# Special Issue

# Hydrogels and Microgels: Fundamentals, Fabrication and Applications

## Message from the Guest Editors

Hydrogels and microgels are some of the most important members of flexible materials. With the continuous innovation of preparation methods and principles, hydrogels and microgels have application prospects in many high-tech fields. This Special Issue focuses on the fundamentals, preparation methods and potential applications of smart hydrogels or smart microgels, including but not limited to hydrogel sensors, flexible electromagnetic devices, hydrogel actuators, flexible structural design, wearable devices, variant structures, flexible morphing skin, etc. This Special Issue has a multidisciplinary feature and focuses on the smart properties of hydrogel materials, including but not limited to the synthesis of smart hydrogels or microgels, 4D printing molding, intelligent devices and structural design. Innovative research in relation to the basic principles and preparation methods is especially welcome.

- flexible sensor
- hydrogel actuator
- flexible morphing skin
- flexible electromagnetic device
- flexible structure
- wearable device
- flexible robot
- electronic skin
- variant structure


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## Deadline for manuscript submissions

closed (20 July 2025)


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## Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

## Editor-in-Chief

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