Special Issue

Bioconversion, Bioaccumulation and Toxicity of Mercury in a Changing World

Message from the Guest Editor

Human past and current activities play a predominant role in the emission and mobilization of mercury (Hg) in the environment. Elemental Hg (Hg0) and inorganic Hg (IHg) emitted in the environment are constantly cycled and recycled through the Hg biogeochemical cycle, among which bioconversion by microorganisms into mono-methyl-Hg (MMHg), bioaccumulation (MMHg and IHg), and biomagnification (MMHg) in food webs are critical aspects for Hg toxicity to biota as well as humans. We particularly invite contributions concerning various aspects of Hg delivery into ecosystems, environmental toxicology at different levels of biological organization, and relating laboratory results to field observations. Notably, the specific emphasis is on (i) the drivers and mechanisms by which MMHg is produced; (ii) bio-uptake and mode-of-action of IHg and MMHg; (iii) food chain transfer and ecological effects on populations and communities; (iv) combined action of Hg and environmental stressors; (v) tools and models to predict Hg methylation rates in different systems; and (vi) models supporting risk assessment to assess the current fate and impact of historical sources of Hg.

Guest Editor

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

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