# Special Issue

# Topological Semimetals: From Symmetry and Topology to Materials and Mechanisms

## Message from the Guest Editor

Spearheaded by Weyl semimetals, over the past decade the field of topological semimetals has established itself as a cornerstone of condensed matter physics. Grounded in the interplay between symmetry and band topology, these systems serve as a versatile platform for exotic quantum phenomena. Yet, numerous questions remain that obstruct the realization of their technological potential. As the field of topological semimetals enters its second decade, this Special Issue will feature new developments on broad aspects ranging from its roots in symmetry and topology to materials that showcase and mechanisms that drive their unconventional properties.

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## Deadline for manuscript submissions

closed (31 December 2024)

# About the Journal

### 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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