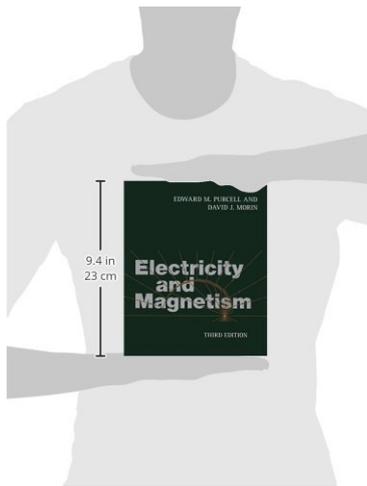


[PDF] Electricity And Magnetism

Edward M. Purcell, David J. Morin - pdf download
free book



Books Details:

Title: Electricity and Magnetism

Author: Edward M. Purcell, David J.

Released:

Language:

Pages: 853

ISBN: 1107014026

ISBN13: 9781107014022

ASIN: 1107014026

[**CLICK HERE FOR DOWNLOAD**](#)

pdf, mobi, epub, azw, kindle

Description:

For 50 years, Edward M. Purcell's classic textbook has introduced students to the world of electricity and magnetism. The third edition has been brought up to date and is now in SI units. It features hundreds of new examples, problems, and figures, and contains discussions of real-life applications. The textbook covers all the standard introductory topics, such as electrostatics, magnetism, circuits, electromagnetic waves, and electric and magnetic fields in matter. Taking a nontraditional approach, magnetism is derived as a relativistic effect. Mathematical concepts are introduced in parallel with the physics topics at hand, making the motivations clear. Macroscopic phenomena are derived rigorously from the underlying microscopic physics. With worked examples, hundreds of illustrations, and nearly 600 end-of-chapter problems and exercises, this textbook is ideal for electricity and magnetism courses. Solutions to the exercises are

available for instructors at www.cambridge.org/Purcell-Morin.

- Title: Electricity and Magnetism
 - Author: Edward M. Purcell, David J. Morin
 - Released:
 - Language:
 - Pages: 853
 - ISBN: 1107014026
 - ISBN13: 9781107014022
 - ASIN: 1107014026
-

Electricity and Magnetism (last updated: 2020 April 17). Chapter 1. Electric Fields. 1.1. Force on a Dipole in an Inhomogeneous Electric Field. 3.6. Induced Dipoles and Polarizability. 3.7. The Simple Dipole. Within electricity and magnetism attempts at theoretical unification were conceived in terms of either gravitational-type forces acting at a distance, as with Ampère, or, with Faraday, in terms of lines of force and the ambient medium in which they were thought to travel. Electricity and Magnetism For 50 years, Edward M. Purcell's classic textbook has introduced students to the world of electricity and magnetism. This third edition has been brought up to date and is now in SI units. It features hundreds of new examples, problems, and figures, and contains discussions of real-life applications. The textbook covers all the standard introductory topics, such as electrostatics, magnetism, circuits, electromagnetic waves, and electric and magnetic fields in matter.

Electricity and magnetism are manifestations of a single underlying electromagnetic force. Electromagnetism is a branch of physical science that describes the interactions of electricity and magnetism, both as separate phenomena and as a singular electromagnetic force. There is much symmetry between electricity and magnetism. It is possible for electricity to give rise to magnetism, and symmetrically for magnetism to give rise to electricity (as in the exchanges within an electric transformer). Electricity and magnetism.

Chapter 1. Electric Fields. 1.1 Introduction 1.2 Triboelectric Effect 1.3 Experiments with Pith Balls 1.4 Experiments with a Gold-leaf Electroscope 1.5 Coulomb's Law 1.6 Electric Field E . 1.6.1 Field of a Point Charge 1.6.2 Spherical Charge Distributions 1.6.3 A Long, Charged Rod 1.6.4 Field on the Axis of and in the Plane of a Charged Ring 1.6.5 Field on the Axis of a Uniformly Charged Disc 1.6.6 Field of a Uniformly Charged Infinite Plane Sheet 1.7 Electric. Purcell, Edward M. Electricity and magnetism / Edward M. Purcell, David J. Morin, Harvard University, Massachusetts. Third edition. pages cm ISBN 978-1-107-01402-2 (Hardback) 1. Electricity. 2. Magnetism. I. Title. QC522.P85 2012 537dc23. Electricity and Magnetism. Definition. The Physical phenomena involving electric charges, their motions, and their effects. The motion of a charge is affected by its interaction with the electric field and, for a moving charge, the magnetic field. The electric field acting on a charge arises from the presence of other charges and from a time-varying magnetic field. The magnetic field acting on a moving charge arises from the motion of other charges and from a time-varying electric field.