Special Issue

Solid State Chemistry Enabling Clean Technologies

Message from the Guest Editor

This Special Issue is focused on solid state chemistry and its role as an enabler of new clean technologies. The main topics are: A. Materials for clean energy storage and conversion: (i) design and modeling of electrode and electrolyte materials for post-lithium-ion batteries; (ii) oxide/hydroxide composites for supercapacitors; (iii) nanocomposite materials for H2 storage; (iv) new thermoelectric materials. B. Materials and thin films for environmental protection: (i) new adsorbents for CO2 capture and gas fuel purification; (ii) new approaches to the catalytic neutralization of waste gases; (iii) new oxide thin films and nanopowders for photocatalysis. C. Ceramics/bioceramics and glasses for a better life: (i) smart optical systems based on glasses and ceramics; (ii) modeling of systems with optical properties; (iii) nanocomposite phosphate-based materials for medical applications. Current concepts, trends, limitations, and emerging new technologies in solid state chemistry will also be presented. **Keywords**

- materials for energy storage and conversion
- catalysts/sorbents
- optics
- phosphate-based materials

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Message from the Editor-in-Chief

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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