



Graphene and Graphene Oxide in Biomedical Application

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Deadline for manuscript
submissions:

closed (30 September 2017)

Message from the Guest Editor

Dear Colleagues,

Graphene-based nanostructures and nanohybrids have attracted more and more attention in recent years due to their two-dimensional structures, high surface areas, good biocompatibility, low mass density, and unique electrical property. One of the most exciting applications of graphene and graphene oxide is in the biomedical engineering field. For example, graphene and graphene oxide have been used as very good platforms for the binding of biomacromolecules and various nanoparticles for the electrical, optical, and spectral biosensing of DNA, proteins, and viruses; the modification of graphene or graphene oxide with biopolymers have been utilized for cell cultures, tissue repair and regeneration, as well as controlled drug delivery; even the conjugation of graphene or graphene oxide with quantum dots has been further applied for the cellular targeting and imaging.

Keywords: grapheme, graphene oxide, nanoparticle, nanohybrids, materials synthesis, nanocomposites, biosensors, biomineralization, tissue engineering, cell culture, cellular bioimaging, drug delivery

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