Special Issue

Diamond Material and Its Applications

Message from the Guest Editors

As a semiconductor, diamond posses the exceptional figures of merit due to its wide band gap (5.45 eV), high breakdown field (⊠10 MV/cm), high thermal conductivity (22 W cm−1 K−1), and high carrier mobility (electron: ~4500 cm2 V−1 s−1, hole: ~3800 cm2 V−1 s−1), which is promissing for high power and high frequency electronics. Single crystalline diamond shows advanced properties as high refraction index of 2.4 (at 600 nm) in combination with its high transparency from UV (225 nm) to the far infrared, which makes it suiable for optical lens, windows and photodetectors. This Special Issue will present recent advances in diamond materials and their applications. Original and review articles can deal with the mentioned applications, without being limited to them, but can also focus on material deposition and characterization, electronic devices, quantum technoligies, photoelectric conversion, MEMS structure, thermal conductor and so on. Full papers, communications, and reviews are all welcome.

Guest Editors

Prof. Dr. Hong-Xing Wang

Dr. Wei Wang

Dr. Yanfeng Wang

Deadline for manuscript submissions

closed (20 November 2022)

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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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