

The screenshot shows the homepage of the Atoms journal. A large yellow circle highlights the 'IMPACT FACTOR' (1.7) and 'CITESCORE' (2.7) information. The search bar at the top right shows the URL for manuscript submission: 'Submit (https://susy.mdpi.com/user/manuscripts/upload?journal=atoms)'.

Search for Articles:

Title / Keyword
Author / Affiliation / Email
Atom
All Article Types

Search

Advanced Search

Journals (about/journals) / Atoms (journal/atoms) / Special Issues (journal/atoms/special-issues) / Photoionization of Atoms (journal/atoms/statistics)

atoms (journal/atoms)

Submit to Atoms (https://susy.mdpi.com/user/manuscripts/upload?form=journal&id=118)
Review for Atoms (https://susy.mdpi.com/reviews/journal/atoms)
Propose a Special Issue (journal/atoms/statistics)

Journal Menu

- Submit to Atoms (https://susy.mdpi.com/user/manuscripts/upload?form=journal&id=118)
- Review for Atoms (https://susy.mdpi.com/reviews/journal/atoms)
- Atoms (https://www.mdpi.com/journal/atoms/about)
- Atoms & Scope (https://www.mdpi.com/journal/atoms/about)
- Editor-in-Chief (https://www.mdpi.com/journal/atoms/editors)
- Editorial Board (https://www.mdpi.com/journal/atoms/reviewers)
- Reviewers (https://www.mdpi.com/journal/atoms/reviewers)
- Editorial Advisory Board (https://www.mdpi.com/journal/atoms/topical_advisory_panel)
- Instructions to Authors (https://www.mdpi.com/journal/atoms/instructions)
- Special Issues (https://www.mdpi.com/journal/atoms/special_issues)

Sections (journal/atoms/sections)

- Article Processing Charge (https://www.mdpi.com/journal/atoms/ago)
- Indexing & Archiving (https://www.mdpi.com/journal/atoms/indexing)
- Editor's Choice Article (https://www.mdpi.com/journal/atoms/editor_choice)
- Most Cited & Most Read (https://www.mdpi.com/journal/atoms/most_cited)
- Journal Statistics (https://www.mdpi.com/journal/atoms/statistics)
- Journal History (https://www.mdpi.com/journal/atoms/history)
- Journal Awards (https://www.mdpi.com/journal/atoms/awards)
- Editorial Office (https://www.mdpi.com/journal/atoms/editorial_office)

Journal Browser

► Journal Browser

volume

issue

Go

> Forthcoming issue (2218-2004/13)
► Current issue (2218-2004/12)

Vol. 19 (2025) (2218-2004/13)
Vol. 12 (2024) (2218-2004/12)
Vol. 11 (2023) (2218-2004/11)
Vol. 10 (2022) (2218-2004/10)
Vol. 9 (2021) (2218-2004/9)
Vol. 8 (2020) (2218-2004/8)
Vol. 7 (2019) (2218-2004/7)
Vol. 6 (2018) (2218-2004/6)
Vol. 5 (2017) (2218-2004/5)
Vol. 4 (2016) (2218-2004/4)
Vol. 3 (2015) (2218-2004/3)
Vol. 2 (2014) (2218-2004/2)
Vol. 1 (2013) (2218-2004/1)

Photoionization of Atoms

- Print Special Issue Flyer (special_issue/flyer/7345d)
- Special Issue Editors
- Special Issue Information
- Keywords
- Benefits of Publishing in a Special Issue
- Published Papers

A special issue of **Atoms (journal/atoms)** (ISSN 2218-2004).

Deadline for manuscript submissions: **closed (31 December 2023)** | Viewed by 25949

Printed Edition Available!
A printed edition of this Special Issue is available [here \(https://www.mdpi.com/books/book/10231\)](https://www.mdpi.com/books/book/10231).

