Special Issue

Metal Elements and Wastewater Treatment: Adsorption, Catalysis and Oxidation

Message from the Guest Editor

Urban and industrial wastewater pollution has become an increasingly pressing issue due to the frequent detection of incompletely treated pollutants, which are transported through Earth's hydrological cycle, posing risks to ecosystems and human health. While metal-based technologies such as adsorption, catalysis, and oxidation have been studied extensively for wastewater remediation, recent advances in nanotechnology, metal recovery, and sustainable metal use open new avenues for research and application. However, current research often treats these processes in isolation, lacking an integrative approach that considers their interconnected roles in treatment systems. This Special Issue aims to provide a platform for innovative research on topics such as metal-based nutrient adsorption and recovery, advanced oxidation processes, metal-mediated catalytic oxidation of pollutants, the occurrence and fate of contaminants at the metal-material interface, and the life-cycle assessment of metal material preparation and utilization. Keywords: metal material; wastewater remediation; catalytic oxidation; adsorption; risk assessment

Guest Editor

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Message from the Editor-in-Chief

In the context of global changes, the sustainable management of water cycles, going from global and regional water cycles to urban, industrial and agricultural water cycles, plays a very important role on the water resources and on their relationships with food, energy, biodiversity, ecosystem functioning and human health. *Water* invites authors to provide innovative original full articles, critical reviews and timely short communications and to propose special issues devoted to new technological and scientific domains and to interdisciplinary approaches of the water cycles. We ensure a critical review process and a quick turnaround between submission and final decision.

Editor-in-Chief

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