Special Issue

Novel Advanced Oxidation Processes for Catalytic Degradation of Emerging Contaminants

Message from the Guest Editors

Emerging pollutants, such as pharmaceuticals, pesticides, perfluoroalkyl substances (PFASs), and microplastics, are characterized by their biological toxicity, environmental persistence, and bioaccumulation. These pollutants have diverse sources, pose hidden environmental risks, and are challenging to manage. Water bodies are the primary medium for the distribution of emerging contaminants in the environment. Therefore, there is an urgent need to develop more effective technologies to enhance end-of-pipe management capabilities for emerging contaminants. This Special Issue aims to explore novel AOPs, including photocatalysis, photothermal catalysis, persulfate/peracetic acid/periodate-based processes, piezocatalysis, and electrochemical oxidation, among others, and evaluate their efficiency, adaptability, mechanism, and potential for practical application in various environmental conditions.

- advanced oxidation processes (AOPs)
- emerging contaminants
- water treatment
- piezocatalysis
- photocatalysis
- photothermal catalysis
- electrochemical oxidation
- oxidizing agent

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