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Edited by Carl W. Wilmsen, Henryk Temkin and Larry A. Coldren
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Vertical-Cavity Surface-Emitting Lasers

One of the key advances in photonic technology in recent years is the development of vertical-cavity surface-emitting lasers, or VCSELs. These devices have a huge range of potential applications, in areas such as communications, printing, and optical switching. This book provides a clear insight into the physics of VCSELs and describes details of their fabrication and applications.

All of the book's contributors are at the forefront of VCSEL research and development. Together they provide complete and coherent coverage of the current state of the art. The opening chapters cover VCSEL design, emission from microcavities, growth, fabrication, and characterization. These are followed by chapters on long- and short-wavelength VCSELs, optical data links, and free-space optical processing.

The book will be of great interest to graduate students and researchers in electrical engineering, applied physics, and materials science. It will also be an excellent reference volume for practicing engineers in the photonics industry.

Carl Wilmsen is Professor of Electrical Engineering at Colorado State University, where he has served as Head of the Department and as Associate Director of the Optoelectronic Computing System Center.

Henryk Temkin holds the Jack Maddox Chair in Electrical Engineering at Texas Tech University. He is a Fellow of the IEEE.

Larry Coldren is Professor of Electrical and Computer Engineering at the University of California, Santa Barbara. He is a Fellow of the IEEE and the OSA. He has previously published a book entitled *Diode Lasers and Photonic Integrated Circuits*.

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Edited by

CARL W. WILMSEN
Colorado State University

HENRYK TEMKIN
Texas Tech University

and

LARRY A. COLDREN
University of California, Santa Barbara

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To our wives
Ann, Bharti, and Donna

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Contributors

Dr. Dubravko I. Babić
Hewlett-Packard Laboratories
Palo Alto, CA 94304

Professor John E. Bowers
Department of Electrical & Computer Engineering
University of California, Santa Barbara
Santa Barbara, CA 93106

Dr. Kent D. Choquette
Sandia National Laboratories
Albuquerque, NM 87185

Professor Larry A. Coldren
Department of Electrical & Computer Engineering
University of California, Santa Barbara
Santa Barbara, CA 93106

Kent M. Geib
Sandia National Laboratories
Albuquerque, NM 87185

Dr. Kirk S. Giboney
Hewlett-Packard Laboratories
Palo Alto, CA 94304

Dr. Kenneth Hahn
Hewlett-Packard Laboratories
Palo Alto, CA 94304

Eric R. Hegblom
Department of Electrical & Computer Engineering
University of California, Santa Barbara
Santa Barbara, CA 93106

Y. H. Houng
Hewlett-Packard Laboratories
Palo Alto, CA 94304

Dr. N. E. J. Hunt
Mitra Imaging
Waterloo, Ontario,
Canada

Dr. Kenichi Kasahara
NEC Corporation
Tsukuba,
Japan

Dr. Dmitri V. Kuksenkov
Polaroid Corp.
Cambridge, MA

Dr. Joachim Piprek
Materials Science Program
University of Delaware
Newark, DE 19716

Dr. Rick Schneider
Hewlett-Packard Laboratories
Palo Alto, CA 94304

Professor E. Fred Schubert
Department of Electrical and Computer Engineering
Boston University
Boston, MA 02215

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Professor Henryk Temkin
Department of Electrical Engineering
Texas Tech University
Lubbock, TX 79409

Dr. Robert L. Thornton
Xerox Palo Alto Research Center
Palo Alto, CA 94304

Dr. Richard C. Williamson
MIT Lincoln Laboratory
Lexington, MA 02173

Professor Carl W. Wilmsen
Department of Electrical Engineering
Colorado State University
Fort Collins, CO 80523

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