EDUCATION

2008 Degree in Biotechnological Sciences at University of Salento

2012 Ph. D. in Engineering of Materials and Structures at University of Salento

CURRENT POSITION

2025 –Associate Professor (Chem-02) Dep. of Biological and Environmental Sciences and Technologies, Universiy of Salento.

MAIN RESEARCH INTERESTS

Spectroscopic investigation techniques (UV-Vis-NIR, MIR and RAMAN) for the study of materials for biotechnology and biomedical applications (nanostructured and nanocomposite drug delivery and controlled drug release systems) and for the development of nanostructures for applications for artificial photosynthesis (photovoltaic and water splitting) and photodegradation of environmental contaminants.

Wet self-assembly techniques for the deposition of thin films: Langmuir Blodgett, Langmuir Schaefer, Layer by Layer, Dip Coating.

Surface investigation techniques (Ellipsometry, Raman Microscopy, MIR and PM-IRRAS) for the characterization of solid films for the development of sensor systems or photoanodes of photochemical cells.

VISITING SCIENTIST

2011 Glynn Laboratory of Bionergetics, University College London, London.

The main research activities were focussed on the resolution of redox IR signals associated with redox state changes of the four metal centres of the bovine Cytocrome c Oxidase by controlled electrochemistry of specific ligated forms. In particular, the investigations aimed on the resolution of the IR signals associated with protonated carboxylic acids (i.e. aspartic and glutamic) and probing amino acidic residues which were likely to play a key roles in coupling of proton/electron transfer.

VISITING PROFESSOR 2019 University of Cordova, Chemistry Degree, Subject: Macrocycles and Colloids.

SUPERVISION OF BACHELOR AND MASTER DEGREE THESIS: Tutor of more than 20 thesis in Environmental Science, Biology, Biotechnology.

TEACHING ACTIVITIES

2015-2019 Physical Chemistry of Sustainable Energies, University of Salento (Department of Biological and Environmental Sciences and Technologies)

2020-2021 Physical Chemistry Laboratory, University of Salento (Department of Cultural Heritages)

2020-2021 Degradation and Conservation of Materials, University of Salento (Archaeology, Department of Cultural Heritages)

2022-2023, 2023-2024, 2024-2025 Physical Chemistry of Biological Systems (Department of Innovation Engineering)

2022-2023, 2023-2024, 2024-2025 Physical Chemistry for Motor Sciences (Department of Biological and Environmental Sciences and Technologies)

2019-2020, 2020-2021 Chemistry for Medicine, University of Goradze

ORGANISATION OF SCIENTIFIC MEETINGS

1. Energy Production, Storage and Conversion from Molecules to Devices at the Crossroads of Physical Chemistry, June 8 – June 12 2015
2. 14th International Symposium on Macrocyclic and Supramolecular Chemistry (June 2019)
3. 20 July 2018; Satellite Meeting "Chemistry Meets Biology and Biotechnology" (Lecce)
4. June 26, 2022 – June 30, 2022, Summer School "Life Is Chiral: biolOgical and chemical fundamentals and novel appRoaches In Chiral rEcognition" LICORICE, Lecce-Italy.
5. Scientific Committee of European Conference on Organized Film since 2017.

INSTITUTIONAL RESPONSIBILITIES

- PhD Faculty College Member in Nanotechnology (University of Salento)
- Faculty College Member in Biomedical Engineering Course (University of Salento)
- Member of the Board of Directors of INSTM, representing the University of Salento

REVIEWING ACTIVITIES

- Topic Editor Sensors -MDPI
- Guest Editor Sensors- MDPI (Special Issue: Supramolecular Chemistry for Sensors Applicatio
- Guest Editor Nanomaterials-MDPI (Special Issue: Synthesis, Functionalization and Applications of Nanocarbons)
- Referee for Journal of Colloids and Interface Science, Food Chemistry, Materials, Molecules, Processes, ACS Omega, Nanomaterials, Trend in Analytical Chemistry, Catalyst, Colloids and Surface A, etc.

BIBLIOMETRY (SCOPUS)

72 papers

2 book chapters

H-index: 23 (Scopus), Total Citations: 1412