(https://www.mdpi.com/books/book/10231)

Share This Special Issue

(mailto:https://www.mdpi.com/books/book/10231)
(https://www.linkedin.com/shareArticle/?mini=true&url=https://www.mdpi.com/books/book/10231#shareArticle?)
mini=true&url=https://www.mdpi.com/books/book/10231#shareArticle?)
https://www.facebook.com/sharer.php?u=https://www.mdpi.com/books/book/10231#shareArticle?)
ion=0&combination=2C20and%20in%20SB...%5D)
(https://www.facebook.com/sharer.php?u=https://www.mdpi.com/journal/atoms/statistics)

Special Issue Editors

Prof. Dr. Sultanah N. Nahar
E-Mail (✉) Website (<http://www.astronomy.ohio-state.edu/~nahar>)
Guest Editor
Astronomy Department, The Ohio State University, Columbus, OH 43210, USA
Interests: photoionization; electron-ion recombination; photo-excitation; electron impact excitation; spectroscopy; X-ray spectroscopy for atomic processes and biomedical applications; database

Prof. Dr. Guillermo Hinojosa
E-Mail (✉) Website (<https://www fis.unam.mx/directorio/25/guillermo-strong-hinojosa-strong-aguirre>)
Guest Editor
Instituto de Ciencias Fisicas, National Autonomous University of Mexico (UNAM), Cuernavaca 62200, Mexico
Interests: atomic, molecular and optical physics; photoionization of ions; negative ions; fundamental processes in low temperature plasma

Special Issue Information

Dear Colleagues,

Photoionization of an atom or ion is one most common processes involving the interaction of a photon with an atom. It is one of the four most dominant atomic processes, along with photo-excitation, electron-ion recombination, and electron impact excitations, in astrophysical plasmas that produce the spectra and hence carries considerable information about the constituent elements and their abundances, plasma opacity, ionizing fractions, etc. The special issue will present the precise underlying science of photoionization although direct photoionization via absorption of a photon by the atomic system happens, resonance form in the process as the energy of the photon-atom system matches to

Submit to Atoms
([https://www.mdpi.com/user/journals/upload?form\[journal_id\]=118](https://www.mdpi.com/user/journals/upload?form[journal_id]=118))

Review for Atoms
(<https://www.mdpi.com/user/journals/review>)

Propose a Special Issue (<https://www.mdpi.com/sendproposalspecialissue/atoms>)

Manuscripts should be submitted online at www.mdpi.com (<https://www.mdpi.com>) by registering (<https://www.mdpi.com/user/register>) and logging in to this website (<https://www.mdpi.com/user/login>). Once you are registered, click here to go to the submission form (<https://www.mdpi.com/user/managercripts/upload>). Manuscripts can be submitted until the deadline. All submissions that pass pre-check will be reviewed. Accepted papers will be published continuously in the journal (as soon as accepted) and will be listed together on the special issue website. Research articles, review articles as well as short communications, editorials, and other types of papers, a title and short abstract (about 100 words) can be sent to the Editorial Office for announcement on this website.

Submitted manuscripts should not have been published previously, nor be under consideration for publication elsewhere (except conference proceedings papers). All manuscripts are thoroughly refereed through a single-blind peer-review process. A guide for authors and other relevant information for submission of manuscripts is available on the Instructions for Authors (<https://www.mdpi.com/journal/atoms/instructions>) page before submitting a manuscript. The Article Processing Charge (APC) (<https://www.mdpi.com/about/apc>) for publication in this open access (<https://www.mdpi.com/about/openaccess>) journal is 1500 CHF (Swiss Francs). Submitted papers should be well formatted and use good English. Authors may use MDPI's English editing service (<https://www.mdpi.com/authors/english>) prior to publication or during author revisions.

Keywords

- photoionization
- experimental features
- theoretical features
- benchmarking
- astrophysical applications

Benefits of Publishing in a Special Issue

- Ease of navigation: Grouping papers by topic helps scholars navigate broad scope journals more efficiently.
- Greater discoverability: Special Issues support the reach and impact of scientific research. Articles in Special Issues are more discoverable and cited more frequently.
- Expansion of research network: Special Issues facilitate connections among authors, fostering scientific collaborations.
- External promotion: Articles in Special Issues are often promoted through the journal's social media, increasing their visibility.
- e-Book format: Special Issues with more than 10 articles can be published as dedicated e-books, ensuring wide and rapid dissemination.

Further information on MDPI's Special Issue policies can be found [here](https://www.mdpi.com/special_issues_guidelines) (https://www.mdpi.com/special_issues_guidelines).

