

The scientific activity is focused on the study of functional solids, in particular layered Zr and Ti phosphates and phosphonates, and double layered hydroxides for several application in materials chemistry, such as heterogeneous catalysis, ionic and protonic conduction, molecular recognition, gas sorption. Recent work was devoted to the synthesis of materials containing bio-active species, such as metal ions and metal nanoparticles with antimicrobial activity. He is involved in the structural and microstructural characterization of micro- and nanocrystalline materials with X-ray powder diffraction, thermoanalytical methods, SEM and TEM analyses. He is author of more than 120 scientific papers published in international journals.