Special Issue

Advances in Synthetic Diamond Materials

Message from the Guest Editor

Significant achievements in recent years in the synthesis of diamonds using CVD methods have resulted in easy access to this material. CVD diamond has a number of outstanding properties that enable exceptional performance in diverse applications. It has been recognized that diamond is a remarkable material with extreme hardness and wear resistance. Other properties such as optical, thermal, electrochemical, chemical, and electronic, also outclass competing materials. Combination of these properties offers designers an engineering material with tremendous potential, offering solutions that can shift performance to new levels or enabling completely new approaches to challenging problems. This Special Issue invites scientists, designers, and engineers to publish recent achievements concerning material properties and characteristics of single crystal and polycrystalline CVD diamond, and how these can be utilized, focusing particularly on optics, electronics, and electrochemistry, and it is expected to summarize how CVD diamond can be tailored for specific applications, on the basis of the ability to synthesize a consistent and engineered high-performance product.

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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