
Contents

Preface.....	ix
Editors.....	xi
Contributors	xiii
Chapter 1 Graphene: Synthesis, Properties, and Applications	1
<i>Zongbin Zhao and Jieshan Qiu</i>	
Chapter 2 Fullerene C ₆₀ Architectures in Materials Science.....	47
<i>Francesco Scarel and Aurelio Mateo-Alonso</i>	
Chapter 3 Graphite Whiskers, Cones, and Polyhedral Crystals	89
<i>Svetlana Dimovski and Yury Gogotsi</i>	
Chapter 4 Epitaxial Graphene and Carbon Nanotubes on Silicon Carbide.....	115
<i>Goknur C. Büke</i>	
Chapter 5 Cooperative Interaction, Crystallization, and Properties of Polymer–Carbon Nanotube Nanocomposites.....	135
<i>Eric D. Laird, Matthew A. Hood and Christopher Y. Li</i>	
Chapter 6 Carbon Nanotube Biosensors	187
<i>Mei Zhang, Pingang He, and Liming Dai</i>	
Chapter 7 Carbon Nanostructures in Biomedical Applications.....	217
<i>Masoud Golshadi and Michael G. Schrlau</i>	
Chapter 8 Field Emission from Carbon Nanotubes	233
<i>Peng-Xiang Hou, Chang Liu, and Hui-Ming Cheng</i>	
Chapter 9 Nanocrystalline Diamond	251
<i>Alexander Vul', Marina Baidakova, and Artur Dideikin</i>	
Chapter 10 Carbon Onions	279
<i>Yuriy Butenko, Lidija Šiller, and Michael R. C. Hunt</i>	
Chapter 11 Carbide-Derived Carbons	303
<i>Yair Korenblit and Gleb Yushin</i>	

Chapter 12	Templated and Ordered Mesoporous Carbons.....	331
	<i>Pasquale F. Fulvio, Joanna Gorka, Richard T. Mayes, and Sheng Dai</i>	
Chapter 13	Oxidation and Purification of Carbon Nanostructures	355
	<i>Sebastian Osswald and Bastian J. M. Etzold</i>	
Chapter 14	Hydrothermal Synthesis of Nano-Carbons	395
	<i>Masahiro Yoshimura and Jaganathan Senthilnathan</i>	
Chapter 15	Carbon Nanomaterials for Water Desalination by Capacitive Deionization	419
	<i>P. Maarten Biesheuvel, Slawomir Porada, Albert van der Wal, and Volker Presser</i>	
Chapter 16	Carbon Nanotubes for Photoinduced Energy Conversion Applications	463
	<i>Ge Peng, Sushant Sahu, Mohammed J. Meziani, Li Cao, Yamin Liu, and Ya-Ping Sun</i>	
Index		499