

New Books and Publications

The Biogeochemistry of Iron in Seawater

David R. Turner and Keith A. Hunter

Series on Analytical and Physical Chemistry of Environmental Systems, Vol. 7

John Wiley & Sons, New York, 2001, pp. 396.
(ISBN 0-471-49068-7)

The proposal that a lack of iron can limit phytoplankton growth in the oceans was first put forward in the 1930s, but it was not until the 1980s that developments in clean sampling and analytical techniques had advanced sufficiently to allow accurate measurements of iron at trace levels. Intensive research carried out during the 1990s (known as the "Iron Age of Oceanography") provided a wealth of new information on the biogeochemistry of iron in seawater. The field has now advanced to a stage where a critical analysis of progress to date can be of considerable benefit to the research community as a whole.

This book, written by acknowledged experts and reviewed by international specialists, provides the authoritative and comprehensive review of the subject area. A joint venture between the Scientific Committee for Ocean Research and IUPAC, it expertly addresses the current state of knowledge on the subject and covers chemical speciation, analytical techniques, and the transformation of iron.

The book includes evidence for iron limitation of primary production of high-nutrient, low-chlorophyll areas in the ocean and offers a wealth of new information. It is ideal for marine scientists, oceanographers, environmental analytical chemists, and others studying the environmental impact of metals and their role in marine ecosystems.



[http://www.iupac.org/publications/
books/author/turner.html](http://www.iupac.org/publications/books/author/turner.html)

Polymerization Processes and Polymer Materials, Volumes I and II

Z. Florancyk, S. Penczek, S. Slomkowski (Eds.)

Macromolecular Symposia, Vol. 174 & 175.

Wiley-VCH, 2001, 434 pp. (Vol. I—ISBN 3-527-30336-7) and 428 pp. (Vol. II—ISBN 3-527-30337-5).

In 2000, over 1500 participants from 54 countries attended the World Polymer Congress—the 38th International Symposium on Macromolecules (sponsored by IUPAC), held 9-14 July at the Warsaw University of Technology. These books, Volumes 174 and 175 of the *Macromolecular Symposia*, contain 86

invited and plenary lectures from the Congress. The scientific program of the Congress—organized by the Department of Polymer Chemistry of the Centre of Molecular and Macromolecular Studies of the Polish Academy of Sciences in Lodz and the Chemistry Department of the Warsaw University of Technology—was divided into 16 Sections and covered such areas as synthesis, radical polymerization, ionic polymerization, polyolefins, branched and star-like macromolecules, biorelated and environmentally friendly polymers, and electrical, optical, and dielectric properties of polymers.



[http://www.iupac.org/publications/macro/
2001/174_preface.html](http://www.iupac.org/publications/macro/2001/174_preface.html)

Characterization of Compounds in Solution: Theory and Practice

William H. Streng

Kluwer Academic/Plenum Publishers, New York, 2001.
(ISBN 3-306-46595-7)

The purpose of this book is to discuss concisely and comprehensively solution properties of compounds that are most important in the area of pharmaceuticals. While there are many topics that can be included in a discussion on solution properties of compounds, the following are the most critical in the area of pharmaceuticals: equilibrium constants, partition coefficients, general solubility, solubility in protic solvents, and solution stability. The ambitious concept of this book is to bring together these topics in a logical and concise manner.

After an introductory chapter on compound characterization, the theoretical chapters of Streng's book cover thermodynamics, kinetics, equilibrium constants, partition coefficient, solubility, solubility of weak acids and bases, solution stability, and instrumentation. Clearly, most of these chapters could easily fill a volume in itself, but the truly original idea of the book is the self-sufficient description of theory and practice used for characterizing compounds in solution. The remaining chapters cover procedures and examples for the practical investigation of equilibria, partitioning, solubility, and solution kinetics.