Published Papers (10 papers)

[Download All Papers](#)

Order results

Content type

Result details

Normal

[Show export options](#) ▾

Research

Jump to: [Review](#)

Open Access Article

37 pages, 768 KB [/2218-2004/12/4/24/pdf?version=1713851676](#)

Theoretical Spectra of Lanthanides for Kilonova Events: Ho I-II, Er I-IV, Tm I-V, Yb I-VI, Lu I-VII ([/2218-2004/12/4/24](#))

by Sultana H. Nahar

Atoms 2024, 12(4), 24; [https://doi.org/10.3390/atoms12040024](#) (<https://doi.org/10.3390/atoms12040024>) - 17 Apr 2024

Cited by 2 ([/2218-2004/12/4/24#metrics](#)) | Viewed by 1456

Abstract The broad emission bump in the electromagnetic spectra observed following the detection of gravitational waves created during the kilonova event of two neutron stars in August 2017, named GW170817, has been linked to the heavy elements of lanthanides (D_{III}) [[Read more](#)].

(This article belongs to the Special Issue [Photoionization of Atoms / Journal/atoms/special_issues/photoionization_atoms](#))

[Show Figures](#)

(https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p001-550.jpg?1713851744) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p003-550.jpg?1713851746) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p004-550.jpg?1713851750) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p005-550.jpg?1713851752) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p006-550.jpg?1713851757) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p007-550.jpg?1713851759) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p008-550.jpg?1713851762) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p009-550.jpg?1713851763) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p010-550.jpg?1713851764) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p011-550.jpg?1713851765) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p012-550.jpg?1713851766) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p013-550.jpg?1713851767) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p014-550.jpg?1713851768) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p015-550.jpg?1713851769) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p016-550.jpg?1713851771) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p017-550.jpg?1713851773) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p018-550.jpg?1713851775) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p019-550.jpg?1713851776) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p020-550.jpg?1713851778) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p021-550.jpg?1713851780) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p022-550.jpg?1713851781) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p023-550.jpg?1713851783) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p024-550.jpg?1713851785) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p025-550.jpg?1713851786) (https://pub.mdpi-res.com/atoms/atoms/12-00024/article_deploy/html/images/atoms-12-00024-p026-550.jpg?1713851788)

Open Access Article

23 pages, 3642 KB [/2218-2004/11/12/12/pdf?version=1702372620](#)

Photionization Study of Neutral Chlorine Atom ([/2218-2004/11/12/12](#))

by Momra Talla Gning and Brahma Sakhoo

Atoms 2023, 11(2), 152; [https://doi.org/10.3390/atoms11120152](#) (<https://doi.org/10.3390/atoms11120152>) - 6 Dec 2023

Cited by 1 ([/2218-2004/11/12/12#metrics](#)) | Viewed by 1696

Abstract Photoionization of neutral chlorine atom is investigated in this paper in the framework of the screening constant per unit nuclear charge (SCUNC) method. Resonance energies, quantum defects and effective charges of the $1s^22p^2$, $1s^22p_1$, $1s^22p_0$ and $1s^22p_{-1}$ states are calculated. The energy levels of the $1s^22p$ atomic system are obtained by the SCUNC method. The resonance energy, quantum defect and effective charge of the $1s^22p_0$ state are 1.14 ± 0.01 eV, 0.000 ± 0.001 and 1.00 ± 0.01 , respectively. The resonance energy and quantum defect of the $1s^22p_{-1}$ state are 1.14 ± 0.01 eV and 0.000 ± 0.001 , respectively. The effective charge of the $1s^22p_1$ state is 1.00 ± 0.01 . The resonance energy and quantum defect of the $1s^22p_2$ state are 1.14 ± 0.01 eV and 0.000 ± 0.001 , respectively. The effective charge of the $1s^22p_2$ state is 1.00 ± 0.01 .

(This article belongs to the Special Issue [Photoionization of Atoms / Journal/atoms/special_issues/photoionization_atoms](#))

[Show Figures](#)

(https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p001-550.jpg?1702372725) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p003-550.jpg?1702372727) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p004-550.jpg?1702372728) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p005-550.jpg?1702372729) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p006-550.jpg?1702372730) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p007-550.jpg?1702372731) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p008-550.jpg?1702372732) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p009-550.jpg?1702372733) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p010-550.jpg?1702372734) (https://pub.mdpi-res.com/atoms/atoms/11-00152/article_deploy/html/images/atoms-11-00152-p011-550.jpg?1702372735)

Open Access Article

20 pages, 4477 KB [/2218-2004/11/4/6/pdf?version=1808528117](#)

