Special Issue

High-Precision Laser Spectroscopy

Message from the Guest Editors

Precision measurements in atomic systems allow for the study of fundamental physics at a broad range of energy scales. These experiments are often small-scale ("tabletop") and provide a complementary approach to new physics searches that occur at high-energy facilities. One area of precision measurement that has seen substantial advances in recent decades is that of high-precision laser spectroscopy. Work in this field has enabled the determination of the values of fundamental constants of nature (i.e., the Rydberg constant), stringent tests of quantum electrodynamics (QED), investigations of fundamental symmetries, and the development of devices such as optical atomic clocks. More recently, the field has expanded to include so-called quantum-enabled spectroscopy techniques. Techniques such as quantum logic spectroscopy (QLS), which harness the resource of quantum entanglement, have opened the door to the study of exotic systems such as molecular ions and highly charged ions at a level of precision that would not otherwise be possible. In this Special Issue, we welcome original and review articles in the field of high-precision laser spectroscopy.

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Deadline for manuscript submissions

closed (30 November 2024)

Atoms

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Impact Factor 1.5
CiteScore 3.1

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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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