

## Semiconductor Nanolasers

This unique resource explains the fundamental physics of semiconductor nanolasers and provides detailed insights into their design, fabrication, characterization, and applications.

Topics covered range from the theoretical treatment of the underlying physics of nanoscale phenomena, such as temperature dependent quantum effects and active medium selection, to practical design aspects, including the multi-physics cavity design that extends beyond pure electromagnetic consideration, thermal management and performance optimization, and nanoscale device fabrication and characterization techniques. The authors also discuss technological applications of semiconductor nanolasers in areas such as photonic integrated circuits and sensing.

Providing a comprehensive overview of the field, detailed design and analysis procedures, a thorough investigation of important applications, and insights into future trends, this is essential reading for graduate students, researchers, and professionals in optoelectronics, photonics, applied physics, nanotechnology, and materials science.

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## Contents

<b>1</b>	<b>Introduction</b>	<b>1</b>
	1.1 The History of Laser Minimization	2
	1.2 Active Materials for Nanolasers	7
	1.3 Fundamental Scale Limits of Lasers	9
	1.4 Efficiency in Nanolasers	14
	1.5 Laser Rate Equations	15
	1.6 Nanolaser Types and Their Characteristics	19
	1.6.1 Vertical Cavity Surface-emitting Lasers (VCSELs)	19
	1.6.2 Photonic Crystal Defect Cavity Lasers	21
	1.6.3 Nanowire Lasers	22
	1.6.4 Cavity-free Nanolasers	26
	1.6.5 Metal-dielectric-metal Waveguide-based Nanolasers	28
	1.6.6 SPASERS	33
<b>2</b>	<b>Photonic Mode Metal-dielectric-metal-based Nanolasers</b>	<b>36</b>
	2.1 Metallo-dielectric Cavity Design	36
	2.2 Invariance of Optimal Metallo-dielectric Waveguide Geometry with Respect to Metal-cladding Permittivity	42
	2.3 Metallo-dielectric Nanolaser Fabrication	48
	2.4 Optical Pump Penetration Analysis	51
	2.5 Metallo-dielectric Nanolasers on Silicon	54
	2.6 Micro-photoluminescence Characterization of Nanolasers	59
<b>3</b>	<b>Purcell Effect and the Evaluation of Purcell and Spontaneous Emission Factors</b>	<b>65</b>
	3.1 Gain Medium and Its Excitation	67
	3.2 Formulation of Purcell Effect in Semiconductor Nanolasers at Room Temperature	69
	3.3 Applicability of the Formulation	73
	3.4 Evaluation of Purcell Effect in a Semiconductor Nanolaser	74
	3.5 Temperature's Effect on $F_P$ and $\beta$	78
	3.6 Temperature Dependence of Cavity Modes and Emission Spectra	80
	3.7 Temperature Dependence of Spontaneous Emission Factor	84
	3.8 Design for Temperature-insensitive High- $\beta$ Nanolasers	88

<b>4</b>	<b>Plasmonic Mode Metal-dielectric-metal-based Nanolasers</b>	91
	4.1 The Fundamental Promise and Challenge of Plasmonics	91
	4.2 Amplification of Propagating Modes	94
	4.2.1 Modes at MD Interface	94
	4.2.2 Amplification in Systems of One or Several MD Interfaces	96
	4.2.3 Amplification in Systems of Many MD Interfaces	97
	4.3 MDM Lasers with 2D Confinement	99
	4.4 Motivation for 3D Confined Coaxial Nanolasers	101
	4.5 Design and Fabrication of Optically Pumped Coaxial Nanolasers	102
	4.6 Emission Characterization of High $\beta$ -factor Coaxial Nanolasers	106
	4.7 Emission Characterization of Unity $\beta$ -factor Coaxial Nanolasers	111
	4.8 Rate Equation Analysis of Unity $\beta$ -factor Coaxial Nanolasers	112
	4.9 Perspective on Plasmonic Mode Nanolasers	117
<b>5</b>	<b>Antenna-inspired Nano-patch Lasers</b>	119
	5.1 Optical Mode and Radiation Pattern of Nanopatch Lasers	119
	5.2 Experimental Demonstration of Optically Pumped Nanopatch Laser	122
	5.3 Toward Low-threshold, Engineerable Radiation Pattern, and Electrical Pumping	125
<b>6</b>	<b>Active Medium for Semiconductor Nanolasers: MQW vs. Bulk Gain</b>	132
	6.1 Current Injection in Semiconductor Nanolasers	133
	6.2 Optical Cavity and Material Gain Optimization	135
	6.3 Reservoir Model for Semiconductor Lasers	138
	6.4 Laser Rate-equation Analysis with the Reservoir Model	140
	6.5 Discussion	144
<b>7</b>	<b>Electrically Pumped Nanolasers</b>	146
	7.1 Optical Mode Design with Realistic Geometrical Parameters	149
	7.2 Cylindrical Nanolasers with InP Undercut	159
	7.3 Cylindrical Nanolasers without InP Undercut	162
	7.4 Cubical Nanolasers without InP Undercut	163
<b>8</b>	<b>Multi-physics Design for Nanolasers</b>	168
	8.1 Simulation of Nanolasers' Electrical and Thermal Performance	168
	8.1.1 Ohmic Resistance	169
	8.1.2 Calculation of Self-heating	171
	8.1.3 Simulation of Nanolaser Heat Dissipation	173
	8.2 Choice and Fabrication Techniques of Dielectric Material for Thermal Management	177
	8.3 Comparison of Device Performance with Different Dielectric Shield Material	179
	8.3.1 Optical Performance	179

