Special Issue

Advances in Smart Materials and Self-Powered Nanogenerators Systems

Message from the Guest Editor

Energy is a fundamental driving force of the global economy. Harvesting renewable energies from our ambient environment through the development of micro/nanoscale energy technologies is of great practical value. Nanogenerators, as an effective mechanical energy harvesting technology, provide a promising route to sustainable energy. Developing new smart materials with new nanostructures to be applied into nanogenerator systems is beneficial to the enhancement of output performance and efficiency of nanogenerators. The piezoelectric nanogenerator and triboelectric nanogenerator (TENG) were invented by Prof. Zhong Lin Wang in 2006 and 2012, respectively, to convert mechanical energy into electricity. Nanogenerators have found major applications in the fields of micro/nano energy, self-powered systems/sensors, blue energy, and high-voltage power sources. This Special Issue aims to cover recent achievements in the fields of smart materials applications and nanogenerator-based self-powered systems.

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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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