Special Issue

Carbon-Based Electronic Materials

Message from the Guest Editor

The unique electrical properties of the large family of carbon allotropes, ranging from semi-metals to semiconductors and insulators, have sparked significant interest in the use of these materials for a wide range of electric applications. The large charge carrier mobility observed in both graphene and carbon nanotubes, together with the large maximum current density, makes them a promising candidate for electronic devices like field-effect transistors and interconnects. Diamond, on the other hand, is an excellent insulator but can also be used as a wide bandgap semiconductor and has, for instance, been considered for power electronics and qubits. Besides their excellent electrical properties, the allotropes of carbon also have outstanding thermal, mechanical, and optical properties. Because of this, carbon-based electronic materials are of interest for a wide range of other electrical applications like sensors, flexible electronics, bioelectronics, and batteries, to name but a few. Dr. ir. Sten Vollebregt

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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