Special Issue

Nanostructured Electrochemical Devices

Message from the Guest Editor

Nanomaterials are very promising for enhancing device performances for sensing, sustainable energy production, and energy conversion and storage, as extensively reported in the literature. In this field, one of the most severe challenges is to find suitable methods for fabricating nanomaterials. Over the years, numerous preparation methods have been proposed in the literature, but not all of them are easily scalable and economically advantageous for industrial application. In this context, electrochemical deposition in a template is a facile method for fabricating either two- or one-dimensional nanostructured materials because it allows easily adjusting the fundamental parameters controlling their final features. In addition, electrochemical processes are usually cheap and environmentally friendly, and they can be easily scaled up from lab to industrial level. For these reasons, different electrodeposition methods were studied for the synthesis of different types of nanomaterials for application in electrochemical sensing, in batteries (lead–acid, lithium–ion, and so on), in solar cells, and in electrochemical water splitting.

Guest Editor

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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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