

Symmetry and Asymmetry in Nature-Inspired, Bio-Based Materials

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Message from the Guest Editor

Dear Colleagues,

From spider webs to nautilus shells, and snowflakes to honeycombs, patterns and symmetry in natural systems have provided them with exquisite functionality far beyond what can currently be achieved by most synthetic materials. These structure-function relationships, controlled by precisely defined geometries, give Nature the power to design materials that respond to and counteract stresses within complex environments and maintain structural stability, among other interesting properties.

It is, therefore, my pleasure to invite you to submit a manuscript for this special issue, “Symmetry in Nature-Inspired, Bio-Based Materials”. Full research articles, short communications and comprehensive reviews covering the design of adaptable materials inspired by natural systems with a particular focus on the study of structure and symmetry, as well as intrinsic intra/intermolecular interactions and the impact of environmental stresses in these systems, and how this contributes to the materials properties. Moreover, work focussing on the use of bio-based materials to achieve these functional systems is especially welcomed.



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Special Issue



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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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