Special Issue

Design and Applications of Artificial Biomolecule Assemblies

Message from the Guest Editor

Recently, a number of artificial proteins nanoparticles/cages have been created experimentally, with one of the main aims being the creation of virus-like capsids that can be used for targeted drug delivery. Proteins are assembling together to form a polygon-like shape and these so-called faces then bind together to form a polyhedron structure, which can include holes. Unlike virus cages, some of these artificial cages exhibit unexpected/paradoxical geometries that have near regular symmetry. One open question is what are the possible geometries for those cages? What are the best polygon structures to form such cages? How thick or how tapered must the faces be to bind together into a cage-like structure? How do the buffers in which these cages are created affect the structures that are obtained? How stables are these nano-cages? How does one bind cargo inside the nanoparticles. We are expecting both experimental and theoretical papers that help answer these questions.

Guest Editor

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Deadline for manuscript submissions

closed (30 June 2024)



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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multidimensional network.

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