Special Issue

New Frontiers in Diatom Nanotechnology

Message from the Guest Editors

Diatoms are eukaryotic, unicellular microalgae living in all aquatic environments. Their protoplasm is enclosed in a hydrated porous amorphous silica shell called frustule, characterized by the presence of regular arrays of holes with submicrometric dimensions.Diatomite is the most abundant source of natural silica, and it is largely used in several industrial applications. Despite the great developments in the field of nanotechnology, the diatom/diatomite architectures can actually compete with man-made fabricated devices. Due to the high surface area (up to 200 m2/g), thermal stability, easy modification through genetic manipulation or chemical modifications, mechanical resistance, optical and photonic properties, nontoxicity, and biocompatibility, diatom frustules are potential scaffolds for the development of nanostructured devices for a variety of applications.

Scientists working on diatom/diatomite nanotechnology are encouraged to submit their contributions to this Special Issue that could be an excellent opportunity to present more recent results in this field and networking labs all over the world.

Guest Editors

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Message from the Editor-in-Chief

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 multi-dimensional network.

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