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MOFs in Asia

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Metal–organic frameworks (MOFs) have emerged as one of the most dynamic classes of materials in contemporary chemistry and materials science. Their structural diversity, tunable porosity, and chemical versatility have enabled transformative advances across various fields ranging from catalysis and gas storage to sensing, drug delivery, and environmental remediation. Over the past two decades, the global MOF research community has expanded rapidly, and Asia has become one of its most vibrant centers of activity.

This *CrystEngComm* themed collection, *MOFs in Asia*, celebrates the breadth and depth of MOF research conducted throughout the region. Our goal is to provide a platform that not only highlights the innovative contributions of Asian research groups but also encourages cross-border dialogue and collaboration that will shape the future of this exciting field.

The collection brings together 13 research articles that exemplify the diversity and creativity of MOF studies in Asia. Several contributions highlight catalysis and energy applications, including MOF-based catalysts for electrosynthesis of urea, iridium-modified zirconium frameworks for oxygen evolution in acidic media, and bioinspired photocatalytic assemblies integrating porphyrin photosensitizers. Others showcase materials design and structural control, such as the stepwise assembly of Ni–N_2S_2 catalytic sites, morphological tuning of MOFs for single-crystal devices, and mechanochemical synthesis of CALF-20 for CO_2 capture.

The issue also underscores the versatility of MOFs in functional applications. Notable examples include ligand-responsive MOF-based colorimetric sensors for corrosive vapors, Eu(III)-encapsulated MOFs for white-light emission, and frameworks enabling enhanced proton conductivity through post-synthetic transmetalation. Complementary contributions advance the fundamental understanding of MOF formation and properties, with studies on interfacial nanosheet growth, defect analysis in bimodal mesoporous systems, and theoretical insights that connect structure to function.

Taken together, these studies demonstrate the remarkable vitality of MOF research in Asia. They reflect not only scientific rigor and creativity, but also the collaborative spirit that drives innovation across the region. The contributions highlight Asia's increasingly central role in MOF research, shaping the next generation of porous materials from fundamental design principles to practical applications.

On behalf of the Royal Society of Chemistry and the Editorial Office of *CrystEngComm*, we extend our deepest gratitude to the authors for their excellent contributions, to the reviewers for their careful and constructive feedback, and to the editorial staff for their invaluable support. We hope that this themed issue serves as a useful reference and an inspiration for researchers worldwide who are pushing the boundaries of MOF science.

We look forward to seeing how the pioneering research showcased here will influence the next chapter of MOF development, both in Asia and globally.

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