Special Issue

Metal-Containing Halogen-Bonded Materials: A New Frontier of Halogen-Bonded Crystal Engineering

Message from the Guest Editor

Over the past few decades, research into halogen bonding has mostly focused on organic systems, and the use of halogen bonding to direct the assembly of metal–organic or organometallic building blocks remains unexplored. However, controlling the solid-state assembly of metal–organic units by halogen bonding, as well as other related sigma-hole interactions, is rapidly emerging as an attractive target for crystal engineering, with new potential in creating supramolecular porous materials capable of selective molecular transport or separation, sensing, or sorption. The presence of metal-based building blocks can impart halogen-bonded materials with new magnetic, optical, and electrical properties that are not readily accessible in purely organic materials. This Special Issue will investigate this new frontier of crystal engineering and explore the recent advances in fundamental understanding, design, and applications of halogen-bonded metal–organic materials. We would be delighted to receive your original research articles, as well as reviews on the design of halogen-bonded materials involving metal-containing building blocks.

Guest Editor

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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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