Special Issue

Design, Properties and Applications of New Metal Organic Frameworks and Coordination Polymers

Message from the Guest Editors

Coordination Polymers (CPs) hold a leading position within the fields of Chemistry and Materials Science. High-dimensional porous CPs, commonly known as Metal-Organic Frameworks (MOFs), with features such as increased stability and permanent ultrahigh porosity. Furthermore, the introduction of the Reticular Chemistry concept in MOF synthesis has significantly contributed to the discovery of a plethora of novel nets presenting unique topologies with intriguing physicochemical characteristics. Nowadays, research on CPs and MOFs is highly interdisciplinary and covers a vast range of synthetic concepts (novel design strategies, reticular chemistry principles, topology studies, synthesis of MOF composites, scale-up design etc.), theoretical investigations (simulations, machine learning, database development), novel phenomena (flexibility, defects) and numerous applications in the energy, environment and health sectors (e.g., adsorption, gas storage and separation, drug delivery, catalysis, water decontamination, sensing, batteries).

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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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