Giuseppe VITIELLO – *CV*

GV appears as author/co-author of 120 publications in peer-reviewed international journals, of 2 Italian and 1 PCT patents, receiving more than 3000 citations with an h-index of 36 (Scopus). GV presented many contributes to national and international conferences and workshops. From 2020, GV is member of the Executive Committee of Italian Neutron Scattering Society (SISN) SISN, and of the Editorial Board of PLOSOne, Nanomaterials and Catalysts international journals. The scientific research of GV is mainly addressed to the design, preparation and the spectroscopic characterization of the structure/function relationship of hybrid organic/inorganic bio-nanomaterials and interfaces for biomedical, energy and environmental applications. During the PhD studies, GV focused on the: i) self-assembly of amphiphilic molecules (i.e., lipids, surfactants, lipopolysaccharides) in aqueous solution to form nanostructured aggregates and ii) interaction of biomimicking eukaryotic and bacterial bio-membranes with biomolecules involved in biochemical processes. Subsequently, the interest was extended to the paramagnetic properties and supramolecular architectures of natural (bio)macromolecules, such as eumelanin pigments or polyphenols and humic acids, as well as of carbon-based nanoparticles obtained from bio-resources. Since the first Post-doc position, the research activity has then focusing on the design, synthesis and physicochemical characterization of metal oxides nanoparticles functionalized with amphiphilic molecules or photo-active organic molecules (obtained from bioresources and biowastes) to realize nanostructured hybrid materials with enhanced redox behavior (i.e. antimicrobial or antioxidant agents) through bioinspired wet-chemistry routes as well as with advanced photocatalytic activity for pollutants removal and hydrogen production. The more recent research activity is addressing to the design and preparation of nanostructured biosensors based on quantum dots functionalized with oligonucleotides for a selective recognition of bio-analytes. Understanding the morphological and structural properties of the nanomaterials and interfaces is commonly realized by a combed strategy based on Electron Paramagnetic Resonance (EPR) and UV-Vis spectroscopy, Dynamic Light Scattering (DLS), Neutron Reflectivity (NR) and Small-Angle Neutron Scattering (SANS).