

Contents

Preface	XI
Section 1	
Synthesis	1
Chapter 1	3
Nonthermal Crystalline Forming of Ceramic Nanoparticles by Non-Equilibrium Excitation Reaction Field of Electron <i>by Norihiro Shimoj</i>	
Chapter 2	19
Biomineralization of Magnetosomes: Billion-Year Evolution Shaping Modern Nanotools <i>by Tarcisio Nascimento Correa, Igor Nunes Taveira, Rogerio Presciliiano de Souza Filho and Fernanda de Avila Abreu</i>	
Chapter 3	41
Nanostructuring Bi ₂ Te ₃ -Based Thermoelectric Thin-Films Grown Using Pulsed Laser Deposition <i>by Le Thi Cam Tuyen, Phuoc Huu Le and Sheng-Rui Jian</i>	
Section 2	
Properties	65
Chapter 4	67
Characterization of Nanocrystalline Cores for EMI Suppression in Cables <i>by Adrian Suarez, Jorge Victoria, Jose Torres, Pedro A. Martinez, Andrea Amaro and Julio Martos</i>	
Chapter 5	85
Fullerenes and Nanodiamonds for Medical Drug Delivery <i>by Basma H. Al-Tamimi and Saad B.H. Farid</i>	
Chapter 6	111
Nano-Sized Minerals from Lower Cretaceous Sandstones in Israel Observed by Transmission Electron Microscopy (TEM) <i>by Nurit Taitel-Goldman and Vladimir Ezersky</i>	

Chapter 7

125

Diluted Magnetic Semiconductors Nanocrystals: Saturation and Modulation
by Anielle C.A. Silva, Amanda I.S. Barbosa, Alessandra S. Silva,
Elisson A. Batista, Thaís K. de Lima Rezende, Éder V. Guimarães,
Ricardo S. Silva and Noelio O. Dantas

Section 3

139

Application

141

Chapter 8

Doped Semiconductor Nanocrystals: Development and Applications
by Anielle C.A. Silva, Eliete A. Alvin, Francisco R.A. dos Santos,
Samanta L.M. de Matos, Jerusa M. de Oliveira, Alessandra S. Silva,
Éder V. Guimarães, Mirella S. Vieira, Eurípedes A. da Silva Filho,
Ricardo S. Silva, Lucas Anhezini, Nilvanira D. Tebaldi
and Noelio O. Dantas

157

Chapter 9

Antimicrobial Efficacy of Biogenic Silver and Zinc Nanocrystals/
Nanoparticles to Combat the Drug Resistance in Human Pathogens
by Gulzar Ahmed Rather, Saqib Hassan, Surajit Pal, Mohd Hashim Khan,
Heshu Sulaiman Rahman and Johra Khan