Special Issue

Quantum Technologies with Cold Atoms

Message from the Guest Editor

In this Special Issue, we invite original research articles and reviews that explore applications in the field of cold atoms. Cold atoms (atoms with a temperature below one milli-Kelvin) have been studied for a few decades since the creation of cold atoms in the 1980s. Cold atoms were first created by magneto-optical traps (MOTs). Further cooling techniques, such as evaporative cooling, can cool their temperature even further, such as to the nano-Kelvin or even the pico-Kelvin range, to obtain BEC (Bose–Einstein condensate). We encourage submissions on technologies based on cold atoms, with the aim of fostering innovation across scientific, technological, and engineering disciplines. While most of the research has focused on basic physics, there has recently been a growing interest in the practical applications of cold atoms. Cold atom-based technologies, such as cold atom qubits (quantum bits), have evolved significantly over the recent decade. This Special Issue will cover a broad range of topics, including the following:

- Cold Rydberg atom-based technologies;
- Cold molecules including cold macroscopic molecules;
- Qubits;
- Quantum electronics;
- Quantum sensing.

Guest Editor

Dr. Jianing Han

Department of Physics, University of South Alabama, Mobile, AL 36688, USA

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

mdpi.com/journal/atoms

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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.

Editor-in-Chief

Prof. Dr. Pascal Quinet
1. Physique Atomique et Astrophysique, Université de Mons, B-7000 Mons, Belgium
2. IPNAS, Université de Liège, B-4000 Liège, Belgium

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