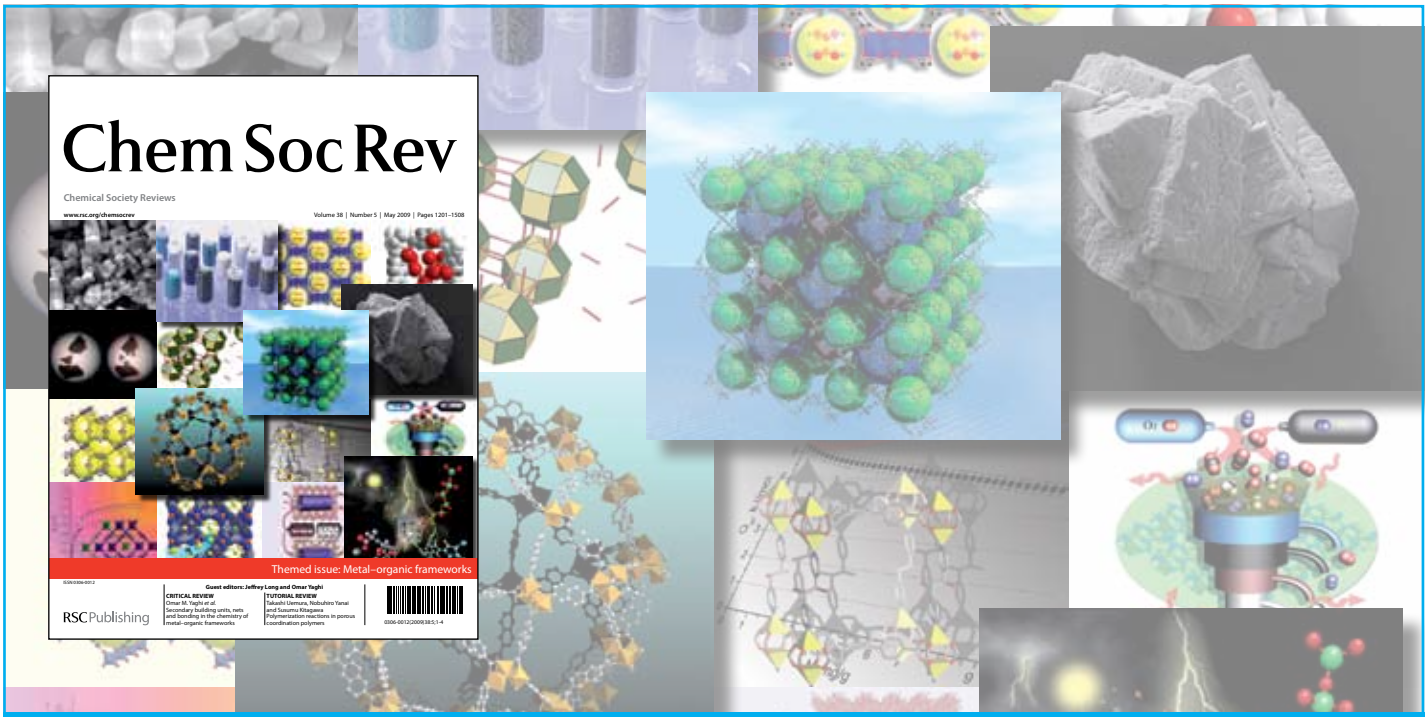

Themed issue: Metal–organic frameworks

Metal–organic frameworks (MOFs) combine chemistry and geometry to produce technology-generating properties in a way that is rarely experienced in science. The vast expanse of possibilities that MOF chemistry offers has allowed many researchers from around the world to emerge as important leaders for their own unique contributions. This issue showcases some of these contributions, while presenting a diverse range of exciting recent developments in the field.

Reviews include:

Hydrogen storage in metal–organic frameworks
Leslie Murray, Mircea Dinca and Jeffrey Long

Recent advances on simulation and theory of hydrogen storage in metal–organic frameworks and covalent organic frameworks
Sang Soo Han, José L. Mendoza-Cortes and William A. Goddard III

Polymerization reactions in porous coordination polymers
Takashi Uemura, Nobuhiro Yanai and Susumu Kitagawa

Large breathing effects in three-dimensional porous hybrid matter : facts, analyses, rules and consequences
Gérard Férey and Christian Serre

Industrial applications of metal–organic frameworks
Alexander U. Czaja, Natalia Trukhan and Ulrich Müller

Design and synthesis of metal–organic frameworks using metal–organic polyhedra as supermolecular building blocks
John J. Perry IV, Jason A. Perman and Michael J. Zaworotko

Guest editors

Jeffrey R. Long
University of California, Berkeley, USA

Omar M. Yaghi
UCLA, USA

"The purpose of this themed issue is to… inform readers about a selection of topics in the field that are currently the subject of intense research."

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