Special Issue

Advanced Materials for Aluminium-ion Battery

Message from the Guest Editor

Aluminium-ion (Al-ion) batteries offer great potential as next generation battery chemistry. Based on the trivalent nature of the Al3+ ion transferring three times the charge of Li+, Al-ion cells offer many strong features and Advantages. However, achieving commercial application of these cells is still a number of years away as the material and electrochemical challenges of this new technology require to be better understood and characterised. This Special Issue will focus on the material challenges faced by this new cell chemistry, including high rate electrodes, aqueous and ionic liquid based electrolytes, separators and understanding of aluminium ion intercalation, surface and interface layer effects. Articles discussing investigations and developments of cell materials, half and full cell/battery tests, and scalability and synthesis routes for material scale-up are welcome for this feature. It is my pleasure to invite you to submit a manuscript for this Special Issue. Full papers, communications and reviews are welcome.

Guest Editor

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Deadline for manuscript submissions

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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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