

Contents

<i>Foreword</i>	<i>Thomas J. Pinnavaia</i>	v
<i>Preface</i>		vii

Part I Clay Minerals

1. Introduction: Clay Structure, Surface Acidity, and Catalysis	1
<i>Kathleen A. Carrado</i>	
2. Molecular Modeling of Clay Mineral Structure and Surface Chemistry	39
<i>Sung-Ho Park and Garrison Sposito</i>	
3. Clay–Organic Interactions: Organoclay Complexes and Polymer–Clay Nanocomposites	91
<i>Eduardo Ruiz-Hitzky, Pilar Aranda, and José María Serratos</i>	
4. Sorption of Nitroaromatic Compounds on Clay Surfaces	155
<i>Cliff T. Johnston, Stephen A. Boyd, Brian J. Teppen, and Guangyao Sheng</i>	

5. Photoprocesses in Clay–Organic Complexes 191
Makoto Ogawa
6. Pillared Clays and Porous Clay Heterostructures 261
Pegie Cool and Etienne F. Vansant

Part II Other Layered Materials

7. Layered α -Zirconium Phosphates and Phosphonates 313
Challa V. Kumar, Akhilesh Bhambhani, and Nathan Hnatiuk
8. Layered Double Hydroxides (LDHs) 373
Paul S. Braterman, Zhi Ping Xu, and Faith Yarberry
9. Layered Manganese Oxides: Synthesis, Properties, and Applications 475
Jia Liu, Jason P. Durand, Laura Espinal, Luis-Javier Garces, Sinue Gomez, Young-Chan Son, Josanlet Villegas, and Steven L. Suib
10. Layered Metal Chalcogenides 509
Chris O. Oriakhi and Michael M. Lerner
11. Alkali Silicates and Crystalline Silicic Acids 541
Wilhelm Schwieger and Gerhard Lagaly
- Index* 631