Special Issue

Application of Hydrogels in Adsorption of Pollutants in Water and Wastewater Treatment

Message from the Guest Editors

Hydrogels have become a vital component in the field of water and wastewater treatment due to their unique structure and properties that facilitate the effective adsorption of a wide range of pollutants. These three-dimensional polymer networks possess high water retention capability, allowing them to interact efficiently with contaminants such as heavy metals, organic dyes, and pharmaceuticals. Moreover, hydrogels can be modified with nanomaterials to further improve their performance. Nanomaterials increase the surface area and provide additional active sites for adsorption, leading to enhanced efficiency in pollutant removal. This combination not only boosts the kinetics of adsorption but also allows for greater selectivity, enabling the targeted removal of specific contaminants. As research continues to optimize hydrogel formulations and explore innovative applications, they are poised to play a significant role in addressing the global challenges of water pollution, ultimately contributing to cleaner and safer water resources.

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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.

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