

Contents

1	Si-Rich Dielectrics for Active Photonic Devices	1
	<i>L. C. Kimerling, L. Dal Negro, M. Stolfi, J. H. Yi, J. Michel, X. Duan, E. H. Sargent, T.-W. F. Chang, V. Sukhovatkin, J. Haavisto, and J. LeBlanc</i>	
2	Nanocrystalline Si EL Devices	25
	<i>B. Gelloz and N. Koshida</i>	
3	Surface and Superlattice	71
	<i>Rabah Boukherroub</i>	
4	Optical Gain and Lasing in Low Dimensional Silicon: The Quest for an Injection Laser	103
	<i>Lorenzo Pavesi</i>	
5	Silicon Single-Electron Devices	125
	<i>Yasuo Takahashi, Yukinori Ono, Akira Fujiwara, Katsuhiko Nishiguchi, and Hiroshi Inokawa</i>	
6	Room Temperature Silicon Spin-Based Transistors.....	173
	<i>M. Cahay and S. Bandyopadhyay</i>	
7	Electron Transport in Nanocrystalline Silicon	197
	<i>H. Mizuta, S. Uno, N. Mori, S. Oda, and N. Koshida</i>	
8	Silicon Nanocrystal Nonvolatile Memories.....	223
	<i>R. Muralidhar, M.A. Sadd, and B.E. White Jr.</i>	

9	Nanocrystalline Silicon Ballistic Electron Emitter.....	251
	<i>Takuya Komoda and N. Koshida</i>	
10	Porous Silicon Optical Label-Free Biosensors.....	293
	<i>Philippe M. Fauchet</i>	
11	Ultrasonic Emission from Nanocrystalline Porous Silicon.....	325
	<i>Hiroyuki Shinoda and Nobuyoshi Koshida</i>	
	Index	337



<http://www.springer.com/978-0-387-78688-9>

Device Applications of Silicon Nanocrystals and
Nanostructures

Koshida, N. (Ed.)

2009, XII, 344 p., Hardcover

ISBN: 978-0-387-78688-9