1. Record Nr. UNICAMPANIAVAN00124733

Autore	TermehYousefi, Amin
Titolo	Nanocomposite-Based Electronic Tongue : Carbon Nanotube Growth by Chemical Vapor Deposition and Its Application / Amin TermehYousefi
Pubbl/distr/stampa	Cham, : Springer, 2018
Descrizione fisica	XII, 101 p. : ill. ; 24 cm
Disciplina	621.36 541 571.4 610.28 620.1 610.153
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910725095803321

Autore	Biswas D. J.
Titolo	A Beginner's Guide to Lasers and Their Applications, Part 1 : Insights into Laser Science / / by Dhruba J. Biswas
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2023
ISBN	9783031243301 9783031243295
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (331 pages)
Collana	Undergraduate Lecture Notes in Physics, , 2192-4805
Disciplina	016.37
Soggetti	Lasers Telecommunication Spectrum analysis Optical materials Biology - Technique Biophysics Biomedical engineering Laser Microwaves, RF Engineering and Optical Communications Spectroscopy Optical Materials Biophysical Methods Biomedical Devices and Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1: Introduction -- Chapter 2: Behavior of light -- Chapter 3: Quantization of Energy -- Chapter 4: Lasers – At a Glance -- Chapter 5: Population Inversion and Consideration of Energy Levels of a lasing medium -- Chapter 6: Cavity and its Bearing on the Operation of Lasers -- Chapter 7: Continuous and Pulsed Lasers -- Chapter 8: Broadening of Gain and its Bearing on the Laser Subtleties -- Chapter 9: Boosting the Performance of a Pulsed Laser -- Chapter 10: Different Types of Lasers -- Chapter 11: Molecular gas lasers -- Chapter 12:

Semiconductor lasers.

Sommario/riassunto

This two-volume book provides an enriching insight into the laser, covering different types of lasers, the basic science behind the technology, their role at the cutting-edge of current scientific research, and their wide-ranging applications. With just high school physics as a prerequisite and favoring qualitative yet scientifically sound explanations over high-level mathematics, this book is aimed at a broad spectrum of readers in physics, chemistry, engineering, medicine, and biology. Its engaging and lucid presentation is enhanced with plenty of illustrations, making the world of the laser accessible to undergraduate students in the sciences and any other inquisitive readers with high school physics under their belts. Furthermore, the text is often laced with anecdotes, picked from history, that are bound to pique the minds of the readers. It is ideal for self-study or as a complement to courses on optics and optoelectronics. This volume, Part 1of 2, explains the fundamentals of optics, what a laser is, how it works, and what is unique about the light it emits, from fundamental quantum theory through population inversion and cavity to common laser types. It is followed by Part 2 which depicts the many advances in science enabled by the laser, including spectroscopy, nonlinear optics, optical cooling and trapping, and optical tweezers, among many others, and provides a glimpse into the ways that the laser affects our lives via its uses in medicine, manufacturing, the nuclear industry, energy, defence, communication, ranging, pollution monitoring, art conservation, fashion, beauty, and entertainment.