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Titolo	Physics—Problems, Solutions, and Computer Calculations [[electronic resource]] : Volume 2 Waves, Sound, Electricity, Magnetism, and Optics // by Wan Muhamad Saridan Wan Hassan, Abd Rahman Tamuri, Muhammad Zaki Yaacob, Roslinda Zainal
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Descrizione fisica	1 online resource (583 pages)
Altri autori (Persone)	TamuriAbd Rahman Zaki YaacobMuhammad ZainalRoslinda
Disciplina	535
Soggetti	Optics Plasma waves Condensed matter Optics and Photonics Waves, instabilities and nonlinear plasma dynamics Condensed Matter Physics
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Nota di contenuto	Waves -- Sound wave -- Superposition and stationary waves -- Electric field -- Gauss's law -- Electric potential -- Capacitance and dielectric -- Current and resistance -- Direct current circuit -- Magnetic field -- Sources of magnetic field -- Magnetic properties of matter -- Faraday's law -- Inductance -- Alternating current circuit -- Electromagnetic waves -- Light phenomena -- Mirror and lens -- Interference of light -- Diffraction of light.
Sommario/riassunto	Knowledge of and skill in physics are essential foundations for studies in science and engineering. This book offers students an introduction to the basic concepts and principles of physics. It covers various topics specifically related to waves, sound, electricity, magnetism, and optics. Each chapter begins with a summary of concepts, principles, definitions, and formulae to be discussed, as well as ending with problems and solutions that illustrate the specific topic. Steps are

detailed to help build reasoning and understanding. There are 250 worked problems and 100 exercises in the book, as well as 280 figures to help the reader visualize the processes being addressed. Computer calculations and solutions are carried out using wxMaxima to give insight and help build computational skills. The book is aimed at first-year undergraduate students studying introductory physics, and would also be useful for physics teachers in their instruction, particularly the exercises at the end of each chapter.
