Special Issue

Advanced Graphene-Based Nanocomposite for Biosensing Application

Message from the Guest Editors

The unique physical, chemical and electrical properties—including the high specific surface area, high carrier mobility, high electrical conductivity, flexibility, and optical transparency—of graphene and its related derivatives make them ideal for biosensing applications. They can be easily functionalized and combined with various types of different nanoparticles, quantum dots, (bio)polymers and biomolecules, to form a diverse range of graphene-based nanocomposites. The fabricated graphene-based nanocomposites can be used as a compatible platform for the immobilization of biomolecules, such as enzymes, antibodies, DNA, RNA and aptamers to create highly sensitive and selective biosensors for the detection of a wide range of biomolecules. They can be also used as non-enzymatic electrode materials for the detection of clinically important biomolecules and biomarkers. This Special Issue aims to highlight the unique research and development efforts, identifying different graphene-based nanocomposite platforms that have been developed for biosensing applications. Research papers, short communications and reviews are all welcome.

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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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