Journal of Chemistry

Special Issue on

Environmental Behavior and Effects of Pollutants in Water

CALL FOR PAPERS

Water pollution caused by anthropogenic activities is one of the major environmental problems in the world. A large number of hazardous substances such as heavy metals, petrochemicals, pharmaceuticals, nanomaterials, pesticides, and herbicides are released into the aquatic environment intentionally or unintentionally during industrialization and urbanization, endangering wildlife and human health. However, there are significant differences in environmental behavior and toxicity of different types of pollutants. For example, heavy metals in water may exist in different forms, which in turn may be altered by environmental conditions such as the presence of different types organic matter, the pH and hardness of the water system, and form transformation, thus affecting their behavior and bioavailability. The biological effects and toxicological mechanisms of organic pollutants are more complex. Some organic pollutants are hydrophobic and easy to accumulate in aquatic organisms, while others are hydrophilic and easily migrate in water. Therefore, studies into the environmental behavior and ecological effects of these pollutants in aquatic environments are required.

This special issue aims to focus on recent advances in research on the environmental behavior and effects of anthropogenic pollutants in aqueous environments. It mainly includes the transport, fate, toxic effects, and environmental management of pollutants. It welcomes high-quality original research papers on these topics, showing both technical advances and innovations with respect to the mechanisms of action. Review articles which describe the current state of research on the environmental behavior and effects of anthropogenic pollutants in water are also welcome.

Potential topics include but are not limited to the following:

- New techniques and methods in the screening and identification of new emerging organic pollutants
- Migration and transformation behaviors of heavy metals and metalloids (e.g., Cu, Zn, Ni, Pb, As, Cd, Sn, and Hg)
- Evaluation and characterization of new emerging organic pollutant biomarkers in aquatic environments
- The bioavailability and bioaccumulation of typical pollutants (toxic metals and organic pollutants) in aquatic ecosystems
- Ecological responses to multiple environmental stressors including pollutants in natural waters
- Biogeochemical process studies addressing the transformations of toxic metals and organic pollutants
- Ecological risk assessments and human health impact evaluations on toxic metals and organic pollutants

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/jchem/environmental.chemistry/ebecw/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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