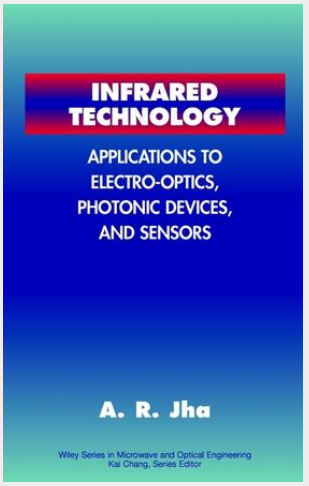
Jha

Infrared Technology

Applications to Electro-Optics, Photonic Devices and Sensors



324,50 €
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In diesem Band werden alle Aspekte der Infrarotstrahlung und ihrer potentiellen technischen Anwendung erläutert. Ausgehend von Kapiteln zur Theorie der Infrarotstrahlung, zur Übertragung von IR-Signalen in der Atmosphäre, zu potentiellen IR-Quellen sowie zu Detektoren werden zahlreiche Einsatzgebiete beschrieben. Dazu gehört die Anwendung von IR in Medizin, Telekommunikation, Raumfahrt und Militär in Form von Laserradaren, CW-Diodenlasern, Festkörperlasern, Geräten zur Fernerkundung und verschiedenste Sensoren. (11/00)

A complete reference guide to the theory, design, and applications of infrared technology Rapid advances in infrared (IR), photonic, and electrooptic technologies have given rise to sophisticated sensors with important commercial, industrial, and military applications-from remote sensing, surveillance, and high-resolution TV to home security systems. This book provides scientists and engineers with a comprehensive, state-of-the-art guide to the analysis and development of IR, photonic, and electrooptical devices and systems for specific applications. Well-known industry expert A. R. Jha compiles and consolidates the latest data on IR sources and systems, presenting fully referenced technical information plus numerical examples illustrating performance parameters and design aspects for an amazingly broad array of applications. Basic IR theory is also provided. Coverage includes: * Transmission characteristics of optical signals through the atmosphere, including effects of scattering, absorption, turbulence, and diffraction * Performance characteristics and capabilities of various IR sources, including state-of-the-art laser technologies * Performance capabilities of IR detectors and focal planar arrays (FPAs) as well as passive and active IR and electronic devices * Potential and existing applications in such diverse fields as medicine, telecommunications, space research, missile systems, and defense IR signature analysis and measurement techniques

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