



5th Anniversary of Nanotechnology and Applied Nanosciences Section—Recent Advances in Carbon Composites and Complex Materials

Guest Editors:

Dr. Francesco Tornabene

Department of Innovation Engineering, University of Salento, 73100 Lecce, Italy

Dr. Rossana Dimitri

Department of Innovation Engineering, University of Salento, 73100 Lecce, Italy

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closed (31 December 2022)

Message from the Guest Editors

The recent requirements in the design and manufacturing of nanosystems and nanotechnology have encouraged the use of carbon-based nanomaterials, particularly carbon nanotubes (CNTs) and graphene, due to their outstanding mechanical properties, high electrical and thermal conductivity, and reduced flammability.

In such a context, this Special Issue aims at gathering together experts and researchers for the mechanical modeling of micro/nanomaterials at different scales, as useful for biosensors, resonators, valves, pumps, porous structures, energy harvesters, and advanced composite structures. The well-known size dependence of most physical and mechanical properties of small-scale structures has favored the use of nonlocal continuum mechanics to simulate complicated scale phenomena in a consistent manner, both from a theoretical and computational standpoint. Advanced theories and high-performance computational models are welcome for the static and dynamic study of nanosystems and nanostructures, involving enhanced nonlocal damage and fracturing models, able to capture the size-dependent formation and propagation of internal cracks in complex heterogeneous materials and interfaces.





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Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica,
Politecnico di Milano, Piazza L.
da Vinci 32, 20133 Milano, Italy

Message from the Editor-in-Chief

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Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
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