Special Issue

Materials for Residential Electrochemical Energy Storage Systems

Message from the Guest Editor

Demand for electrochemical storage and conversion devices for transportation, residential applications, powered tools, and consumer electronics has been strongly stimulated by the inexorable growth of the Earth 's population and number of applications as well as the depletion of fossil fuel reserves. In that context, the design of future electrochemical storage and conversion systems should consider numerous criteria, such as the energy efficency, long-term stability, raw material scarcity, cell chemistry, safety, and recycling potential. Especially in the field of decentral solar energy economy, high cycling stability, affordability, and safety aspects of the storage system are of great importance. In that context, this Special Issue welcomes any original or review contribution related to the use of advanced materials for established (Pb-acid, NiMH, Li-LFP and Na/NiCl2) as well as emergent (metal/air, metal-ion, redox-flow) batteries for residential applications.

Guest Editor

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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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