



Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses)

By Liangliang Ji

Download now

Read Online ➔

Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses) By Liangliang Ji

This book is dedicated to the relativistic (laser intensity above 10^{18} W/cm²) laser-plasma interactions, which mainly concerns two important aspects: ion acceleration and extreme-light-field (ELF). Based on the ultra-intense and ultra-short CP lasers, this book proposes a new method that significantly improves the efficiency of heavy-ion acceleration, and deals with the critical thickness issues of light pressure acceleration. More importantly, a series of plasma approaches for producing ELFs, such as the relativistic single-cycle laser pulse, the intense broad-spectrum chirped laser pulse and the ultra-intense isolated attosecond (10-18s) pulse are introduced. This book illustrates that plasma not only affords a tremendous accelerating gradient for ion acceleration but also serves as a novel medium for ELF generation, and hence has the potential of plasma-based optics, which have a great advantage on the light intensity due to the absence of device damage threshold.

↓ [Download Ion acceleration and extreme light field generatio ...pdf](#)

📄 [Read Online Ion acceleration and extreme light field generat ...pdf](#)

Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses)

By Liangliang Ji

Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses) By Liangliang Ji

This book is dedicated to the relativistic (laser intensity above 10^{18} W/cm²) laser-plasma interactions, which mainly concerns two important aspects: ion acceleration and extreme-light-field (ELF). Based on the ultra-intense and ultra-short CP lasers, this book proposes a new method that significantly improves the efficiency of heavy-ion acceleration, and deals with the critical thickness issues of light pressure acceleration. More importantly, a series of plasma approaches for producing ELFs, such as the relativistic single-cycle laser pulse, the intense broad-spectrum chirped laser pulse and the ultra-intense isolated attosecond (10-18s) pulse are introduced. This book illustrates that plasma not only affords a tremendous accelerating gradient for ion acceleration but also serves as a novel medium for ELF generation, and hence has the potential of plasma-based optics, which have a great advantage on the light intensity due to the absence of device damage threshold.

Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses) By Liangliang Ji Bibliography

- Sales Rank: #5423684 in Books
- Published on: 2014-01-24
- Original language: English
- Number of items: 1
- Dimensions: 9.20" h x .40" w x 6.30" l, .60 pounds
- Binding: Hardcover
- 84 pages

 [Download Ion acceleration and extreme light field generatio ...pdf](#)

 [Read Online Ion acceleration and extreme light field generat ...pdf](#)

Editorial Review

From the Back Cover

This book is dedicated to the relativistic (laser intensity above 10^{18} W/cm²) laser-plasma interactions, which mainly concerns two important aspects: ion acceleration and extreme-light-field (ELF). Based on the ultra-intense and ultra-short CP lasers, this book proposes a new method that significantly improves the efficiency of heavy-ion acceleration, and deals with the critical thickness issues of light pressure acceleration. More importantly, a series of plasma approaches for producing ELFs, such as the relativistic single-cycle laser pulse, the intense broad-spectrum chirped laser pulse and the ultra-intense isolated attosecond (10-18s) pulse are introduced. This book illustrates that plasma not only affords a tremendous accelerating gradient for ion acceleration but also serves as a novel medium for ELF generation, and hence has the potential of plasma-based optics, which have a great advantage on the light intensity due to the absence of device damage threshold.

About the Author

Liangliang Ji received his B. Sc. in physics from University of Science and Technology of China in 2006. He obtained his Ph. D. in physics in July 2011, from Shanghai Institute of Optics and Fine Mechanics, Chinese Academy of Sciences. During his Ph.D. study in the group of Prof. Baifei Shen, he mainly worked on new particle acceleration schemes and extreme light field generation based on relativistic laser-plasma interaction. Later on, he won Alexander von Humboldt fellowship and became a post-doc fellow working with Prof. Alexander Pukhov at Duesseldorf University in Germany. His recent research interests include laser-ion acceleration and the effects of quantum electrodynamics (QED) in strong relativistic laser-plasma interaction.

Users Review

From reader reviews:

Sandra Murray:

What do you think about book? It is just for students as they are still students or the idea for all people in the world, the actual best subject for that? Just simply you can be answered for that issue above. Every person has several personality and hobby for every other. Don't to be pushed someone or something that they don't would like do that. You must know how great and important the book Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses). All type of book is it possible to see on many options. You can look for the internet methods or other social media.

Anh Huckaby:

Do you have something that that suits you such as book? The publication lovers usually prefer to opt for book like comic, short story and the biggest one is novel. Now, why not striving Ion acceleration and extreme light field generation based on ultra-short and ultra-intense lasers (Springer Theses) that give your fun preference will be satisfied by simply reading this book. Reading routine all over the world can be said as the opportunity for people to know world better then how they react toward the world. It can't be claimed constantly that reading routine only for the geeky person but for all of you who wants to always be success

person. So , for every you who want to start looking at as your good habit, you may pick Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) become your own personal starter.

Dewey Rascon:

Are you kind of stressful person, only have 10 or maybe 15 minute in your day to upgrading your mind talent or thinking skill also analytical thinking? Then you have problem with the book than can satisfy your short time to read it because pretty much everything time you only find e-book that need more time to be study. Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) can be your answer because it can be read by a person who have those short extra time problems.

Karen Delamora:

Reading a book make you to get more knowledge from it. You can take knowledge and information from a book. Book is composed or printed or highlighted from each source this filled update of news. In this modern era like at this point, many ways to get information are available for an individual. From media social similar to newspaper, magazines, science guide, encyclopedia, reference book, book and comic. You can add your knowledge by that book. Are you ready to spend your spare time to open your book? Or just searching for the Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) when you desired it?

Download and Read Online Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji #MN4VCPYIS8W

Read Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji for online ebook

Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji books to read online.

Online Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji ebook PDF download

Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji Doc

Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji Mobipocket

Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji EPub

MN4VCPYIS8W: Ion acceleration and extreme light field generation based on ultra-short and ultra–intense lasers (Springer Theses) By Liangliang Ji