Special Issue

Modeling and Mechanics of Carbon-Based Nanostructures and Electronic Devices

Message from the Guest Editor

A wide range of outstanding and novel features of such carbon nanomaterials as graphene, carbon nanotubes, carbon dots and fullerene have attracted the attention of researchers around the world. Unique mechanical properties of carbon nanocomposites make them an essential part of element base for stretchable and transparent electrodes for transistors, lithium-ion batteries and supercapacitors, as well as electrochemical biosensors. Mathematical modeling of carbon nanostructures' functionalization performed by present-day software helps to achieve the desired configuration of composite that provides optimum mechanical properties; for example, Young modulus, Poisson ratio, fracture strength during strain, crumbling, bending and nanoindentation.

- modeling
- mechanics
- carbon nanostructures
- electronic devices
- composites
- nanoindentation

Guest Editor

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Deadline for manuscript submissions

closed (30 November 2021)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/72631

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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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