Special Issue

Superconductivity and Topology in Quantum Materials

Message from the Guest Editor

We are pleased to announce a Special Issue focused on the theme of superconductivity and topology in quantum materials. This issue aims to highlight innovative research exploring the interplay between topological effects and superconducting systems, including Josephson-based architectures. Topological properties have become fundamental in understanding quantum materials, offering deep insights into superconductivity, coherence, and quantum information science. Their role is pivotal in developing robust quantum technologies and enhancing the stability of quantum states. We invite contributions on topics such as topological effects on superconducting states, interference phenomena in Josephson systems, coherence in superconducting qubit arrays, and applications in fault-tolerant quantum computing. Interdisciplinary approaches are especially welcome, particularly those addressing topological stabilization, error prevention, and the engineering of long-lived quantum states. This issue offers a platform for both theoretical and experimental work that advances the future of quantum materials and scalable quantum technologies.

Guest Editor

Prof. Paolo Silvestrini

Department of Mathematics and Physics, University of Campania "L. Vanvitelli", 81100 Caserta, Italy

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Applied Sciences
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
applsci@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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