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Computational Methods for Quantum Matter

Guest Editors:

Dr. Sebastiano Pilati

School of Science and
Technology, Physics Division,
Università di Camerino, 62032
Camerino, MC, Italy

Prof. Dr. Bruno Julia-Diaz

Facultat de Física, Universitat de
Barcelona, E-08028 Barcelona,
Spain

Prof. Dr. Stefano Giorgini

INO-CNR BEC Center and
Dipartimento di Fisica, Università
di Trento, 38123 Trento, Italy

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Message from the Guest Editors

In recent years, remarkable experimental breakthroughs achieved with platforms such as atomic gases, trapped ions, and superconducting qubits have allowed for controlled realizations of various intriguing quantum phenomena. These experiments represent the ideal venue to test novel computational methods for quantum many-body systems.

This Special Issue aims to showcase relevant computational studies on quantum matter, highlighting successful applications, recent algorithmic advancements, and also the main open challenges. Contributing authors are invited to elucidate physics insights provided by the employed computational techniques and/or to describe enabling technical developments. The further goals are also to provide the community with helpful information for future computational advancements and to bring the open challenges to be addressed by quantum many-body physicists in the near and the midterm future into the spotlight.



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Special Issue



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Editor-in-Chief

Prof. Dr. Antonio Bianconi

Rome International Center for
Materials Science Superstripes
(RICMASS), Via dei Sabelli 119A,
00185 Rome, Italy

Message from the Editor-in-Chief

Welcome to *Condensed Matter* (ISSN 2410-3896)! It gives me great pleasure to invite you to publish in the journal. We are looking to build a collection of high quality research articles, supported by a community from across the field of condensed matter physics. In this task, I will be assisted by a highly qualified editorial board. We accept papers on basic research as well as applications, and experimental or theoretical work. Currently the journal is indexed by ESCI (Web of Science) and hope you can consider *Condensed Matter* as an exceptional home for your manuscript.

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Rapid Publication: manuscripts are peer-reviewed and a first decision is provided to authors approximately 20.8 days after submission; acceptance to publication is undertaken in 3.4 days (median values for papers published in this journal in the second half of 2025).

Contact Us

Condensed Matter Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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