

Contents of Volume 1

Editors-in-Chief Biographies	vii
Volume Editors	ix
List of Contributors to Volume 1	xi
Contents of All Volumes	xv
Preface to Volume One	xix
Foreword	xxiii

Volume 1 Nanomaterials

1.01	Electronic Structure of Organic Materials Investigated by Quantum Chemical Calculations B. Engels, W. Liu, J. Pfister, V. Settels, H.-M. Zhao and R.F. Fink, <i>University of Würzburg, Würzburg, Germany</i>	1
1.02	Carbon Nanotubes: Electronic Structure and Spectroscopy G. Lanzani, <i>Italian Institute of Technology, Milano, Italy</i> L. Lüer, <i>Madrid Institute for Advanced Studies, IMDEA Nanociencia, Madrid, Spain</i>	23
1.03	Laser Action in Organic Semiconductors R.C. Polson and Z.V. Vardeny, <i>University of Utah, Salt Lake City, UT, USA</i>	41
1.04	An Overview of Organic Light-Emitting Diodes and their Applications J. Shinar, <i>Ames Laboratory, USDOE and Iowa State University, Ames, IA, USA</i> R. Shinar, <i>Iowa State University, Ames, IA, USA</i>	73
1.05	Organic Spintronics S. Majumdar, H.S. Majumdar and R. Österbacka, <i>Åbo Akademi University, Turku, Finland</i>	109
1.06	Structured Organic Non-Linear Optics S.-H. Jang and A.K.-Y. Jen, <i>University of Washington, Seattle, WA, USA</i>	143
1.07	Quantum Dots: Theory N. Vukmirović and L.-W. Wang, <i>Lawrence Berkeley National Laboratory, Berkeley, CA, USA</i>	189
1.08	Quantum Dots: Synthesis and Characterization D. Dorfs, R. Krahn, A. Falqui and L. Manna, <i>Istituto Italiano di Tecnologia, Genoa, Italy</i> C. Giannini, <i>CNR-Istituto di Cristallografia (IC), Bari, Italy</i> D. Zanchet, <i>Laboratório Nacional de Luz Síncrotron, Campinas-SP, Brazil</i>	219
1.09	Core-Shell Nanocrystals S. Kudera and L. Maus, <i>Max Planck Institute for Metals Research, Stuttgart, Germany</i> M. Zanella and W.J. Parak, <i>Philipps Universität Marburg, Marburg, Germany</i>	271

1.10	Inorganic Nanowires C.N.R. Rao, S.R.C. Vivekchand and A. Govindaraj, <i>Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore, India</i>	289
1.11	Inorganic Nanotubes beyond Cylindrical Matter M. Remskar, <i>Jozef Stefan Institute, Ljubljana, Slovenia</i>	315
1.12	ZnO Nanorods and their Heterostructures for Electrical and Optical Nanodevice Applications G.-C. Yi, <i>Seoul National University, Seoul, Republic of Korea</i> T. Yatsui and M. Ohtsu, <i>The University of Tokyo, Tokyo, Japan</i>	335
1.13	Noble Metal Nanoparticles: Synthesis and Optical Properties F. Hubenthal, <i>Universität Kassel, Kassel, Germany</i>	375
1.14	Magnetic Nanoparticles S. Mørup, M.F. Hansen and C. Frandsen, <i>Technical University of Denmark, Kongens Lyngby, Denmark</i>	437
1.15	Colloidal and Self-Assembled Quantum Dots for Optical Gain P. Kambhampati, Z. Mi and R.R. Cooney, <i>McGill University, Montreal, QC, Canada</i>	493
1.16	Optical Properties of Nanostructured Silicon Y. Chao, <i>University of East Anglia, Norwich, UK</i>	543
1.17	Solar Cells and Photocatalysts Y. Nosaka, <i>Nagaoka University of Technology, Nagaoka, Japan</i>	571
1.18	Rare-Earth Doped Upconversion Nanophosphors F. Wang and X. Liu, <i>National University of Singapore, Singapore</i>	607