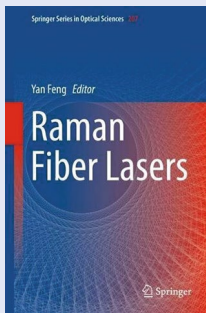


Handbook of Optoelectronics

Edited by John P. Dakin & Robert G. W. Brown

CRC PRESS: 2017. 2192PP. £269.50

This three-volume set is an updated and self-contained reference covering the basic science, light sources, devices and modern applications associated with optoelectronics technologies. This second edition provides a complete update of the original work with a focus on systems and applications. Covered in Volume I are optoelectronic devices including semiconductor lasers, optical detectors and receivers, optical fibre devices, modulators, amplifiers, integrated optics, nanodevices, LEDs and organic LEDs, and engineered optical materials. Volume II describes the technologies used for various tasks such as communications, imaging, displays, sensing, data processing and optical-to-electrical energy conversion. Volume III, a new addition, explores optoelectronics applications in commercially important areas including infrastructure, transport, security, environmental monitoring, the military, the oil and gas industries, energy generation and medicine.

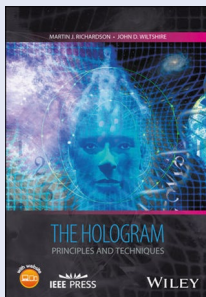


Raman Fiber Lasers

Edited by Yan Feng

SPRINGER: 2017. 368PP. £88.00

Raman fibre lasers have emerged as a versatile laser technology for generating high-power light in the visible to mid-infrared regions, and they are already being applied in the fields of telecommunications, astronomy, cold-atom physics, laser spectroscopy, environmental sensing and laser medicine. Written by experts in the field, this text covers various topics relating to Raman fibre laser research including power scaling, cladding and diode pumping, cascade Raman shifting, single-frequency operation and power amplification. Other topics discussed include mid-infrared laser generation, infrared super-continuum light sources, specialty optical fibres and random distributed feedback Raman fibre lasers. This book is suitable for scientists, students and technicians seeking to understand the recent developments and future trends of this promising and multifaceted technology.

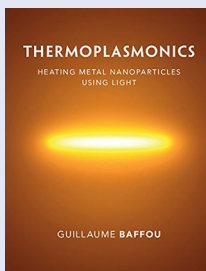


The Hologram

By Martin J. Richardson & John D. Wiltshire

WILEY: 2017. 336PP. US\$83.50

This book provides an overview of the currently available recording materials and laser technology used for the fabrication of holograms. It contains a step-by-step guide to the production of holograms, and also outlines the most common problems encountered in producing satisfactory images in the laboratory, as well as dealing with the wide range of optical and chemical techniques used in commercial holography. Tutorials on the types of lasers and optical systems employed when dealing with holograms, diffraction theory and wavefront reconstruction are included. Conventional holography and digital image holograms are also detailed. This book will be a comprehensive resource for students, researchers and technicians working in academia and commercial laboratories on the production of holograms.



Thermoplasmonics

By Guillaume Baffou

CAMBRIDGE UNIV. PRESS: 2017. 314PP. £54.99

Under appropriate illumination, metal nanoparticles can exhibit enhanced light absorption, effectively becoming nanoscale sources of heat that can be precisely controlled using light. This thermal behaviour can have important applications in photothermal cancer therapy, drug and gene delivery, nanochemistry and photothermal imaging. This title provides an overview of this exciting new field of thermoplasmonics and a detailed discussion of its theoretical foundations. Topics discussed include nanoplasmonics, the thermodynamics of metal nanoparticles, numerical simulation techniques and thermal microscopy techniques. This text will appeal to all researchers and graduate students working in plasmonics, nano-optics and thermal-induced processes at the nanoscale.

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