

Special Issue

4f-Elements-Based Materials: Design, Crystal Chemistry and Properties

Message from the Guest Editor

Dear colleagues, Natural and synthetic rare-earth and actinide compounds are attracting increasing attention due to the great variety of their significance and application. The covered areas range from catalysis to magnetism and from superporous frameworks to environmental concerns, space industry, and medicine. The most addressed properties are complex interplays of d- and f-magnetic systems and extremely high intermetallic magnetization, luminescence, and the production of neutron sources. In this Special Issue, we invite contributions dedicated to synthesis and studies of both lanthanide- and actinide-based materials, their structural and materials chemistry, developing approaches toward their targeted synthesis, including structural design, as well as safe processing and storage of spent fuel. We also welcome papers concerning f-metal minerals, derived materials, and new ways of actinide immobilization in natural and human-made media. Of essential interest are also contributions dedicated to the comparison of various properties of actinides and their 4f-analogs, which may be relevant to the yet elusive chemistry of the latest actinide elements.

Guest Editor

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Message from the Editorial Board

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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