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Descrizione fisica	1 online resource (221 p.)
Collana	Nano-Optics and Nanophotonics, , 2192-1970
Disciplina	621.365
Soggetti	Lasers Photonics Nanotechnology Nanoscale science Nanoscience Nanostructures Optics, Lasers, Photonics, Optical Devices Nanotechnology and Microengineering Nanoscale Science and Technology
Lingua di pubblicazione	Inglese
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Preface -- Silicon Light-Emitting Diodes and Lasers Using Dressed Photons -- Theoretical Analysis on Optoelectronic Properties of Organic Materials: Solar Cells and Light-Emitting Transistors -- Laser Spectroscopy Using Topological Light Beams -- Localized Modes in Nonlinear Discrete Systems.
Sommario/riassunto	This book focuses on the recent progress in nanophotonics technology to be used to develop novel nano-optical devices, fabrication technology and advanced systems. It reviews light-emitting diodes and lasers made of silicon bulk crystals in which the light emission principle is based on dressed-photon-phonons. Further topics include: theoretical studies of optoelectronic properties of molecular condensates for organic solar cells and light-emitting devices, the basics of topological light beams together with their important

properties for laser spectroscopy, spatially localized modes emerging in nonlinear discrete dynamic systems and theoretical methods to explore the dynamics of nanoparticles by the light-induced force of tailored light fields under thermal fluctuations. These topics are reviewed by leading scientists. This overview is a variable resource for engineers and scientists working in the field of nanophotonics.