

Graduated in Physics in 1983.

Full professor of Applied Physics, Faculty of Medicine.

Research activities: Bio-softmatter

1. Long term research on the physico-chemical properties of self-organizing biological macromolecules: structural, dynamic, thermotropic, lyotropic and interaction properties.
 - a. structural organization and dynamics of complex lipid systems (micelles, membranes) on different time- and length-scales
 - b. concentrated phases of gangliosides
 - c. structural effects following ganglioside digestion operated by enzymes
2. Topical projects, in collaboration with other groups
 - a. mesoscale characterization of aggregates of Abeta and Tau peptides
 - b. structure of lecithin-chitosan based nanoparticles and of solid-lipid nanoparticles for drug delivery and controlled release
 - c. characterization of caseinophosphopeptides-Ca complexes
 - d. characterization of lipoplexes for DNA transfection
 - e. nanostructured biomatrices of hyaluronic acid
 - f. interaction of model membranes with small peptides

Experimental physical techniques: laser light scattering (visible, UV), Neutron and X-ray techniques at the European Large Scale Facilities.

Co-author of more than 100 publications on peer-reviewed International Journals.

Member of the following: Consorzio Nazionale Interuniversitario per le Scienze fisiche della Materia (CNISM), Società Italiana di Spettroscopia Neutronica (SISN), Società Italiana di Biochimica (SIB), Società Italiana di Fisica (SIF), Società Italiana di Biofisica Pura e Applicata (SIBPA), European Biophysical Society (EBSA).

Involved in the following: Giunta of the Società Italiana di Spettroscopia Neutronica (SISN), Scientific committee for Soft Condensed Matter of the European Synchrotron Radiation Facility (ESRF, Grenoble), referee for scientific journals (J.Phys.Chem, BBA, Chem. Phys. Lipids, FEBS Letters...)