

### Research Interests:

No	Research Interest
1	<b>Synthesis, Doping, Modification and Characterization of Nanostructured Materials:</b> TiO <sub>2</sub> , ZnO, ZnSe, CdS, CdSe, Layered double hydroxide (LDHs), Nanosized zero-valent iron (NZVI), graphene oxide (GO), $\gamma$ -FeOOH, pyrite, magnetite, martite, hematite, montmorillonite, and clinoptilolite.
2	<b>Application of Nanostructured Sonocatalysts and Photocatalysts for:</b> *Removal of organic dyes and phenolic compounds from wastewater * Removal of pesticides and herbicides from wastewater *Immobilization of nanostructured catalysts on fixed beds
3	<b>Advanced Oxidation Processes (AOPs)</b> *Sonocatalytic process *Photocatalytic process *Ozonation and photocatalytic-ozonation processes *Fenton, photo-Fenton, like-Fenton processes
4	<b>Ultrasound-assisted Processes</b> *Sonochemical synthesis of nanostructured catalysts *Sonocatalytic processes *Sono-Fenton process *Kinetic modeling
5	<b>Electrochemical Water Treatment Processes</b> *Electrocoagulation process *Electro-Fenton process *Peroxi-coagulation process *Anodic oxidation
6	<b>Chemiluminescence</b> *Determination of environmental pollutants *Application of nanomaterials for enhancement of chemiluminescence systems
7	<b>Biological Water and Wastewater Treatment</b> *Biological decolorization and degradation of dye solutions by micro/macro algae *Phytoremediation