

1 Polyhydroxyalkanoates-Based Nanocomposites: An Efficient and Promising Way of Finely Controlling Functional Material Properties	1
Stéphane Bruzaud	
2 New Developments in Polycaprolactone-Layered Silicate Nano-biocomposites: Fabrication and Properties	21
Hassan Namazi, Mohsen Mosadegh, and Mozhgan Hayasi	
3 Polylactic Acid (PLA) Layered Silicate Nanocomposites	53
Mahsa A. Tehrani, Abozar Akbari, and Mainak Majumder	
4 Recent Progress in the Development of Starch-Layered Silicate Nanocomposites	69
Yi-Lin Chung and Hsi-Mei Lai	
5 Structure-Property Correlations of Poly(ethylene oxide) Nanohybrids with Layered Silicates and Silica Nanoparticles ...	87
Engin Burgaz	
6 Recent Developments in Cellulose and Cellulose Derivatives/Clay Nanocomposites	109
Maria do Carmo Gonçalves and Marcia Maria Favaro Ferrarezi	
7 Thermal and Rheological Properties of Poly(ethylene-co-vinyl acetate) (EVA) Nanoclay	129
Vinicius Pistor and Ademir José Zattera	
8 Polypropylene Clay Nanocomposites	153
Kummetha Raghunatha Reddy	
9 ABS Based Nanocomposites	177
Michele Modesti, Stefano Besco, and Alessandra Lorenzetti	
10 Polystyrene Layered Silicate Nanocomposites	205
Abozar Akbari, Mahsa A. Tehrani, and Hossien Cherghibidsorkhi	

11 Nanoclays as Asphalt-Binder Modifiers	223
Giovanni Polacco, Sara Filippi, Massimo Paci, and Filippo Merusi	
12 Crystallization and Polymorphic Behavior of Nylon-Clay Nanocomposites	247
E. Bhoje Gowd and C. Ramesh	
13 Preparation and Characterization of Poly(trimethylene terephthalate) Nanocomposites	267
Jin-Hae Chang	
14 Recent Developments in Poly(butylene terephthalate) Nanocomposites	293
Jin-Hae Chang	
15 FRP Esthetic Orthodontic Wire and Development of Matrix Strengthening with Poly(methyl methacrylate)/Montmorillonite Nanocomposite	319
Shuichi Yamagata, Junichiro Iida, and Fumio Watari	
16 Development of TGDDM Based Layered Silicate Nanocomposites for High Performance Applications	329
K. Shree Meenakshi, E. Pradeep Jaya Sudhan, S. Ananda Kumar, and M. J. Umashathy	
17 Structural and Physical Properties of Polyurethane Nanocomposites and Foams	341
Baiju John	
18 Advanced Electrospun Nanofibers of Layered Silicate Nanocomposites: A Review of Processing, Properties, and Applications	361
Singaravelu Vivekanandhan, Makoto Schreiber, Amar Kumar Mohanty, and Manjusri Misra	
19 Flame Retardant Properties of Polymer/Layered Double Hydroxide N Nanocomposites	389
Tianxi X. Liu and Hong Zhu	
20 Recent Developments in the Permeability of Polymer Clay Nanocomposites	415
G. Choudalakis and A. D. Gotsis	
21 Recent Developments of Foamed Polymer/Layered Silicates Nanocomposites	453
Krzysztof Pielichowski, James Njuguna, and Sławomir Michałowski	

22	Polymer-Layered Silicate Nanocomposite Membranes for Fuel Cell Application	481
	Ananta Kumar Mishra, Tapas Kuila, Nam Hoon Kim, and Joong Hee Lee	
23	Polymer Nanocomposites: Emerging Growth Driver for the Global Automotive Industry	511
	Vivek Patel and Yashwant Mahajan	