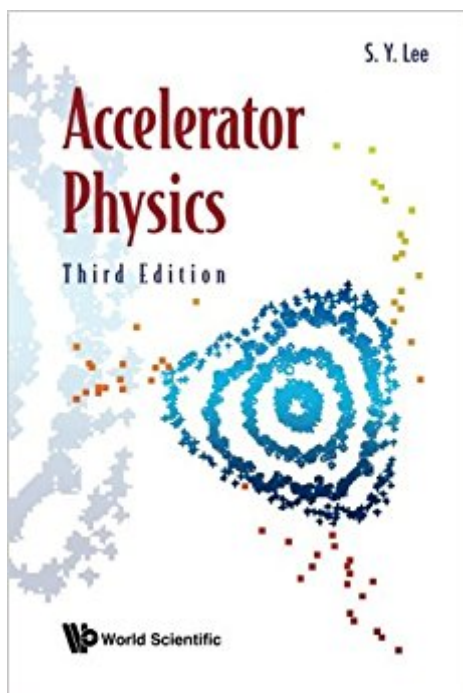


The book was found

Accelerator Physics (Third Edition)



Synopsis

Research and development of high energy accelerators began in 1911. (1) development of high gradient dc and rf accelerators, (2) achievement of high field magnets with excellent field quality, (3) discovery of transverse and longitudinal beam focusing principles, (4) invention of high power rf sources, (5) improvement of ultra-high vacuum technology, (6) attainment of high brightness (polarized/unpolarized) electron/ion sources, (7) advancement of beam dynamics and beam manipulation schemes, such as beam injection, accumulation, slow and fast extraction, beam damping and beam cooling, instability feedback, laser-beam interaction and harvesting instability for high brilliance coherent photon source. The impacts of the accelerator development are evidenced by the many ground-breaking discoveries in particle and nuclear physics, atomic and molecular physics, condensed matter physics, biology, biomedical physics, nuclear medicine, medical therapy, and industrial processing. This book is intended to be used as a graduate or senior undergraduate textbook in accelerator physics and science. It can be used as preparatory course material in graduate accelerator physics thesis research. The text covers historical accelerator development, transverse betatron motion, synchrotron motion, an introduction to linear accelerators, and synchrotron radiation phenomena in low emittance electron storage rings, introduction to special topics such as the free electron laser and the beam-beam interaction. Attention is paid to derivation of the action-angle variables of the phase space, because the transformation is important for understanding advanced topics such as the collective instability and nonlinear beam dynamics. Each section is followed by exercises, which are designed to reinforce concepts and to solve realistic accelerator design problems. Readership: Accelerator, high-energy, nuclear, plasma and applied physicists.

Book Information

Paperback: 556 pages

Publisher: World Scientific Publishing Company; 3 edition (November 17, 2012)

Language: English

ISBN-10: 9814374946

ISBN-13: 978-9814374941

Product Dimensions: 6 x 1.2 x 9 inches

Shipping Weight: 2 pounds (View shipping rates and policies)

Average Customer Review: 1.0 out of 5 stars 1 customer review

Best Sellers Rank: #734,393 in Books (See Top 100 in Books) #90 in Books > Science & Math >

Physics > Nuclear Physics > Atomic & Nuclear Physics #112 in Books > Science & Math > Physics > Nuclear Physics > Particle Physics #121 in Books > Science & Math > Physics > Applied

Customer Reviews

"This is a good book which goes well beyond the standard introductory text on the field. It should satisfy the graduate student specializing in the field and the accelerator scientist willing to cover in major detail the fundamental aspects of the physics of particle accelerators." -- IL Nuovo Saggiatore

"I recommend this book to any student who wants to enter the accelerator field! A must for students and experts." -- GSI Helmholtzzentrum für Schwerionenforschung GMBH Review of the First Edition: "The large number of formulas and the excellent table of contents and index make the book a very useful addition to the library of a scientist or engineer already in the field." -- Physics Today

