

Biomagnetism, by R.S. Wadas, Published by Ellis Horwood Series in Physics and Its applications, New York, and Prentice Hall-Simon Schuster New York 10016, and by PWN-Polish Scientific Publishers, Warsaw, ISBN 0-13-084666-X, 170 pages, 1991, \$79.95.

To the six senses which have been long recognized as affecting biology, magnetic phenomena should be added. Magnetism has now been shown to have significant effects on biomagnetic properties. In addition, the possibility of a magnetic field having an influence (although small) on chemical reactions, is now being recognized. Free radicals, so important to many chemical reactions, have been modified in their spins, although the potential to cause major disruption is not yet achieved.

This book, written by Professor Wadas, Head of the Magnetic Laboratory, Electronic Materials Research and Production Center, Warsaw, Poland, is a comprehensive review of the state of the science. It is intended primarily for graduates in biophysics and biochemistry, physics, chemistry, biology, medicine, zoology, ecology and astronomy. This is the first book on biomagnetism available in English, and “secrets” of magnetism including the uncertainties of the effects and effects of magnetic fields on living organisms. Experiments are noted in considerable detail. The experiments described in the book are not all academic — a detailed set of data for the magnetic field influence on the operation of the heart (in monkeys) will doubtlessly improve monitoring of aortic blood flow.

Many graphs and drawings are included to assist the reader. The book doubtlessly will generate much interest in this subject.

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Material Safety Data Sheets, The Writer's Desk Reference, Edited by R.P. Molinelli, M.J. Reale and R.I. Freudenthal, Hill and Garnett Publishing, Inc., Boca Raton, FL 33481-0847, 1992, ISBN 0-962-38133-0, 394 pages, \$99.50.

Widespread or indifference to complete facts have been observed in many Material Safety Data Sheets (MSDS's) which have appeared over the past years in an attempt to comply with OSHA 29 CFR part 1910.12 Hazards Communication. Each shipment of a chemical should be accompanied by an appropriate MSDS, containing information the ultimate user will find useful in protection from adverse effects while transporting, reacting, using, and disposal, including precautions and information as to medical care needed if spills or other misadventures occur.

To assist writers of MSDS's, three highly qualified editors, assisted by 13 associates, have set the record as to both the informational and legal requirements, suggested data sources, and presentation of the final product. The

12 chapters, which cover a wide range from identification of properties, to data sources, to effective communications, to frequent updating when new information is unearthed, are each explained in detail with references. Of commendable note is the larger print, which will assist anyone with less than perfect 20/20 vision.

It is hoped that readers will review existing MSDS's to improve and update the information in this volume, and to consider the significance as new sheets are written. It must not be forgotten that not only the ultimate worker, but also supervisory, fire and rescue supporting personnel (who may need the information in true emergencies when authorities are not available), and copies should be available without overt security. This volume will be of much value in chemical health and safety and is highly recommended.

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Transport and Remediation of Subsurface Contaminants, Colloidal, Interfacial, and Surfactant Phenomena, edited by D.A. Sabatini and R.C. Knox, ACS Symposium Series 491, American Chemical Society, Washington, DC, 1992, ISBN 0-8412-2223-1, 252 pages, \$69.95.

Chemical releases into the subsurface are pervasive environmental problems. The source may be as simple as known or unknown hazardous waste disposal sites, or as obvious as gasoline and other petroleum from leaking tanks.

This volume, based on the symposium sponsored by the ACS Division of Colloid and Surface Chemistry in June 1991 attempts with much success to analyze the problems, which are compounded by the nature of the material, type of soil, strong hydrophobic chemicals (such as PCB's) or separate phases of non-aqueous phase liquids, such as TCE (trichloroethylene).

Colloidal, interfacial, and surfactant phenomena are all important in finding specific answers to real-world problems. Chapters discuss both inorganic as well as organic pollution. The volume is technical in nature, and the roundtable discussion after the last chapter speculates on the future of such operations. Chapter 6, on colloid remediation in groundwater by polyelectrolyte capture, in view of the widespread presence of radioactive colloids (radiocolloids), believed to accelerate the transport of radioactive species in groundwater, should be of interest in view of the wide concern over radioactivity contamination in and around the 17 government-owned nuclear facilities in the U.S. This volume is an important documentation and reference on a very important subject area, and should have wide readership in that area of pollution control.

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