symmetry

an Open Access Journal by MDPI

IMPACT FACTOR 2.7

CITESCORE 4.9

Cooperative Effects in Finite Systems

Guest Editors:

Prof. Dr. Vyacheslav Yukalov
Bogolubov Laboratory of Theoretical Physics, Joint Institute for Nuclear Research, 141980 Dubna, Russia

Prof. Dr. V. S. Bagnato
Instituto de Fisica de Sao Carlos, Universidade de Sao Paulo, CP 369, Sao Carlos 13560-970, SP, Brazil

Dr. Rashid G. Nazmitdinov
Bogolubov Laboratory of Theoretical Physics, Joint Institute for Nuclear Research, 141980 Dubna, Russia

Deadline for manuscript submissions:
31 December 2023

Message from the Guest Editors

Dear Colleagues,

Cooperative phenomena are at the basis of many-body physics. These phenomena are associated with particle interactions and correlations. Cooperative phenomena are at the origin of phase transitions. They lead to quantum effects. With the development of modern technologies, operating on a nanometer scale, a natural question arises about the manifestation of cooperative phenomena in mesoscopic systems. In these systems, the finite-size effects can become important, as can the influence of the surfaces and boundaries, whose role can be neglected for macroscopic systems. Understanding the peculiarities of these phenomena in a microscopic environment becomes a real challenge for science. Indeed, the study of physics phenomena in mesoscopic systems has grown into a wide field of interdisciplinary investigations involving various branches of natural sciences from physics to chemistry and biology to sociology. Thus, the importance of studying different aspects of cooperative phenomena that can break or preserve symmetries in their evolution between the macroscopic and microscopic world becomes obvious.

symmetry

IMPACT FACTOR 2.7

CITESCORE 4.9

an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Sergei D. Odintsov
ICREA, P. Lluis Companyas 23, 08010 Barcelona and Institute of Space Sciences (IEEC-CSIC), C. Can Magrans s/n, 08193 Barcelona, Spain

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.

Author Benefits

Open Access:— free for readers, with article processing charges (APC) paid by authors or their institutions.
High Visibility: indexed within Scopus, SCIE (Web of Science), CAPlus / SciFinder, Inspec, Astrophysics Data System, and other databases.
Journal Rank: JCR - Q2 (*Multidisciplinary Sciences*) / CiteScore - Q1 (*General Mathematics*); Q1 (*Physics and Astronomy*); Q1 (*Computer Science*)

Contact Us

Symmetry
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/symmetry
symmetry@mdpi.com
@Symmetry_MDPI