Theoretical and Computational Investigation on Composite Materials

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

This Special Issue aims to bring together experts and researchers in theoretical and computational modeling of composite materials, covering topics such as the effects of the reinforcement staking sequence, ply orientation, agglomeration and dispersion of nanoparticles, surface treatment and the functionalization of reinforcements, interfacial interactions between matrix and reinforcement, delamination/debonding and failure, the volume fractions of constituents, the porosity level of composites, etc.

Topics include but are not limited to:

Classical and high-performance advanced theories and multiscale approaches (including but not limited to quantum mechanics or ab initio modeling, molecular dynamics, meso-mechanics modeling, and finite element analysis).

Composite materials to be studied include but are not limited to continuous/discontinuous fiber-reinforced composites and laminates, nanoparticle or nanofiber modified composites, functionalized composites, carbon nanotubes (CNTs), graphene nanoplatelets, and innovative and advanced classes of composites.

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Special Issue