

Contents

Preface	v
Chapter 1 Carbon Nanotube/Nanofibre Polymer Composites Milo Shaffer and Jan Sandler	1
Chapter 2 Dispersion, Bonding and Orientation of Carbon Nanotubes in Polymer Matrices Suresh Advani and Zhihang Fan	61
Chapter 3 SWNT Buckypaper Nanocomposites: High Nanotube Loading and Tailoring Nanostructures Chuck Zhang	99
Chapter 4 Processing and Mechanical Properties Characterization of Hybrid Thermoset Polymer Composites with Micro-Fiber and Carbon Nano-Fiber Reinforcements Kuang-Ting Hsiao	141
Chapter 5 Shear Rheology of Nanofiber Suspensions and Nanofiber/Polymer Melt Composites Jianhua Xu, Yingru Wang, Christopher Kagarise, Kurt W. Koelling and Stephen E. Bechtel	191

Chapter 6 Recent Advances in Polymer/Layered Silicate Nanocomposites: An Overview from Science to Technology Masami Okamoto	247
Chapter 7 Polymer-Clay Nanocomposites — A Review of Mechanical and Physical Properties Zhong-Zhen Yu, Aravind Dasari, Yiu-Wing Mai	307
Chapter 8 Preparative Methods and Properties of Polypropylene/Layered Silicate Nanocomposites Joong-Hee Lee, Prashantha Kalappa, Chang-Eui Hong, Nam Hoon Kim and Gye-Hyoung	359
Chapter 9 Clay Nanocomposites Of Polyurethanes And Epoxies: Preparation Methods And Properties Sadhan C. Jana	419