

# **Books with numerous** examples!

K.J. Ebeling, University of Ulm

## **Integrated Optoelectronics**

#### **Waveguide Optics, Photonics, Semiconductors**

1993. IX, 537 pp. 289 figs. Hardcover 98,- ISBN 3-540-56599-X

This book provides a basic understanding of the devices used in optoelectronic integrated circuits and optical signal processing such as waveguides, couplers, switches, modulators, laser diodes, and photodetectors. The descriptions start from well-known basic physical principles. The derivations are detailed and can be followed without additional references. The book contains numerous quantitative examples and, in addition, a large number of end-of-chapter problems.



R.G. Hunsperger, University of Delaware, Newark, DE

# **Integrated Optics:** Theory and Technology

3rd ed. 1991. XIX, 347 pp. 192 figs. 17 tabs. (Springer Series in Optical Sciences, Vol. 33) Softcover DM 82,-ISBN 3-540-53305-2

**Integrated Optics** is comprehensive and thorough enough for use both as a classroom text (practice problems are included) and as a specialist's reference. The gratifying success of the first two editions and the continuing rapid development of the field necessitated the writing of this third edition. All chapters have been revised and updated, and a new chapter on quantum well devices has been added. As in the previous editions, detailed descriptions of the phenomena, devices, and technology used in optical integrated circuits and their relationship to fiber optics are presented.



Prices are subject to change without notice. All prices for books and journals include 7% VAT. In EC countries the local VAT is

Springer-Verlag 🗆 Heidelberger Platz 3, W-1000 Berlin 33, F.R. Germany 🗀 175 Fifth Ave., New York, NY 10010, USA 🗌 8 Alexandra Rd., London SW 19 7JZ, England 🗀 26, rue des Carmes, F-75005 Paris, France 🗀 37-3, Hongo 3-chome, Bunkyo-ku, Tokyo 113, Japan 🗆 Room 701, Mirror Tower, 61 Mody Road, Tsimshatsui, Kowloon, Hong Kong 🗆 Avinguda Diagonal, 468-4° C, E-08006 Barcelona, Spain 🗆 Wesselényi u. 28, H-1075 Budapest, Hungary

#### **FORTHCOMING PAPERS**

A Tunable Bragg Cavity for an Efficient Millimeter FEL Driven by **Electrostatic Accelerators** 

I. Boscolo, I. Fabbri (Italy)

Thermally Induced Optical Bistability in a New Polymeric Blend at Room Temperature

U. Bernini, L. De Stefano, P. Mormile, G. Pierattini, P. Russo (Italy)

Four-Branch Oscillation from a Dual-Polarization Cavity CO2 Laser

D. J. Biswas, P. Nilaya, U. K. Chatterjee (India)

### Applied Physics A 57, No. 2 (1993)

Synergetic Ordering in Solids (Part I)

Editorial 109

H. Haken

Basic Concepts of Synergetics 111

E. Kotomin, M. Zaiser

A Mesoscopic Approach to Point-Defect Clustering in Solids during Irradiation 117

C. Abromeit, Y. Estrin

Point-Defect-Driven Dislocation Patterning during Deformation under Irradiation 123

U. Holzwarth, U. Eßmann

The Evolution of Persistent Slip Bands in Copper Single Crystals 131

Spatio-Temporal Aspects of Low-Temperature Thermomechanical Instabilities: A Model Based on Dislocation Dynamics 143

Solids and Materials

Theory of Spatial Subharmonic Instability Under Hologram Recording in a Photorefractive Crystal with Applied AC Field 153

A. T. Werner, J. Anders, H. J. Byrne, W. K. Maser, M. Kaiser, A. Mittelbach,

Broadband Electroluminescent Emission from Fullerene Crystals 157

K. Buse, K. H. Ringhofer

Pyroelectric Drive for Light-Induced Charge Transport in the Photorefractive Process 161

M. U. Lehr, H.-J. Schulz, M. Thiede

Bistable Heating of Solid Samples Immersed in Liquid Helium 167

B. Morosin, X.-D. Xiang, M. Fuhrer, A. Zettl Structural Properties of Vapor-Grown C<sub>60</sub> Crystals 171

Surfaces and Multilayers

P. B. Kargl, R. Kullmer, D. Bäuerle

Periodic Structures in Pyrolytic Laser-CVD of W from WCl<sub>6</sub> 175

P. González, D. Fernández, J. Pou, E. García, J. Serra, B. León, M. Pérez-Amor, T. Szörényi

Study of the Gas-Phase Parameters Affecting the Silicon-Oxide Film Deposition Induced by an ArF Laser 181

T. Kacsich, Th. Weber, W. Bolse, K. P. Lieb

Xenon-Beam-Induced Atomic Transport through Cr/Al and Cr<sub>2</sub>N/Al Interfaces 187

G. I. Grigorov, K. G. Grigorov, M. Stoyanova, J. L. Vignes, J. P. Langeron, P. Deniean

Aluminium Diffusion in Titanium Nitride Films.

Efficiency of TiN Barrier Layers 195

Rapid Communications

R. Schwedler, F. Brüggemann, A. Kohl, K. Wolter, K. Leo, H. Kurz

Type-I and Type-II Wannier-Stark Effect in InGaAs/InGaAs Superlattices 199

W. Albrecht, Th. Kruse, K. Leo, H. Kurz

Dynamics of Optically Excited Quasiparticles in YBa2Cu3O7 203

R. Gaisch, R. Berndt, J. K. Gimzewski, B. Reihl, R. R. Schlittler, W. D. Schneider, M. Tschudy

Internal Structure of C60 Fullerene Molecules as Revealed by Low-Temperature STM 207

J.-P. Locquet, C. Gerber, A. Cretton, Y. Jaccard, E. Williams, E. Mächler Electrochemical Oxidation of La<sub>2</sub>CuO<sub>4</sub> Thin Films Grown by Molecular Beam Epitaxy 211

A 5