Special Issue

Gel-Based Adsorbent Materials for Environmental Remediation

Message from the Guest Editors

Gels have a 3D polymeric network with remarkable physicochemical properties, such as excellent water absorption and retention capacity, good pollutant adsorption capacity, and reversible swelling ability. Their biocompatible, biodegradable, and non-toxic nature makes them highly suitable for diverse water treatment applications that employ adsorption, filtration, and membrane separation techniques. The structural properties of the gels determine their utility in removing polar or apolar organic pollutants and cationic or anionic inorganic particles for tailored applications. Similarly, supramolecular-based gel materials manifest responsiveness to external stimuli, making them more versatile as smart adsorbent materials. This Special Issue focuses on the use of gels for the adsorption of pollutants (e.g., heavy metals, dyes, agrochemicals, and pharmaceuticals) from aqueous solutions. We welcome original research papers, reviews, communications, and short papers that highlight the preparation, characterization, structure–function relationship, and advantages or challenges of using gel-based materials for applications in environmental remediation.

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About the Journal

Message from the Editor-in-Chief

Gels (ISSN 2310-2861) is recently established international, open access journal on physical and chemical gel-based materials. The journal aim is to encourage scientists to publish their experimental and theoretical results in as much detail as possible. General topics include but not limited to synthesis, characterization and applications of new organogels, hydrogels and ionic gels made either from low molecular weight compounds or polymers, composite and hybrid materials where a metal is by some means incorporated into the gel network, and computational studies of these materials in order to provide a better understanding of gelation mechanism. We cordially invite you to consider publishing with us and contribute with your own grain of sand to the advance in this fascinating field.

Editor-in-Chief

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