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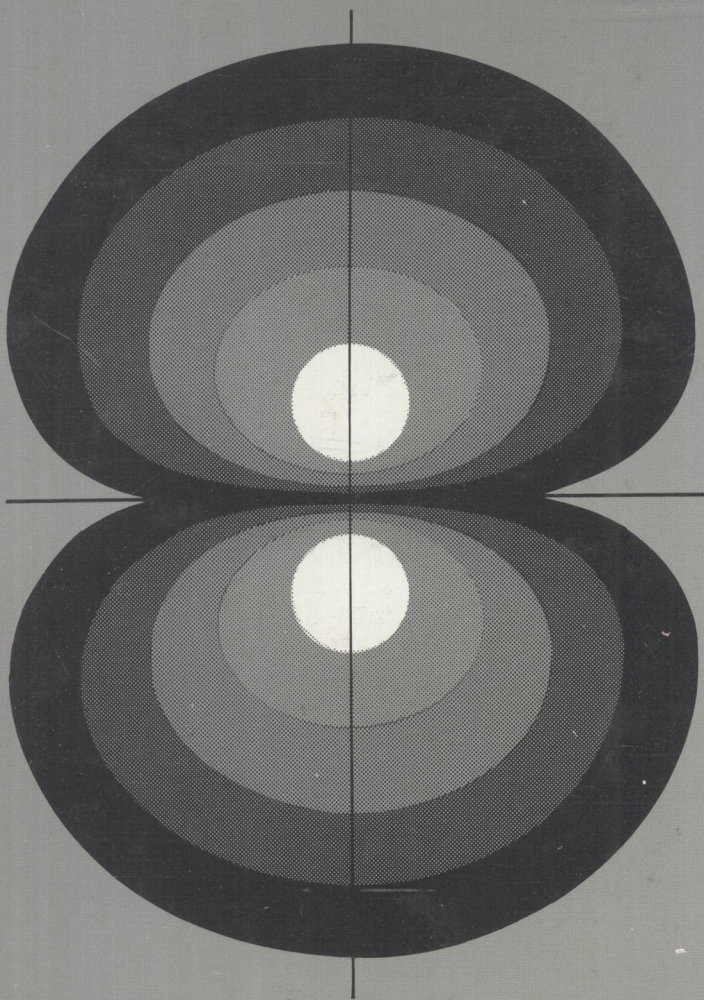

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THE CHEMICAL PHYSICS OF SOLVATION

Part C
Solvation Phenomena in Specific Physical, Chemical and Biological Systems

Edited by
Revaz R. Dogonadze, Erika Kálmán,
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PREFACE

Solvation, in the broadest sense regarded as interaction between a solute "impurity" particle and its environments, covers not only theories and properties of electolyte solutions, but has counterparts in a range of other many-body phenomena. These are commonly associated with different sciences, extending for example to chemical physics of condensed matter, electrochemistry, structure and dynamics of ionic solids and melts, biology, and applied sciences. Some have been discovered recently, and with a view to the different sciences to which they belong, the physical properties of their solute-environment behaviour are manifested in very different ways.

Part C of our three-volume monograph is a treatment of solute-environmental effects in a range of specific physical, chemical, and biological systems. Specific solvation systems were also treated in parts A and B, with a bias towards their association with theory and spectroscopy of solvation, respectively. The guidelines for the present volume have been the parallel structural and dynamic properties in electrolyte solutions and other condensed matter systems, their reflection in a broad variety of different observables, and last but not least, the clear chemical physics associated with the topics. Other fascinating solvation subjects, for example hydrogen-bonded networks, interfacial and boundary phenomena, hydration forces, and solvent-mediated aggregation would also qualify as "Solvation in Specific Systems", gathered under headings such as "Solvation at Different Scales", and could be suitable for future treatment.

Throughout the preparation of part C, as of our previous volumes, we have enjoyed the support and enthusiasm of many people and institutions. Acknowledgements for professional, financial and practical support expressed in the previous volumes fully apply to part C. In addition, we are most grateful to a number of chemical and physical societies for permission to reprint figures published in their journals, and to authors who have consented to the use of their material. Specific references to the sources of reproduced material are given at the appropriate places in the chapter.

We extend special thanks to all the authors of part C for their devoted work and attentive response to correspondence and editorial comments. Both part C and the previous volumes should be regarded as the collective achievement of all the contributors involved. However, an important element towards accomplishment of this aim was that most of the chapters of part C were available, at least in a preliminary form, by the time the processing of the earlier volumes was initiated. The preparation of camera-ready copy typescripts for part C had

to await the preparation of parts A and B, and they have thus suffered a degree of delay. Fortunately, some contributors were able to update their chapters during the processing of part C. We are thus most grateful to all authors of part C for their appreciation of this problem.

The editors would finally like to thank Mrs. Ellen Hjordt, Mrs. Bodil Rosell, and Mrs. Else Winther, Chemistry Department A, the Technical University of Denmark, for their most careful work and never failing patience in typing the camera-ready form of this volume.

Any response to the three volumes will be greatly appreciated as a help to assess the efforts made during the long time spent in attempts to transform visions into reality.

Erika Kálmán, Alexei A. Kornyshev and Jens Ulstrup
Editors

Budapest, Moscow and Copenhagen

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