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# Symmetries in Quantum Nano-Chemistry (from Structure to Properties, Observability and Functions)

Guest Editor:

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## Message from the Guest Editor

Dear Colleagues,

Symmetry is a driving force of Nature. It means equilibrium and tension. It features space-time curvatures, quantum information, states algebra, and the structure and properties of matter in isolated and open systems. Symmetry is formalized in mathematical groups, functions, orbitals, types of interactions, the properties of molecules, degrees of freedom. and in entropy-negentropy transformations: it characterizes order. chaos. fractalizations of structures, networks, and their patterned graphs. At present there is increasing clearness that symmetry, perhaps along with statistics, acts as a silent potential of matter, quanta, and energies. Its insights have always offered the way to make leaps in science and technology, while merging with the quantum information at the level of atoms, molecules, solid states, and nanomaterials at large, and may be the key to a unified understanding of the next level of quantum theory in general and of quantum nanochemistry in particular...









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## **Editor-in-Chief**

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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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