Special Issue

Advanced Electrochromic Materials and Devices

Message from the Guest Editors

Electrochromism is the dynamical modulation of materials' optical properties through redox reactions under an applied electric field, which has various applications in smart windows for energy-efficient buildings, low-power displays, self-dimming rear mirrors for automobiles, mid-far-infrared reflection modulation for infrared adaptive camouflage and thermal radiation manipulation, etc. Conventional electrochromic devices usually consist of multi-layer structures with transparent conductive layers, electrochromic films, ion-conducting layers, and ion-storing films. The design and synthesis strategies of electrochromic materials and transparent conductors, comprehensive electrochemical kinetic analysis, and novel device design are areas of active research worldwide. We hope that this Special Issue will promote further fundamental research on electrochromic materials and the development of new multifunctional electrochromic devices to meet the growing demand for next-generation electronic 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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