Record Nr. UNINA9910164982103321 Progress in Nanophotonics 4 / / edited by Motoichi Ohtsu, Takashi **Titolo** Yatsui Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2017 **ISBN** 3-319-49013-3 Edizione [1st ed. 2017.] 1 online resource (XIII, 146 p. 91 illus., 26 illus. in color.) Descrizione fisica Nano-Optics and Nanophotonics, , 2192-1970 Collana Disciplina 620.5 Soggetti Lasers **Photonics** Quantum optics Nanotechnology **Optics** Electrodynamics Nanoscale science Nanoscience **Nanostructures** Optics, Lasers, Photonics, Optical Devices **Quantum Optics** Nanotechnology and Microengineering Classical Electrodynamics Nanoscale Science and Technology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Progress in dressed photon technology and the future --Nonequilibrium statistical mechanical models for photon breeding processes assisted by dressed-photon-phonons -- Nearfield-assisted chemical reactions and its applications -- Nanophotonics-based selfoptimization for macro-optical applications -- Ultraflexible organic electronics and photonics.

Sommario/riassunto

This book presents the recent progress in the field of nanophotonics. It

contains review-like chapters focusing on various but mutually related topics in nanophotonics written by the world's leading scientists. Following the elaboration of the idea of nanophotonics, much theoretical and experimental work has been carried out, and several novel photonic devices, high-resolution fabrication, highly efficient energy conversion, and novel information processing have been developed in these years. Novel theoretical models describing the nanometric light-matter interaction, nonequilibrium statistical mechanical models for photon breeding processes and near-field assisted chemical reactions as well as lightmatter interaction are also explained in this book. It describes dressed photon technology and its applications, including implementation of nanophotonic devices and systems, fabrication methods and performance characteristics of ultrathin, ultraflexible organic lightemitting diodes, organic solar cells and organic transistors.