# Special Issue

# Delbrück Scattering: 50th Anniversary of the Discovery

## Message from the Guest Editor

By the time a new generation of physicists was able to demonstrate Delbrück scattering experimentally through the medium of novel technologies for that period, confirming predictions relying on Feynman diagrams, Max Delbrück had switched his main research area to become a Nobel Prize winner for his studies on replication and the genetic structure of viruses. Fifty years have passed since Lise Meitner's most meritorious student saw his idea demonstrated reliably, aided by QED techniques, strengthening Hans Bethe's early confirmation. However, this effect is still a topical direction for research, expected to open the way to new studies and applications for gamma ray scattering experiments.

The Special Issue invites articles reporting, reviewing or analysing results obtained in experiments related to Delbrück scattering, as well as theoretical studies on this effect. This deflection of gamma photons enabled by vacuum polarisation requires extended studies on nuclear physics energies, from the perspective of a direct, focused approach, together with competing processes or combined with non competing effects.

## Guest Editor

Dr. Rareş Şuvăilă

1. Horia Hulubei National Institute for Physics and Nuclear Engineering, Magurele, Romania
2. National Institute for Research and Development of Marine Geology and Geoecology—GeoEcoMar, Bucharest, Romania

## Deadline for manuscript submissions

closed (15 July 2025)

**Atoms**

an Open Access Journal by MDPI

Impact Factor 1.5
CiteScore 3.1

mdpi.com/si/221161

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

mdpi.com/journal/atoms

# Atoms

an Open Access Journal by MDPI

Impact Factor 1.5
CiteScore 3.1

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)

MDPI