Special Issue

Rare Earth and Actinide Materials

Message from the Guest Editors

Ancient Greek philosophers used the term “earth” to refer to all solid matter—materials—of the Universe. After two millennia, the term has survived in references to alkaline earth and rare earth (RE) groups of elements in the periodic table. The latter commonly includes lanthanides, yttrium, and (arguably) scandium. While most abundant RE elements (Sc, Y, La, and Ce) are indeed rarer than most abundant alkaline earth metals (Ca and Mg), rare earth are critical for the creation materials used by modern society. Indeed, they span the applications from permanent magnets and superconductors to catalysts, ceramics, and environmental barrier coatings. Among actinides, only thorium was widely used in material design outside of the nuclear field. The chemistry of rare earth elements and the structure of their compounds is often used as a guide to actinides; lanthanides are formed as fission products and play a role in the design and reprocessing of nuclear materials. This Special Issue is devoted to rare earth and actinides. Expert submissions related to experimental research and computations on rare earth and actinide materials will be considered for publication.

Guest Editors

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Deadline for manuscript submissions

closed (10 May 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/157704

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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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