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2.3.2 The Stationary Regime in PhC Lasers2.3.3 Dynamics of PhC Lasers; 2.4 The Final Assault: Issues That Have Been Partially Solved and Others That Remain to Be Solved Before Photonic Crystal Lasers Become Ready for Application; 2.4.1 Room Temperature Continuous Wave Room Temperature Operation of Photonic Crystal Nano-Lasers; 2.4.1.1 CW Operation via Nonradiative Recombination Reduction; 2.4.1.1.1 CW Operation in Air Clad PhCs by a Smart Choice of Active Material; 2.4.1.1.2 RT CW Operation with QWs in an Air Cladding Membrane, via ``Fine Processing'' and Surface Passivation
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Chapter 3 Electrically Pumped Photonic Crystal Lasers: Laser Diodes and Quantum Cascade Lasers

Sommario/riassunto

This book brings together in a single volume a unique contribution by the top experts around the world in the field of compact semiconductor lasers to provide a comprehensive description and analysis of the current status as well as future directions in the field of micro- and nano-scale semiconductor lasers. It is organized according to the various forms of micro- or nano-laser cavity configurations with each chapter discussing key technical issues, including semiconductor carrier recombination processes and optical gain dynamics, photonic confinement behavior and output coupling mechanis