



Introducing *Industrial Chemistry & Materials*

Cite this: *Ind. Chem. Mater.*, 2023, **1**, 7

DOI: 10.1039/d3im90001k

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Welcome to the first issue of *Industrial Chemistry & Materials (ICM)*, the new gold open access journal published by the Royal Society of Chemistry. Based on the disciplines of chemistry and materials, *ICM* features application-driven chemistry and materials innovation with the advantage of being inter-disciplinary. We hope this journal will be the premier home for papers related to industrial chemistry and materials, with a vision of stimulating inspiration, solving problems, and accelerating the application of new technologies.

Why did we create the *ICM* journal? Looking back on the development history of the chemical industry, from alchemy in the 2nd century BC, the emergence of the alkali industry in the 1700s, the successful cracking of petroleum in the 1800s, the invention of synthetic rubber in the 1900s to today's manned spaceflight, the chemical industry has dramatically promoted the development of human civilization and is a pillar of the global economy. Global consensus agrees that under the goal of sustainable development and carbon neutralization, the chemical industry urgently needs systematic revolution and innovation from theory to technology. The upgrading of the chemical industry requires deep crossover and integration with multiple disciplines such as materials science, biology, energy science, environmental science, process engineering, *etc.* Especially, new functional materials not

only speed up the transformation of traditional energy structures from fossil fuels to renewable energy and resources, but also promote the upgrading of traditional high-pollution and energy-intensive industries. A large amount of low-carbon science and technology and new functional materials, has emerged at an unprecedented speed.

In the past three years, COVID-19 has unexpectedly affected the world's landscape and economy, further strengthening the awareness, importance, and urgency of sustainability in people's minds. In the words of M. Moore: "Victory won't come to me unless I go to it.". Obviously, we are facing an unprecedented challenge, solutions-focused research in industrial chemistry and materials has become a major force in solving sustainability issues facing mankind. In order to provide scientific guidance for revitalizing the world industry, the Institute of Process Engineering, CAS and the Royal Society of Chemistry worked together to launch *ICM*, and *ICM* will always be committed to being the propellant to our victory in sustainable development.

ICM is dedicated to publishing high-impact innovative research and major technological breakthroughs in all aspects of industrial chemistry and materials, with a particular focus on important innovations for a low-carbon chemical industry, energy, and functional materials. We publish

research papers, communications, reviews, perspectives, and commentaries on topics including but not limited to, fine chemicals, energy, catalysis, biomass, CCUS, functional materials, process engineering, *etc.* *ICM* is gold open access, which means that your papers can be shared widely and accessed easily around the world. The Institute of Process Engineering of CAS are currently paying all article processing charges (APCs) so that you can publish your work for free. *ICM* will always attach importance to the efficiency, openness, and transparency of peer review. We offer authors the transparent option to publish the peer review history alongside their articles online. Our editorial board consists of 69 world-class scientists from 15 countries and regions, and over half of them have an h-index higher than 50. Maohong Fan (University of Wyoming, USA), Chao Lu (Zhengzhou University, China), Anja V. Mudring (Aarhus University, Denmark), Rong Sun (Shenzhen Institute of Advanced Electronic Materials, CAS, China), Quanhong Yang (Tianjin University, China), Shouliang Yi (National Energy Technology Laboratory, USA), Tierui Zhang (Technical Institute of Physics and Chemistry, CAS, China) and Xiangping Zhang (Institute of Process Engineering, CAS, China) serve as the inaugural associate editors, who will play a role in the quality control of submissions, topic selection for themed issues, and global promotion.





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The first issue of *ICM* contains 10 high-quality articles around the topics of energy, catalysis, biomass, separation science, computational chemistry, *etc.* On the occasion of the first issue's publication, we would like to express our sincere gratitude to the authors who contributed their high-quality articles to *ICM*, and to our advisory and editorial board members who have greatly contributed to the development of *ICM*. *ICM* aims to establish a world-class

platform for researchers, engineers, and policymakers in the field of industrial chemistry and materials to promote academic exchange and disciplinary development. To achieve this goal, we are committed to upholding the highest standards in terms of speed, quality, and services in publication. We are eager to deliver more exciting innovations and inspiration to our community and welcome your participation in the *ICM* family as our

authors, reviewers, and readers. We look forward to embarking on this new journey with you, setting sail toward a bright future!

Best Regards,
Suojia Zhang
Editor-in-Chief of *ICM*

