Special Issue

The Application of Electroactive Polymers

Message from the Guest Editor

Electroactive polymers (also known as conducting polymers or inherently/intrinsically conducting polymers) are polymers that change their properties as a function of applied electric fields. Changes in polymer oxidation state result in significant changes in volume, color, reactivity, permeability, conductivity, and solubility. The ability to change these properties at will is what has led to most of the potential applications. Stable oxidation/reduction processes allow the materials to be used for energy storage (batteries and capacitors) and static dissipation; conductivity changes are useful for sensors, electromagnetic shielding, and artificial nerves; changes in volume have practical applications in actuators, drug delivery, and separations; light absorption and emission processes allow the polymers to be useful for photovoltaic and light emitting applications as well as photothermal therapeutics; changes in color have led to applications in electrochromics. We invite the scientific community to submit their contributions, in the form of original research articles and review articles, in all areas of applications of electroactive polymers.

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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