1. Record Nr. UNINA9910816195603321 Autore Lewis R. A (Roger Adrian), <1957-> **Titolo** Terahertz physics / / R.A. Lewis [[electronic resource]] Cambridge:,: Cambridge University Press,, 2012 Pubbl/distr/stampa **ISBN** 1-316-08972-X 1-139-08819-X 1-139-78261-4 1-139-77962-1 1-139-77658-4 1-283-87075-4 1-139-77810-2 Descrizione fisica 1 online resource (xix, 275 pages) : digital, PDF file(s) Disciplina 539.2 Soggetti Submillimeter waves Electromagnetic waves **Physics** Terahertz spectroscopy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Title from publisher's bibliographic system (viewed on 05 Oct 2015). Nota di contenuto pt. 1. Basics -- pt. 2. Components -- pt. 3. Applications. Sommario/riassunto Terahertz physics covers one of the least explored but richest regions of the electromagnetic spectrum. Designed for independent learning, this is the first book to open up this exciting new field to students of science and engineering. Written in a clear and consistent style, the textbook focuses on an understanding of fundamental physical principles at terahertz frequencies and their applications. Part I outlines the foundations of terahertz science, starting with the mathematical representation of oscillations before exploring terahertz-frequency light, terahertz phenomena in matter and the terahertz interactions between light and matter. Part II covers components of terahertz technology, from sources of terahertz frequency radiation, through the manipulation of the radiation, to its detection. Part III deals with

applications, including time-domain spectroscopy. Highlighting

modern developments and concepts, the book is ideal for self-study. It features precise definitions, clear explanations, instructive illustrations, fully worked examples, numerous exercises and a comprehensive glossary.