Special Issue

Applications of Ab-Initio Calculations in Atomic, Molecular, and Optical Physics

Message from the Guest Editors

The development of ab initio methods is paramount for the theoretical description of atomic and molecular structures, and their interactions with particles and fields. In recent years, new ab initio techniques have been developed to improve these calculations, thereby paving the way for new studies and applications and supporting a plethora of experimental studies. This Special Issue aims to collate papers (original articles and reviews) that focus on the current advancements in ab initio calculations and their applications in the fields of atomic, molecular, and optical physics. Research areas may include (but are not limited to) the following:

- Atomic and molecular structure calculations;
- Electron-atom and electron-molecule scattering calculations;
- Atomic and molecular photoionization;
- Attosecond and strong-field physics in atoms and molecules;
- Study of atoms and molecules in inhomogeneous fields;
- Molecular dynamics (e.g., molecular dissociation, vibrational excitation, etc.).

We look forward to receiving your contributions.

Guest Editors

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Deadline for manuscript submissions

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About the Journal

Message from the Editor-in-Chief

The scope of *Atoms* is deliberately wide and encompasses a large part of theoretical and experimental atomic,
molecular, nuclear, and chemical physics in order to encourage cross-disciplinary connections, while supporting the more traditional idea of individual subfields. The journal is also interested in papers concerning
the computation and compilation of data related to applications in the above areas. Details of experimental methods and codes are welcome. Your research is taken seriously and peer-reviewed with care. I encourage you
to contact me or any of the Editorial Board Members for further information.

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