

# Special Issue

## Recent Advances in Ion-Impact Atomic Collisions: Experiment, Theory and Applications

### Message from the Guest Editors

Ion-impact atomic collision studies have shaped our understanding of the microscopic world and continue to play an important role in shedding light on fundamental properties and processes of atomic and molecular few-body systems. At the same time, they provide insight and data of relevance for more applied research directions such as the study of fusion plasmas, X-ray emissions of astrophysical objects, and radiation damage of biological tissue. For this special issue we invite original contributions covering all aspects of contemporary heavy-particle atomic collision physics, ranging from the development of new theoretical or computational approaches and experimental techniques to the calculation and measurement of cross section data for specific processes and the use of collisional data in plasma modeling and other areas. The goal is to provide a snapshot of current research in the field, of new insights, developments, and applications and of open problems.

### Guest Editors

Prof. Dr. Tom Kirchner

Department of Physics & Astronomy, York University, 4700 Keele Street, Toronto, ON, Canada

Prof. Dr. Michael Schulz

Department of Physics, Missouri University of Science and Technology, Rolla, MO 65409, USA

### Deadline for manuscript submissions

closed (31 January 2019)

## Atoms

an Open Access Journal  
by MDPI

Impact Factor 1.5  
CiteScore 3.1



[mdpi.com/si/15704](https://mdpi.com/si/15704)

*Atoms*

Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[atoms@mdpi.com](mailto:atoms@mdpi.com)

[mdpi.com/journal/](https://mdpi.com/journal/)

[atoms](https://atoms.mdpi.com)



# Atoms

---

an Open Access Journal  
by MDPI

---

Impact Factor 1.5  
CiteScore 3.1



[mdpi.com/journal/  
atoms](https://mdpi.com/journal/atoms)



## 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

---

### Author Benefits

#### Open Access

— free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, ESCI (Web of Science), Astrophysics Data System, Inspec, CAPlus / SciFinder, INSPIRE, and other databases.

#### Journal Rank:

CiteScore - Q2 (Nuclear and High Energy Physics)