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| Disciplina | 681.2 |
| Soggetti | Lasers Photonics Optical materials Electronic materials Microwaves Optical engineering Analytical chemistry Materials science Optics, Lasers, Photonics, Optical Devices Optical and Electronic Materials Microwaves, RF and Optical Engineering Analytical Chemistry Characterization and Evaluation of Materials |
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| Nota di contenuto | Plasmonic Photonic Crystal Fibers -- Hybrid Fiber-Optic Sensors -- Microstructured Fibers for Sensing -- Optical Microfiber Sensors -- Fiber-Based Infrasonic Sensing -- Specialty Fiber Grating-Based Acoustic Sensing -- Electrospinning Nanofibers -- Nanofibers for Gas Sensing -- Sapphire-Derived Fibers and Optical Fiber Sensing -- Thermoelectric Fibers -- In-Fiber Breakup -- Nano- and Micro-Structuring of Materials Using Polymer Cold Drawing Process -- Fiber-Based Triboelectric Nanogenerators -- Fiber-Shaped Energy-Storage Devices -- Brillouin Fiber Laser Sensors. |
| Sommario/riassunto | Fiber sensing technologies have enabled both fundamental studies and a wide spectrum of applications in every aspect of life. This book |

highlights the recent advancement in fiber sensing technologies based on newly developed sensing mechanisms, advanced fiber structures, and functional materials. In particular, the integration of functional materials with different electrical, optical, thermal, or mechanical properties into a single fiber offers a wealth of new opportunities in sensing. The book covers the major developments in novel fiber materials, such as semiconductors, metals, polymers, soft glasses, and carbon materials, as well as the sensing applications based on both single fiber and multi-dimensional fiber arrays for temperature, light, strain, vibration, electric and magnetic fields, hazardous chemicals, gases, and physiological signals.