	8.3.2 Electrical and Thermal Performance	184
	8.3.3 Discussions	188
	8.4 Preliminary Experimental Validation and Analysis with Al <sub>2</sub> O <sub>3</sub> Shield	189
	8.4.1 Experimental Validation and Optical Mode Analysis	189
	8.4.2 Electrical and Thermal Analysis of Measured Device	193
	8.5 Multi-physics Design for Room-temperature Operation	196
	8.6 Discussions	199
<b>9</b>	<b>Cavity-free Nanolaser</b>	<b>202</b>
	9.1 Dispersion Analysis for Cavity-free Nanolaser	202
	9.2 Effect of Surface Roughness on Light Stopping	207
	9.3 Design of Stoplight Nanolasers	209
<b>10</b>	<b>Beyond Nanolasers: Inversionless Exciton-polariton Microlaser</b>	<b>214</b>
	10.1 Background	214
	10.2 Strong Coupling and Condensation between Quantum-well Excitons and Cavity Photons	217
	10.3 Coherent Emission of Radiation by the Stimulated Scattering of Exciton-polaritons	223
	10.4 Electrically pumped Polariton Microlasers	224
	10.5 Discussions	230
<b>11</b>	<b>Application of Nanolasers: Photonic Integrated Circuits and Other Applications</b>	<b>231</b>
	11.1 State of the Art for Chip-scale Integration	231
	11.2 Nanolasers' Integration with a Silicon-based Platform	234
	11.3 Nanolasers' Integration with Optical Waveguides	236
	11.3.1 Far-field Engineering of Metal-clad Nanocavities	236
	11.3.2 Coupling from Nanolasers to Waveguides On-chip	239
	11.3.3 Coupling from Waveguides to Nanocavities On-chip	242
	11.4 High-speed Optical Communication with Nanoscale Light Sources	245
	11.4.1 Small-signal Modulation Dynamics	245
	11.4.2 Large-signal Modulation Dynamics	253
	11.5 Silicon-compatible Miniature Laser	256
	11.5.1 Optically Pumped Sidewall-modulated III-V/Si DFB Microlaser	256
	11.5.2 Electrically Pumped Sidewall-modulated III-V/Si DFB Microlaser	259
	11.5.3 Coupling III-V/Si Edge-emitting Lasers to Si Waveguide	261
	11.5.4 Perspective: Pushing the Footprint of DFBs to the Nanoscale	263
	11.6 Other Applications and Future Trends of Nanolasers	266

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<i>Appendix A Spontaneous Emission in Free Space and Cavity</i>	270
<i>A.1 Nonrelativistic QED in Free Space and in a Resonant Cavity</i>	270
<i>A.2 Spontaneous Emission Probability in Free Space and in a Resonant Cavity</i>	273
<i>Appendix B Temperature-dependent Material Gain</i>	275
<i>B.1 Analysis of the Temperature-dependent Material Gain Spectrum of Bulk <math>\text{In}_{0.53}\text{Ga}_{0.47}\text{As}</math></i>	275
<i>B.2 Analysis of the Temperature-dependent Material Gain Spectrum of MQW InGaAsP</i>	279
<i>Appendix C Modeling Thermal Effects in Nanolasers</i>	283
<i>C.1 Thermal Model Overview</i>	283
<i>C.2 Ohmic (Joule) Heating Using a Simple Stack Model</i>	284
<i>C.3 Junction Heating</i>	286
<i>C.4 Heterojunction Heating</i>	288
<i>C.5 Surface Recombination Heating</i>	288
<i>C.6 Auger Recombination Heating</i>	289
<i>Appendix D Constriction Resistance and Current Crowding in Nanolasers</i>	290
<i>D.1 Vertical Contact Structure</i>	290
<i>D.2 Horizontal Contact Structure</i>	295
<i>D.3 Discussion</i>	300
<i>References</i>	302
<i>Index</i>	321