

## Higher education and current position

-October 2013 - present: Assistant professor (sector FIS/03) Industrial Engineering Department - Tor Vergata University

-June–December 2014: Endeavour Fellowship of the Australian Government at School of Chemistry, Physics and Mechanical Engineering – Queensland University of Technology (Brisbane – Australia)

-June and December 2013: Visiting scientist at Van 't Hoff Institute - University of Amsterdam (NL)

-January 2004–September 2013: Assistant professor (Sector FIS/03) Physics Department - Tor Vergata University

-August 1998–December 2003: INFM researcher (National Institute for the Physics of Matter) at Physics Department - Tor Vergata University

-May 1997 - May 1998: post-doc fellowship of the European Community (Training and Mobility of Researchers) at the Laboratory for Physical Chemistry - University of Amsterdam.

1996-1998: INFM contract and teaching contract for Physics course - Architecture faculty - University of Camerino

1992-1996: Phd in Physics at Tor Vergata University

## Teaching experience

Supervisor and co-supervisor of more than 30 Master Degree and PhD students. Since A.A. 1996 he has taught several courses in Physics, Optics, Solid State Physics and Condensed Matter of Solids. Currently he is teaching "Nanostructures and Nanomaterials" for Mechanical Engineering course and "Complements of Optics" for Material Science course at the Tor Vergata University.

## Research activity and technical skills

Main skills and expertise are on experimental Physics with special regard on Material Science and Optical Spectroscopy.

Main fields of activity are:

- Organic vapour sensors based on luminescent quantum dots
- Synthesis and characterization of metallic nanoparticles for sensing applications
- Synthesis and optical characterization of hybrid sol-gel based waveguides (ORMOCER and ORMOSIL)
- Nanoimprinting and soft-lithographic techniques
- Surface nanostructuring of solar cells by soft lithography
- Synthesis of inorganic and hybrid materials (bulk and film) with sol-gel procedures
- Optical characterization of quantum structures, semiconductors and insulators by absorption, luminescence, reflectance and quantum yield.
- Fabrication of 3D scaffolds for tissue engineering with photolithographic techniques

## Professional recognitions

-December 2013: positive evaluation for the national scientific qualification to function as associate professor in the Italian Universities for the academic sector 02/B3 (Applied Physics)

-2014 Winner of an Endeavour Research Fellowship to undertake a scientific program at the Faculty of Science and Engineering at the Queensland University of Technology (Brisbane – Australia)

## Collaborations

Universities: Milan, Padua, Naples (Italy); University of Amsterdam (NI); Humboldt University (Berlin- Ge); Technische Hochschule (Wildau-Ge); Queensland University of Technology Brisbane (Australia).

Author of more than 80 papers on peer reviewed scientific international journals and one patent.