

Contents

Foreword.....	vii
Preface	ix
Acknowledgements.....	xiii
List of Contributors.....	xv
Part A: Examples, Ion Properties and Concepts	1
Chapter 1: An Attempt of a General Overview	3
<i>Werner Kunz and Roland Neueder</i>	
Chapter 2: Phospholipid Aggregates as Model Systems to Understand Ion-Specific Effects: Experiments and Models	55
<i>Epameinondas Leontidis</i>	
Chapter 3: Modelling Specific Ion Effects in Engineering Science	85
<i>Christoph Held and Gabriele Sadowski</i>	
Part B: Promising Experimental Techniques	117
Chapter 4: Linear and Non-linear Optical Techniques to Probe Ion Profiles at the Air–Water Interface	119
<i>Hubert Motschmann and Patrick Koelsch</i>	
Chapter 5: X-Ray Studies of Ion Specific Effects.....	149
<i>Padmanabhan Viswanath, Luc Girard, Jean Daillant, Luc Belloni, Olivier Spalla and Dmitri Novikov</i>	

Chapter 6: The Determination of Specific Ion Structure by Neutron Scattering and Computer Simulation	171
<i>George W. Neilson, Philip E. Mason and John W. Brady</i>	
Chapter 7: Specific Ion Effects at the Air–Water Interface: Experimental Studies	191
<i>Vincent S. J. Craig and Christine L. Henry</i>	
Part C: Newest Results from Theory and Simulation	215
Chapter 8: Ion Binding to Biomolecules	217
<i>Mikael Lund, Jan Heyda and Pavel Jungwirth</i>	
Chapter 9: Ion-Specificity: From Solvation Thermodynamics to Molecular Simulations and Back	231
<i>Joachim Dzubiella, Maria Fyta, Dominik Horinek, Immanuel Kalcher, Roland R. Netz and Nadine Schwierz</i>	
Chapter 10: HNC Calculations of Specific Ion Effects	267
<i>Luc Belloni and Ioulia Chikina</i>	
Chapter 11: Modifying the Poisson–Boltzmann Approach to Model Specific Ion Effects	293
<i>Mathias Boström, Eduardo R. A. Lima, Evaristo C. Biscaia Jr., Frederico W. Tavares and Werner Kunz</i>	
Part D: Summary and Conclusions	311
Chapter 12: An Attempt of a Summary	313
<i>Werner Kunz and Gordon J. T. Tiddy</i>	
Index	321