

## Special Issue

# Recent Advances in Biomedical Nanocomposites and Their Functionalizations

### Message from the Guest Editor

To date, nanostructures in various forms, including inorganic/organic nanoparticles, nanocapsules, nanogels, nanofibers, nanocomposites, and even nanocoatings, have been designed and developed. These nanostructures can have intrinsic antibacterial/anticancer properties or can be used as nanocarriers for loading molecules/biomolecules with antibacterial/anticancer effects. The last decade has seen advances in the design of these nanocarriers, not only in their synthesis but also in surface functionalization approaches. Through this progress, various characterization techniques have also been employed to indicate their successful synthesis as well as the successful loading of active molecules. These nanocarriers have been used for the treatment of cancer as well as infections from the in vitro to in vivo level. Moreover, different theoretical modelling/calculation/simulation methods, including density functional theory, molecular docking, molecular dynamics, Monte Carlo, etc., have been used to investigate the interactions at the molecular level, leading to new insights into nanocarrier design.

### Guest Editor

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## International Journal of Molecular Sciences

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