Special Issue

Advances in the Synthesis of Nanostructured High-Porosity-Based Adsorbents and Catalysts for Water Purification

Message from the Guest Editors

Modern industrialization has contaminated the world's freshwater supplies with various contaminants. The application of porous structured materials can considerably remove the quantities of these contaminants. As a result, due to their high porosity and high surface areas, the synthesis of high-porosity nanostructured materials over the past decade has advanced numerous disciplines, including water purification. The processes employed include the sol–gel method, extraction, co-precipitation, solvothermal, hydrothermal and sono-chemical methods, and chemical vapor deposition. This Special Issue aims to present the latest research into various effective nanostructured materials that can be utilized to inexpensively clean water.

Potential topics include, but are not limited to, the following:
Nanocomposites for dye removal;
Synthesis of high-porosity materials;
Modification of materials for water purification;
Photocatalysts for degradation of organic pollutants;
Mechanism of adsorption;
Mechanism of photodegradation;
High-adsorption-capacity-based adsorbents;
Effective removal of organic dyes;
Universal water purification.

Guest Editors

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Deadline for manuscript submissions

closed (20 March 2024)

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Message from the Editor-in-Chief

Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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