L-Shell Photoionization of Magnesium-like Ions with New Results for Ci^{+} ([/2218-2004/11/4/6](#))

by Jean-Paul Monseur, Eugene T. Kennedy, Jean-Marc Bizau, Denis Cubaneys, Sébastien Guibault, Christophe Blanchard, M. Faith Hasoglu and Thomas W. Gorczyca

Atoms 2023, 11(4), 66; [https://doi.org/10.3390/atoms11040066](#) (<https://doi.org/10.3390/atoms11040066>) - 3 April 2023

Cited by 3 ([/2218-2004/11/4/6#metrics](#)) | Viewed by 1868

Abstract This study reports on the absolute photoionization cross sections for the magnesium-like Ci^{+} ion over the 190–370 eV photon energy range, corresponding to the L-shell (2s and 2p subshells) excitation regime. The experiments were performed using the Multi-Analysis Ion Apparatus (MAIA) on [...] [[Read more](#)].

(This article belongs to the Special Issue [Photoionization of Atoms / Journal/atoms/special_issues/photoionization_atoms](#))

[Show Figures](#)

(https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p001-550.jpg?1780528190) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p003-550.jpg?1780528192) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p004-550.jpg?1780528201) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p005-550.jpg?1780528193) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p006-550.jpg?1780528195) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p007-550.jpg?1780528197) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p008-550.jpg?1780528199) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p009-550.jpg?1780528200) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p010-550.jpg?1780528191) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p005-550.jpg?1780528192) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p006-550.jpg?1780528193) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p007-550.jpg?1780528194) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p008-550.jpg?1780528195) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p009-550.jpg?1780528196) (https://pub.mdpi-res.com/atoms/atoms/11-00066/article_deploy/html/images/atoms-11-00066-p010-550.jpg?1780528197)

Open Access Article

14 pages, 902 KB [/2218-2004/11/9/1/pdf?version=1873056599](#)

The Shapes of Stellar Spectra ([/2218-2004/11/9/1](#))

Atoms 2023, 11(9), 61; [https://doi.org/10.3390/atoms11090061](#) (<https://doi.org/10.3390/atoms11090061>) - 20 Mar 2023

Cited by 4 ([/2218-2004/11/9/1#metrics](#)) | Viewed by 1989

Abstract Stellar atmospheres separate the hot and dense stellar interiors from the emptiness of space. Radiation escapes from the outermost layers of a star, carrying direct physical information. Underneath the atmosphere, the very high opacity keeps radiation thermalized and resembling a black body with [...] [[Read more](#)].

(This article belongs to the Special Issue [Photoionization of Atoms / Journal/atoms/special_issues/photoionization_atoms](#))

[Show Figures](#)

(https://pub.mdpi-res.com/atoms/atoms/11-00061/article_deploy/html/images/atoms-11-00061-p001-550.jpg?1873056593) (https://pub.mdpi-res.com/atoms/atoms/11-00061/article_deploy/html/images/atoms-11-00061-p002-550.jpg?1873056592) (https://pub.mdpi-res.com/atoms/atoms/11-00061/article_deploy/html/images/atoms-11-00061-p003-550.jpg?1873056591) (https://pub.mdpi-res.com/atoms/atoms/11-00061/article_deploy/html/images/atoms-11-00061-p004-550.jpg?1873056590) (https://pub.mdpi-res.com/atoms/atoms/11-00061/article_deploy/html/images/atoms-11-00061-p005-550.jpg?1873056589) (<a href="https://pub.mdpi-res.com/atoms/atoms/11-00061



Show Figures
MDPI (https://pub.mdpi-res.com/atoms/atoms-11-00028/article_deploy/html/images/atoms-11-00028-p001-550.jpg?1677722461) (https://pub.mdpi-res.com/atoms/atoms-11-00028/article_deploy/html/images/atoms-11-00028-p002-550.jpg?1677722459) (https://pub.mdpi-res.com/atoms/atoms-11-00028-p003-550.jpg?1677722454)

Open Access Article 21 pages, 1355 KB J2218-2004/10/1/pdf?version=1643189351

Photoionization from Various Systems and Radiative-Rate Coefficients (J2218-2004/10/1)

by Anand K. Bhatia
Atoms 2022, 10(1); <https://doi.org/10.3390/atoms10010009> (https://doi.org/10.3390/atoms10010009) - 19 Jan 2022

Cited by 5 (2/218-2004/10/1 metrics) | Viewed by 2533

Abstract Photoionization or photodetachment is an important process. It has applications in solar- and astrophysics. In addition to accurate wave function of the target, accurate continuum functions are required. There are various approaches, like exchange approximation, method of polarized orbitals, close-coupling approximation, R-matrix formulation, [...] Read more.

