## Special Issue

# Functional Gels: Synthesis, Characterization, and Applications

## Message from the Guest Editors

Functional gels are a kind of soft material with dynamic characteristics, with wideranging application potential in many scientific and engineering fields. Their unique three-dimensional networks, high solvent content, and tunable physicochemical properties make them an ideal candidate for designing advanced intelligent systems. This Special Issue aims to present cutting-edge research in this rapidly developing field. We invite contributions that focus on innovative synthetic methodologies covering precision polymerization, supramolecular chemistry, biofabrication, additive manufacturing, and other technologies to effectively regulate gel structure and function. We particularly encourage research exploring advanced characterization techniques, such as multi-scale rheology and scattering methods, which are vital for elucidating the complex structure-property relationships in gel behavior. We also welcome innovative research on the practical applications of functional gels, including advanced sensing technologies, intelligent lubricating materials (gel-based lubricants), smart responsive systems, and nextgeneration biological dressings and wound care solutions.

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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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