff meetings with international teams, budget definition and negotiation, identifying candidates, writing report and project schedules with academic and industrial partners; management of funding;

Expert in technical writing; scientific communication, patent filing and public speaking: Speaker in 40 international conference of ultrafast optics and material research society; Inventor of 2 patents with Oxford University; Reviewer for high impact scientific Journals; Conference Organizer (MRS Boston 2019).

Broad Experience in teaching activities in Physics and Chemistry courses at Engineering School (Politecnico of Milan). Seminars on Photophysical processes in Photovoltaics, at Chemistry, EPFL.

Mentor in the Fix the Leaky Pipeline (FLP) Program for female PhDs and postdocs in the ETH Domain, Switzerland.

Chief Editor of SN applied science and of the International Journal of Photoenergy.