# **Special Issue**

# Recent Progress in Hydrogels with Novel Functionality

## Message from the Guest Editors

Hydrogels, three-dimensional network hydrophilic polymeric materials with physical or chemical crosslinks, have been developed over a century and have diverse applications, such as hygiene products, cosmetics, water purification, pharmaceutics, etc. Hydrogels can adsorb a large amount of water after swelling in aqueous environments through hydrophilic interaction and hydrogen bonding between polymers and water in addition to some dissociated electrolyte groups on the main chain or side groups. Due to the intrinsic structural factors and complex interactions inside the hydrogel, physical properties such as strength, morphology, and shape of a swelled hydrogel are commonly sensitive to the environment and affected by external stimuli. This Special Issue aims to provide a comprehensive collection of the latest progress in the field of functional hydrogels, including the synthesis, characterization of hydrogels, and their responsivity, structure, swelling, mechanical or other particular properties.

#### **Guest Editors**

Prof. Dr. Chih-Feng Huang

Department of Chemical Engineering, i-Center for Advanced Science and Technology (iCAST), National Chung Hsing University, Taichung 40227, Taiwan

Dr. Cheng-Wei Tu

Green Energy and Environment Research Laboratories, Industrial Technology Research Institute, Hsinchu, Taiwan

# Deadline for manuscript submissions

closed (31 December 2021)



Sci

an Open Access Journal by MDPI

CiteScore 4.5



mdpi.com/si/44306

Sci

MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 sci@mdpi.com

mdpi.com/journal/ sci





Sci

an Open Access Journal by MDPI

CiteScore 4.5



# **About the Journal**

# Message from the Editor-in-Chief

#### Editor-in-Chief

Prof. Dr. Claus Jacob

Division of Bioorganic Chemistry, School of Pharmacy, Saarland University, D-66123 Saarbruecken, Germany

## **Author Benefits**

# **High Visibility:**

indexed within Scopus, and other databases.

#### Journal Rank:

CiteScore - Q1 (Multidisciplinary)

## **Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 37.1 days after submission; acceptance to publication is undertaken in 5.9 days (median values for papers published in this journal in the second half of 2024).