(This article belongs to the Special Issue Photoionization of Atoms / journal/atoms/special_issues/photoionization_atoms)

Show Figures

(https://pub.mdpi-res.com/atoms/atoms-10-00009/article_deploy/html/images/atoms-10-00009-p001-550.jpg?1643189441) (https://pub.mdpi-res.com/atoms/atoms-10-00009/article_deploy/html/images/atoms-10-00009-p002-550.jpg?1643189441) (https://pub.mdpi-res.com/atoms/atoms-10-00009/article_deploy/html/images/atoms-10-00009-p003-550.jpg?1643189441) (https://pub.mdpi-res.com/atoms/atoms-10-00009/article_deploy/html/images/atoms-10-00009-p004-550.jpg?1643189441)

Review

Jump to: Research

Open Access Editor's Choice Review 27 pages, 3768 KB J2218-2004/11/3/pdf?version=1678779331

Photoionization and Electron-Ion Recombination in Astrophysical Plasmas (J2218-2004/11/3)

by D. John Miller

Atoms 2023, 11(3), 54; <https://doi.org/10.3390/atoms11030054> (https://doi.org/10.3390/atoms11030054) - 9 Mar 2023

Cited by 5 (2/218-2004/11/3 metrics) | Viewed by 2198

Abstract Photoionization and its inverse, electron-ion recombination, are key processes that influence many astrophysical plasmas (and gasses), and the diagnostics that we use to analyze the plasmas. In this review we provide a brief overview of the importance of photoionization and recombination in astrophysics. [...] Read more.

(This article belongs to the Special Issue Photoionization of Atoms / journal/atoms/special_issues/photoionization_atoms)

Show Figures

(https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p001-550.jpg?1678779331) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p002-550.jpg?1678779322) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p003-550.jpg?1678779319) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p004-550.jpg?1678779313) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p005-550.jpg?1678779321) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p006-550.jpg?1678779312) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p007-550.jpg?1678779318) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p008-550.jpg?1678779315) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p009-550.jpg?1678779316) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p010-550.jpg?1678779327) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p011-550.jpg?1678779324) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p012-550.jpg?1678779328) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p013-550.jpg?1678779315) (https://pub.mdpi-res.com/atoms/atoms-11-00054/article_deploy/html/images/atoms-11-00054-p014-550.jpg?1678779328) (https://pub.mdpi-res.com/atoms/atoms-11-00054-p015-550.jpg?1678779316)

Open Access Review 12 pages, 439 KB J2218-2004/11/3/pdf?version=1678909898

Photoionization and Opacity (J2218-2004/1/2)

by Anil Pradhan

Atoms 2023, 11(1), 52; <https://doi.org/10.3390/atoms11030052> (https://doi.org/10.3390/atoms11030052) - 6 Mar 2023

Cited by 5 (2/218-2004/1/1 metrics) | Viewed by 1561

Abstract Opacity determines radiation transport through material media. In a plasma source, the primary contributors to atomic opacity are bound-bound line transitions and bound-free photoionization into the continuum. We review the theoretical methods for state-of-the-art photoionization calculations based on the R-matrix method as employed [...] Read more.

(This article belongs to the Special Issue Photoionization of Atoms / journal/atoms/special_issues/photoionization_atoms)

Show Figures

(https://pub.mdpi-res.com/atoms/atoms-11-00052/article_deploy/html/images/atoms-11-00052-p001-550.jpg?1678909892) (https://pub.mdpi-res.com/atoms/atoms-11-00052/article_deploy/html/images/atoms-11-00052-p002-550.jpg?1678909878) (https://pub.mdpi-res.com/atoms/atoms-11-00052/article_deploy/html/images/atoms-11-00052-p003-550.jpg?1678909877)

Open Access Review 48 pages, 5260 KB J2218-2004/10/2/pdf?version=1651829927

Measurement of Photoionization Cross-Section for the Excited States of Atoms: A Review (J2218-2004/10/2)

by Md. Golam Ali Beg

Atoms 2022, 10(2), 35; <https://doi.org/10.3390/atoms10020035> (https://doi.org/10.3390/atoms10020035) - 14 Apr 2022

Cited by 6 (2/218-2004/10/2 metrics) | Viewed by 5335

Abstract A review of experimental studies of the measurement of the photoionization cross-section for the excited states of the alkali atoms, alkaline earth atoms, and rare-gas atoms is presented, with emphasis on using multi-step laser excitation, ionization, and the saturation technique. The dependence of [...] Read more.

