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Nota di contenuto	1. Introduction -- 2. Theory and Measurement Approaches -- 3. Optical and Wireless Devices, Fabrication Process and Applications -- 4. Nanotechnology and MEMS: Design, Technology and Measurements -- 5. Nanocomposite Materials and Optical Sensors -- 6. Instrumentation for Measurement Procedures -- 7. Electronic Measurements and Signal processing -- 8. Noise.
Sommario/riassunto	Optoelectronics--technology based on applications light such as micro/nano quantum electronics, photonic devices, laser for

measurements and detection--has become an important field of research. Many applications and physical problems concerning optoelectronics are analyzed in Optical Waveguiding and Applied Photonics. The book is organized in order to explain how to implement innovative sensors starting from basic physical principles. Applications such as cavity resonance, filtering, tactile sensors, robotic sensor, oil spill detection, small antennas and experimental setups using lasers are analyzed. Innovative materials such as nanocomposites are characterized, designed, and applied in order to provide new ideas about detection principles. As with many electric circuitries, light applications and architectures suffer from noising due to physical and transmission connections. The book illustrates some examples for practical issues. The theory and the nanotechnology facilities provide important tools for researchers working with sensing applications.