

CONTENTS

PREFACE	VII
ACKNOWLEDGMENTS	IX
CONTRIBUTORS	XI
SECTION I SYNTHESIS	1
1. Polymers with Inherent Microporosity	3
<i>Neil B. McKeown and Peter M. Budd</i>	
2. Porous Polymers from Self-Assembled Structures	31
<i>Eric M. Todd and Marc A. Hillmyer</i>	
3. Porogen Incorporation and Phase Inversion	79
<i>Lei Qian and Haifei Zhang</i>	
4. Colloidal Templating	119
<i>Neil R. Cameron, Peter Krajnc, and Michael S. Silverstein</i>	
SECTION II CHARACTERIZATION	173
5. Surface Area and Porosity Characterization of Porous Polymers	175
<i>Rolando M. A. Roque-Malherbe</i>	
6. Nondestructive Evaluation of Critical Properties of Thin Porous Films	205
<i>Mikhail R. Baklanov and Denis Shamiryan</i>	
7. Microscopy Characterization of Porous Polymer Materials	247
<i>Gregory Meyers, Anand Badami, Steve Rozeveld, Bob Cieslinski, Clifford Todd, Charlie Wood, Deborah Rothe, William Heeschen, and Gary Mitchell</i>	

CONTENTS

SECTION III APPLICATIONS	275
8. Separation Membranes <i>Mathias Ulbricht</i>	277
9. Biomedical Devices <i>Yvonne Reinwald, Kevin Shakesheff, and Steven Howdle</i>	323
10. High-Performance Microelectronics <i>Charles T. Black</i>	359
11. Polymer-supported Reagents and Catalysts <i>Jonathan Behrendt and Andrew Sutherland</i>	387
12. Templates for Porous Inorganics <i>Arne Thomas, Jens Weber, and Markus Antonietti</i>	435
INDEX	447