Special Issue

Optical and Electrical Properties of Polymeric Materials

Message from the Guest Editor

Polymeric materials can be insulators, semiconductors, and metals, depending on sp2 or sp3 hybridization and doping concentration. Among them, saturated polymers have sp3 carbons leading to insulating properties, whereas the unsaturated ones have sp2pz carbon, resulting in semiconductors or even metals. In this Special Issue, based on the electronic structure of conducting polymeric materials, we focus on the optical, electrical, opto-electronic and electro-optical properties of materials and their emerging applications, such as photovoltaic (PV) cells, light-emitting diodes (LEDs), field-effect transistors (FETs), plastic bioelectronics, etc. In the case of insulating polymeric materials, they should be blended with ionic or conducting compounds to be used as ionic, electronic, and mixed conductors for electrochemical energy storage including polymer electrolytes, specifically, single-ion conductors. Furthermore, insulating polymers can have dielectric, ferroelectric, photoconducting, and piezoelectric properties, which are some of the current Special Issue's themes. Original research, review, mini review and perspective articles are greatly welcome.

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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