Special Issue

Properties, Processing and Applications of Diamond and Related Superhard Materials

Message from the Guest Editors

Diamonds and related superhard materials have shown great application potential in many fields due to their high hardness, excellent thermal conductivity, and good chemical stability, etc. This Special Issue will compile recent developments in the field of diamonds and related superhard materials. The articles presented in this Special Issue will cover various topics, ranging from but not limited to the following: (1) intrinsic properties of diamond and related superhard materials, such as mechanical properties (hardness, toughness, etc.), thermal properties (thermal conductivity, thermal expansion coefficient, etc.), optical properties and electrical properties; (2) advanced processing methods of diamond and related superhard materials, including but not limited to the innovation and optimization of cutting, grinding, polishing, etching and other processes; (3) application of diamond and related superhard materials, PCD, diamond coating tools; (4) diamond preparation (polycrystalline or single crystal diamond), nucleation of diamond, low temperature growth, heteroepitaxial single crystal, diamond coating/film on WC-Co, GaN, Ga2O3, etc.

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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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