Special Issue

Modeling and Simulation of Heat and Mass Transfer in Novel Low-Dimensional Nanomaterials

Message from the Guest Editor

In last two decades, there has been tremendous progress in the field of low-dimensional nanomaterials. Versatile, new nanomaterials with astonishing properties have been imagined and/or synthesized, which bring about novel functionalities and applications that could not be previously realized. When the geometry of a material approaches the nanoscale, its heat and mass transfer behaviors deviate significantly from those of bulk materials and provide a playground for researchers in the fields of materials science, mechanics, physics, and chemistry. Hence, this Special Issue aims to share new insights regarding the heat and mass transfer of novel low-dimensional nanomaterials based on modeling and simulation methods. The topics of this issue include but are not limited to: (1) thermal conductivity of novel low-dimensional nanomaterials; (2) interfacial thermal transport of heterojunctions formed with these nanomaterials; (3) thermal properties of nanocomposite materials; (4) surface wettability of novel low-dimensional nanomaterials; (5) nanofluidic across the nanochannels of laminar nanomaterials; (6) nanofiltration and separation with low-dimensional nanomaterial-based membranes.

Guest Editor

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Deadline for manuscript submissions

closed (10 July 2024)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/161920

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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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