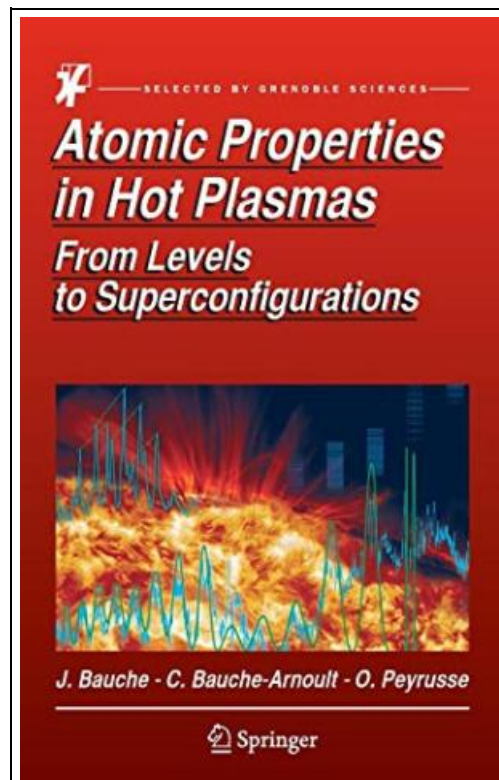


Atomic Properties in Hot Plasmas: From Levels to Superconfigurations (Hardback)



Filesize: 9.67 MB

Reviews

This publication is great. It is full of wisdom and knowledge You will not really feel monotony at at any time of the time (that's what catalogs are for relating to when you ask me).

(Dr. Everett Dicki DDS)

ATOMIC PROPERTIES IN HOT PLASMAS: FROM LEVELS TO SUPERCONFIGURATIONS (HARDBACK)



To download **Atomic Properties in Hot Plasmas: From Levels to Superconfigurations (Hardback)** PDF, remember to follow the button under and download the ebook or have access to additional information that are related to ATOMIC PROPERTIES IN HOT PLASMAS: FROM LEVELS TO SUPERCONFIGURATIONS (HARDBACK) ebook.

Springer International Publishing AG, Switzerland, 2015. Hardback. Condition: New. 1st ed. 2015. Language: English. Brand new Book. This book is devoted to the calculation of hot-plasma properties which generally requires a huge number of atomic data. It is the first book that combines information on the details of the basic atomic physics and its application to atomic spectroscopy with the use of the relevant statistical approaches. Information like energy levels, radiative rates, collisional and radiative cross-sections, etc., must be included in equilibrium or non-equilibrium models in order to describe both the atomic-population kinetics and the radiative properties. From the very large number of levels and transitions involved in complex ions, some statistical (global) properties emerge. The book presents a coherent set of concepts and compact formulas suitable for tractable and accurate calculations. The topics addressed are: radiative emission and absorption, and a dozen of other collisional and radiative processes; transition arrays between level ensembles (configurations, superconfigurations); effective temperatures of configurations, superconfigurations, and ions; charge-state distributions; radiative power losses and opacity. There are many numerical examples and comparisons with experiment presented throughout the book. The plasma properties described in this book are especially relevant to large nuclear fusion facilities such as the NIF (California) and the ITER (France), and to astrophysics. Methods relevant to the central-field configurational model are described in detail in the appendices: tensor-operator techniques, second-quantization formalism, statistical distribution moments, and the algebra of partition functions. Some extra tools are propensity laws, correlations, and fractals. These methods are applied to the analytical derivation of many properties, specially the global ones, through which the complexity is much reduced. The book is intended for graduate-level students, and for physicists working in the field.



[Read Atomic Properties in Hot Plasmas: From Levels to Superconfigurations \(Hardback\) Online](#)



[Download PDF Atomic Properties in Hot Plasmas: From Levels to Superconfigurations \(Hardback\)](#)

Other Kindle Books



[PDF] Corporate Financial Reporting (Paperback)

Follow the link below to download "Corporate Financial Reporting (Paperback)" PDF document.

[Download](#) [eBook](#)

»



[PDF] Minecraft Blockopedia: An Official Minecraft Book from Mojang (Hardback)

Follow the link below to download "Minecraft Blockopedia: An Official Minecraft Book from Mojang (Hardback)" PDF document.

[Download](#) [eBook](#)

»



[PDF] Negotiating with Backbone: Eight Sales Strategies to Defend Your Price and Value (Hardback)

Follow the link below to download "Negotiating with Backbone: Eight Sales Strategies to Defend Your Price and Value (Hardback)" PDF document.

[Download](#) [eBook](#)

»



[PDF] Genuine new book Essentials of Leadership: Principles and Practice (4th Edition) (U.S.) Shiliboge. (U.S.(Chinese Edition)

Follow the link below to download "Genuine new book Essentials of Leadership: Principles and Practice (4th Edition) (U.S.) Shiliboge. (U.S.(Chinese Edition)" PDF document.

[Download](#) [eBook](#)

»



[PDF] LGB The Together Book (Sesame Street) (Hardback)

Follow the link below to download "LGB The Together Book (Sesame Street) (Hardback)" PDF document.

[Download](#) [eBook](#)

»



[PDF] Crafty Fun With Paper! (Hardback)

Follow the link below to download "Crafty Fun With Paper! (Hardback)" PDF document.

[Download](#) [eBook](#)

»