Special Issue

Recent Advances in Reticular Chemistry

Message from the Guest Editors

Reticular chemistry, the practice of linking molecular building blocks (MBBs) through strong bonds into extended crystalline structures, allowed for an unprecedented growth in the field of design of new functional materials, such as Metal-Organic Frameworks (MOFs), Covalent-Organic Frameworks (COFs) or Zeolitic Imidazolate Frameworks (ZIFs). The MBB approach has emerged as a prominent pathway towards the design and development of solid-state porous materials, as the desired properties/ functionalities can be introduced in preselected MBBs at the design stage. Modular nature of these novel crystalline structures holds the potential to address persistent societal challenges in applications related to energy and sustainability, such as gas storage/separation, catalysis, drug delivery or sensing. Efforts are ongoing towards the discovery of novel MBBs, and new strategies for the rational design of made-to-order materials are being evaluated. This Special Issue aims to compile some of the recent advances in the design, construction, and application of novel materials demonstrated by means of reticular chemistry.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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