**Education**

2007 PhD in Chemical Sciences, Università di Bologna

2004 Laurea in Chemistry, Università di Bologna (110/110 cum laude)

**Professional Experience**

2013 Visiting Professor, Department of Chemistry, University of Pune, Pune (India)

2012 - Team member of the iONE-FP7 project "Implantable Organic Nano-Electronics to improve treatment of Spinal Cord Injury"

2011 - Associate Professor, Università di Bologna

2008-2010 Research assistant, Università di Bologna. Involved in the European STREP project BIODOT (Organic transistors for sensing 2007-2010)

2009 Recipient of the “Marco Polo” grant to visit the College of Chemistry and Molecular Engineering, Peking University, Beijing, China

2005 Winner of a competitive project within the framework of European Social Fund. SPINNER project of industrial cooperation in collaboration with Nerviano Medical Science Srl and CINECA

**Reviewering**

ACS (JACS, ACS Nano, J. Phys. Chem. A, B, C); RCS (Chem. Soc. Rev., Chem. Commun., Biorg. Med. Chem. J. Mater. Sci. C, PCCP, Dalton Trans., Biomaterials Sci.; Metallomics, RCS Ad.) Wiley (ChemPhysChem, Eur. J. Org. Chem., Eur. J. Inorg. Chem.) and Elsevier (Biorg. Med. Chem).

**Research Activities**

Nanotechnology.

- Protein/carbon nanoparticles hybrids for application in nanotechnology and nanomedicine

- Medical applications of drug/calcite hybrid crystals: from targeted delivery carriers to active scaffolds

- Synthesis of hybrid carbon nanoparticles/calcium carbonate nanocomposite. Morphological and mechanical characterization.

- Marine biomaterials as innovative scaffolds for regenerative medicine

Computational chemistry

Application of different computational methods (multiscale modelling) in computational nanotechnology and biophisics: ab-initio quantum chemical programs (Gaussian-03 and 09, TURBOMOLE), molecular mechanics and dynamics (CHARMM, AMBER, NAMD, Tinker), docking and virtual screening (DOCK, AutoDock, PatchDock, FireDock), modelling tools for soft-matter simulations (CULGI, ESPResSo)

- Computational Nanotechnology: Electronic structure of fullerenes, metalloendohedral fullerenes and nanotubes. Nanopeapods. Surfactant/carbon nanoparticles self-assembly. Micellar systems. Interactions between fullerenes, nanotubes, nanoparticles and biomolecules. Interactions between nano-objects and membranes

- Computational Biophysics: Simulation of enzymatic mechanisms. Conformational studies of peptides and proteins. Drug design and virtual screening. Interaction between proteins and surfaces

Partecipation in numerous national and international conferences, schools and workshop