# Special Issue

# Supramolecular Gels: Structure-Property Correlation and Their Applications in Sensors and Environmental Remediation

## Message from the Guest Editor

Supramolecular gels made from low-molecular-weight gelators (LMWGs) are fascinating soft materials with a wide range of applications. These gels are formed when solvent molecules become immobilized in a three-dimensional network of fibers created by self-assembled gelator molecules. Predicting the self-assembly mechanism is challenging due to the influence of various non-covalent interactions and the characteristics of the gelator. Thus, understanding the correlation between the structure and properties of LMWGs is essential for designing these materials with predictable properties for applications such as sensors and environmental remediation. In water remediation, supramolecular gels are employed to effectively remove contaminants such as heavy metals, dyes, and pharmaceuticals. Their porous networks and stimuli-responsive properties make LMWGs excellent candidates for adsorption studies, displaying impressive capacities for dye adsorption. Additionally, LMWGs function as sensors due to their dynamic non-covalent interactions, allowing their properties to be tuned by external stimuli such as temperature, light, and pH changes.

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