

Contents

Microporous Organic Polymers: Design, Synthesis, and Function	1
Jia-Xing Jiang and Andrew I. Cooper	
Hydrogen, Methane and Carbon Dioxide Adsorption in Metal-Organic Framework Materials	35
Xiang Lin, Neil R. Champness, and Martin Schröder	
Doping of Metal-Organic Frameworks with Functional Guest Molecules and Nanoparticles	77
Felicitas Schröder and Roland A. Fischer	
Chiral Metal-Organic Porous Materials: Synthetic Strategies and Applications in Chiral Separation and Catalysis	115
Kimoon Kim, Mainak Banerjee, Minyoung Yoon, and Sunirban Das	
Controlled Polymerization by Incarceration of Monomers in Nanochannels	155
Takashi Uemura and Susumu Kitagawa	
Designing Metal-Organic Frameworks for Catalytic Applications	175
Liqing Ma and Wenbin Lin	
Magnetic and Porous Molecule-Based Materials	207
Nans Roques, Veronica Mugnaini, and Jaume Veciana	
Index	259