

Contents

1	The High Energy Ion Irradiation Impact on Carbon Nanotubes	1
	Pankaj Koinkar, Amit Kumar, Dinesh Kumar Avasthi, Mahendra More, and Ri-ichi Murakami	
2	Surface Modification of Carbon Nanotubes for High-Performance Polymer Composites	13
	Soo-Jin Park, Seul-Yi Lee, and Fan-Long Jin	
3	Mechanical Properties of Boron-Added Carbon Nanotube Yarns	61
	Yoshinori Sato, Mei Zhang, and Kazuyuki Tohji	
4	Synthesis and Characterization of Poly(Phenylene Sulfide)-Grafted Carbon Nanotube Nanocomposites	75
	Ana M. Díez-Pascual and Mohammed Naffakh	
5	Functionalization of Carbon Nanotubes and Their Polyurethane Nanocomposites	103
	Sravendra Rana, Raghavan Prasanth, and Lay Poh Tan	
6	Electrical Conductivity and Morphology of Polyamide6/Acrylonitrile-Butadiene-Styrene Copolymer Blends with Multiwall Carbon Nanotubes: A Case Study	123
	Suryasarathi Bose, Arup R. Bhattacharyya, Rupesh A. Khare, and Ajit R. Kulkarni	
7	Mechanical Behavior of Starch–Carbon Nanotubes Composites	141
	Lucía M. Famá, Silvia Goyanes, Valeria Pettarin, and Celina R. Bernal	
8	PCL–CNT Nanocomposites	173
	Feng Luo, Lanlan Pan, Xibo Pei, Rui He, Jian Wang, and Qianbing Wan	

9	Fabrication and Characterization of Carbon Nanotube/Cellulose Composite Paper	195
	Eiichi Sano, Tomo Tanaka, and Masanori Imai	
10	Polystyrene Carbon Nanotube Nanocomposites	213
	Ehsan Zeimaran, Abozar Akbarivakilabadi, and Mainak Majumder	
11	Preparation, Properties, and Processibility of Nanocomposites Based on Poly(ethylene-Co-Methyl Acrylate) and Multiwalled Carbon Nanotubes	245
	Utpal Basuli, Sudipta Panja, Tapan Kumar Chaki, and Santanu Chattopadhyay	
12	Poly(lactic Acid (PLA) Carbon Nanotube Nanocomposites	283
	Abozar Akbari, Mainak Majumder, and A. Tehrani	
13	Carbon Nanotube-Based Poly(ethylene oxide) Nanocomposites	299
	Ramanan Krishnamoorti and Tirtha Chatterjee	
14	Advances in Carbon Nanotube Technology for Corrosion Applications	335
	Alina Pruna	
15	Polymer Electrolyte Membrane Fuel Cells: Role of Carbon Nanotubes/Graphene in Cathode Catalysis	361
	Raghunandan Sharma, Jayesh Cherusseri, and Kamal K. Kar	
16	Application of Carbon Nanotubes in Dye-Sensitized Solar Cells	391
	Lina Ma and Haijun Niu	
17	Application of Carbon Nanotubes for Resolving Issues and Challenges on Electrochemical Capacitors	415
	Raghavan Prasanth, Ravi Shankar, Nutan Gupta, Sravendra Rana, and Jou-Hyeon Ahn	
18	Advances in Lithium-Ion Battery Technology Based on Functionalized Carbon Nanotubes for Electrochemical Energy Storage	447
	Raghavan Prasanth, Ravi Shankar, Nutan Gupta, and Jou-Hyeon Ahn	
19	Nanotechnology Advancements on Carbon Nanotube/Polypyrrole Composite Electrodes for Supercapacitors	479
	Jayesh Cherusseri, Raghunandan Sharma, and Kamal K. Kar	
20	Carbon Nanotube for Bone Repair	511
	Jayachandran Venkatesan and Se Kwon Kim	

21	The Role of CNT and CNT/Composites for the Development of Clean Energy	527
	Samantha Wijewardane	
22	CNT-Based Inherent Sensing and Interfacial Properties of Glass Fiber-Reinforced Polymer Composites	543
	Zuo-Jia Wang, Dong-Jun Kwon, Ga-Young Gu, and Joung-Man Park	
23	Polymer/Carbon Composites for Sensing	577
	Peter Lobotka and Pavol Kunzo	