

Special Issue

Folding and Design of α -Helical Proteins and Peptides: Theory Meets Nanomaterials, Biotechnology and Health

Message from the Guest Editor

The most common secondary structure in globular proteins is the α -helix, frequently occurring in the form of specific structural motifs such as coiled-coils and helical bundles. Being associated with a variety of functions, oligomerization states and protein topologies, the helical folding motifs have opened new avenues for the design and engineering of bio-inspired protein- or peptide-based nanostructures and functional biomaterials. Although our limited understanding of protein folding/ misfolding and oligomerization frequently presents major barriers in the development of α -helical biomaterials, recent theoretical studies and experimental approaches are beginning to chart this new territory, leading to countless possibilities for functionalization and new nanomaterials. The aim of this Special Issue is to gather folding studies of α -helical structural motifs along with rational design experiments and applications of protein-/peptide-based biomaterials. The authors are invited to submit manuscripts presenting theoretical, experimental and applied research. Both research and review articles are welcome.

Guest Editor

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