

Contents

Functionalized Nanoparticles and Chitosan-Based Functional Nanomaterials	1
P.K. Dutta, Rohit Srivastava, and Joydeep Dutta	
Nanoparticles for Gene Delivery into Stem Cells and Embryos	51
Pallavi Pushp, Rajdeep Kaur, Hoon Taek Lee, and Mukesh Kumar Gupta	
Engineering of Polysaccharides via Nanotechnology	87
Joydeep Dutta	
Hydroxyapatite-Packed Chitosan-PMMA Nanocomposite: A Promising Material for Construction of Synthetic Bone	135
Arundhati Bhowmick, Subhash Banerjee, Ratnesh Kumar, and Patit Paban Kundu	
Biodegradable Polymers for Potential Delivery Systems for Therapeutics	169
Sanjeev K. Pandey, Chandana Haldar, Dinesh K. Patel, and Pralay Maiti	
Phytomedicine-Loaded Polymeric Nanomedicines: Potential Cancer Therapeutics	203
S. Maya, M. Sabitha, Shantikumar V. Nair, and R. Jayakumar	
Proteins and Carbohydrates as Polymeric Nanodrug Delivery Systems: Formulation, Properties, and Toxicological Evaluation	241
Dhanya Narayanan, J. Gopikrishna, Shantikumar V. Nair, and Deepthy Menon	

Biopolymeric Micro- and Nanoparticles: Preparation, Characterization and Industrial Applications	269
Anil Kumar Anal and Alisha Tuladhar	
Applications of Glyconanoparticles as “Sweet” Glycobiological Therapeutics and Diagnostics	297
Naresh Kottari, Yoann M. Chabre, Rishi Sharma, and René Roy	
Index	343