

Special Issue

Self-Assembling Peptide Hydrogels: From Nanostructure to Functional Materials

Message from the Guest Editors

Peptides are fundamental players in many biological processes because of their highly ordered and preorganized structures. Self-assembling peptide (SAP) hydrogels are a class of soft materials typically composed of entangled three-dimensional (3D) networks of nanofibers, characterized by high water contents, microporous structures, and tunable mechanical stability. Through side-chain modification and backbone functionalization, SAP hydrogels can be easily decorated to realize specific functional materials with promising candidates in a plethora of challenging applications.

This Special Issue will cover both fundamental and applied aspects of self-assembling peptide (SAP) hydrogels, including novel synthetic strategies, structural characterization, functional properties, and stimulus responsiveness. Particular attention will be devoted to their use in different fields, including biomedical applications, catalytic/photocatalytic conversion, and chiroptical purposes.

Guest Editors

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