(This article belongs to the Special Issue Photoionization of Atoms / journal/atoms/special_issues/photoionization_atoms)

Show Figures

(https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p001-550.jpg?1651830028) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p002-550.jpg?1651830013) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p003-550.jpg?1651830017) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p004-550.jpg?1651830016) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p005-550.jpg?1651830040) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p006-550.jpg?1651830039) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p007-550.jpg?1651830021) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p008-550.jpg?1651830030) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p009-550.jpg?1651830038) (https://pub.mdpi-res.com/atoms/atoms-10-00039/article_deploy/html/images/atoms-10-00039-p010-550.jpg?1651830035) (https://pub.mdpi-res.com/atoms/atoms-10-00039-article_deploy/html/images/atoms-10-00039-p011-550.jpg?1651830027) (https://pub.mdpi-res.com/atoms/atoms-10-00039-article_deploy/html/images/atoms-10-00039-p012-550.jpg?1651830024) (https://pub.mdpi-res.com/atoms/atoms-10-00039-article_deploy/html/images/atoms-10-00039-p013-550.jpg?1651830032)

Open Access Review 19 pages, 2649 KB J2218-2004/10/1/pdf?version=1645407203

Atmospheric Processes, Including Photoabsorption, Subject to Outside Charge-Neutral Plasma (J2218-2004/10/1)

by Tu-Nan Chang, Te-Kwei Fang, Chensheng Wang and Xian Guo

Atoms 2022, 10(1), 16; <https://doi.org/10.3390/atoms10010016> (https://doi.org/10.3390/atoms10010016) - 29 Jan 2022

Cited by 8 (2/218-2004/10/1 metrics) | Viewed by 2677

Abstract We present in this review our recent theoretical studies on atomic processes subject to the plasma environment including the α and β emissions and the ground state photoabsorption of the one- and two-electron atoms and ions. By carefully examining the spatial and temporal [...] Read more.

(This article belongs to the Special Issue Photoionization of Atoms / journal/atoms/special_issues/photoionization_atoms)

Show Figures

(https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p001-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p002-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p003-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p004-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p005-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p006-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p007-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016/article_deploy/html/images/atoms-10-00016-p008-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016-p009-550.jpg?1645407260) (https://pub.mdpi-res.com/atoms/atoms-10-00016-p010-550.jpg?1645407260)

Show export options ▾

Displaying articles 1-10

Atoms (journal/atoms) EISSN 2210-2004. Published by MDPI

RSS (rss/journal/atoms) Content Alert (journal/atoms/atom_alert)

Further Information

Article Processing Charges (apc)

Pay an Invoice (about/invoicing)

Open Access Policy (openaccess)

Contact MDPI (about/contact)

Jobs at MDPI (https://careers.mdpi.com)

Guidelines

For Authors (authors)

For Reviewers (reviewers)

For Editors (editors)

For Librarians (librarians)

For Publishers (publishing services)

For Societies (societies)

For Conference Organizers (conference_organizers)

MDPI Journals

Sciforum (https://sciforum.net)

MDPI Books (https://www.mdpi.com/books)

Preprints (https://preprints.mdpi.com)

SciPost (https://scipost.net)

SciPortiles (https://sciportiles.net/?utm_source=mdpi.com&utm_medium=bottom_menu&utm_campaign=initiative)

Encyclopaedia (https://encyclopaedia.nubis)

JAMS (https://jams.pub)

Proceedings Series (about/proceedings)

Follow MDPI

LinkedIn (https://www.linkedin.com/company/mdpi)

Facebook (https://www.facebook.com/MDPISciencePublishing)

Twitter (https://twitter.com/MDPIScience)

YouTube

Instagram

TikTok

Subscribe to receive issue release notifications and newsletters from MDPI journals

Select options ▾

Back to Top

