



Metal Removal from Wastewater Using Biomass and Carbon-Based Materials

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Message from the Guest Editor

Industrial-origin wastewater, especially from the metallurgical, textile, paper, tanning, fertilizer, and stock-raising sectors, is a major source of contaminating heavy metals, the accumulation of which in groundwater is a well-known problem. These heavy metals can be removed by physico-chemical techniques, such as ion exchange, membrane filtration, and oxidation/reduction, etc., but none are reliable when the solute concentration is $<100\text{--}150\text{ mg}\cdot\text{L}^{-1}$. Further, these techniques are costly. This Special Issue of Metals explores the use of biomass (carbon-containing materials originating from biodegradable sources), modified biomass (e.g., by hydrothermal treatment, torrefaction and/or pyrolysis), and man-made carbon-containing materials (carbon nanotubes and nanofibres) in the removal of heavy metals from wastewater when in low concentration. With such knowledge, these pollutants might even be valorised.





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Message from the Editorial Board

Metallic materials play a vital role in the economic life of modern societies; contributions are sought on fresh developments that enhance our understanding of the fundamental aspects related to the relationships between processing, properties and microstructure – disciplines in the metallurgical field ranging from processing, mechanical behavior, phase transitions and microstructural evolution, nanostructures, as well as unique metallic properties – inspire general and scholarly interest among the scientific community.

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