



atoms

an Open Access Journal by MDPI



Charge-State Evolution in Ion-Atom/Solid Collisions

Guest Editors:

Dr. Alex M. Imai

Department of Nuclear
Engineering, Kyoto University,
Kyoto 615-8540, Japan

Dr. Viacheslav P. Shevelko

Optical Department, P.N. Lebedev
Physical Institute, Moscow
119991, Russia

Dr. Emily Lamour

Faculty of Science and
Engineering, Sorbonne
University, 75005 Paris, France

Deadline for manuscript
submissions:

closed (31 March 2021)

Message from the Guest Editors

Dear Colleagues,

Since atomic collision phenomena are strongly affected by the charge-states of the projectile ions, both equilibrium and pre-equilibrium charge-states of penetrating ions in solid, dense-gas media and plasmas are essential to pure and applied atomic collision studies. As for the equilibrium charge-states, there has been a number of papers, compilations, and databases published in the literature, but there still a few for pre-equilibrium charge-state evolutions especially for heavy ion collisions in low-energy range although they are highly demanded in material science, biological physics, accelerator technology and so on. After recent advances in experiments (target preparations etc.), theories (cross section calculations etc.), as well as simulations (including more advanced models), this Special Issue of *Atoms* will highlight many kinds of contributions related to charge-state evolutions in ion-atom/solid and plasma collisions, ranging from basic data production, simulation codes and cross sections, to application studies which needs a knowledge of charge-state evolutions and to scope also their future needs.



mdpi.com/si/27636

Special Issue



atoms



an Open Access Journal by MDPI

Editor-in-Chief

Dr. James F. Babb

Institute for Theoretical Atomic
and Molecular Physics, Center for
Astrophysics | Harvard &
Smithsonian, Cambridge, MA
02138, USA

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.

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*)

Contact Us

Atoms Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/atoms
atoms@mdpi.com
[X@Atoms_MDPI](https://twitter.com/Atoms_MDPI)