Research and development of high energy accelerators began in 1911. Since then, milestones achieved are: (1) development of high gradient dc and rf accelerators, (2) achievement of high field magnets with excellent field quality, (3) discovery of transverse and longitudinal beam focusing principles, (4) invention of high power rf sources, (5) improvement of ultra-high vacuum technology, (6) attainment of high brightness (polarized/unpolarized) electron/ion sources, (7) advancement of beam dynamics and beam manipulation schemes, such as beam injection, accumulation, slow and fast extraction, beam damping and beam cooling, instability feedback, laser-beam interaction and harvesting instability for high brilliance coherent photon source. The impacts of the accelerator development are evidenced by the many ground-breaking discoveries in particle and nuclear physics, atomic and molecular physics, condensed matter physics, biology, biomedical physics, nuclear medicine, medical therapy, and industrial processing. This book is intended to be used as a graduate or senior undergraduate textbook in accelerator physics and science. It can be used as preparatory course material in graduate accelerator physics thesis research. The text covers historical accelerator development, transverse betatron motion, synchrotron motion, an introduction to linear accelerators, and synchrotron radiation phenomena in low emittance electron storage rings, introduction to special topics such as the free electron laser and the beam-beam interaction. Attention is paid to derivation of the action-angle variables of the phase space, because the transformation is important for understanding advanced topics such as the collective instability and nonlinear beam dynamics. Each section is followed by exercises, which are designed to reinforce concepts and to solve realistic accelerator design problems.

The fonts used in this book are so thin and the lines on almost all figures are extremely thin. The whole book looks like printed by a printer out of ink. It is so hard to read, even with reading glass -- Think about this is a graduate textbook, students have to read it again and again in at least one semester. Prof. S.Y. Lee of Indiana University lost his mind, sent his manuscript to such a shabby publishing company. Put all his students in shadow in order to save some ink money. Maybe someone can donate some ink to Prof Lee?

[Download to continue reading...](#)

Accelerator Physics (Third Edition) Particle Accelerator Physics (Graduate Texts in Physics)
Accelerator Physics: Example Problems With Solutions Third Eye: Third Eye Activation Mastery,
Easy And Simple Guide To Activating Your Third Eye Within 24 Hours (Third Eye Awakening,
Pineal Gland Activation, Opening the Third Eye) A Certain Scientific Accelerator Vol. 6 Physics for
Scientists and Engineers with Modern Physics: Volume II (3rd Edition) (Physics for Scientists &
Engineers) Physics: for Scientists and Engineers with Modern Physics, Third Edition The Solid
State: An Introduction to the Physics of Crystals for Students of Physics, Materials Science, and
Engineering (Oxford Physics Series) Head First Physics: A learner's companion to mechanics and
practical physics (AP Physics B - Advanced Placement) Physics for Kids : Electricity and Magnetism
- Physics 7th Grade | Children's Physics Books Six Ideas that Shaped Physics: Unit N - Laws of
Physics are Universal (WCB Physics) Quantum Electrodynamics: Gribov Lectures on Theoretical
Physics (Cambridge Monographs on Particle Physics, Nuclear Physics and Cosmology) Six Ideas
That Shaped Physics: Unit R - Laws of Physics are Frame-Independent (WCB Physics)
Problem-Solving Exercises in Physics: The High School Physics Program (Prentice Hall Conceptual
Physics Workbook) 5 Steps to a 5 AP Physics 1: Algebra-Based 2018 edition (5 Steps to a 5 Ap
Physics 1 & 2) Geometry, Topology and Physics, Second Edition (Graduate Student Series in
Physics) Physics for Scientists & Engineers with Modern Physics (4th Edition) Physics for Scientists
and Engineers: A Strategic Approach with Modern Physics (4th Edition) Physics for Scientists and
Engineers: A Strategic Approach with Modern Physics (3rd Edition) University Physics with Modern
Physics (14th Edition)

[Contact Us](#)

[DMCA](#)

[Privacy](#)

