

Publications

Book Reviews

¹³C NMR Spectroscopy: A Working Manual With Exercises, by E. Breitmeier and G. Bauer (Harwood Academic Publishers, PO Box 786, Cooper Station, New York, NY 10276, 1984, 356 pp., \$108).

This book is an excellent introduction to carbon-13 (¹³C) nuclear magnetic resonance (NMR) spectroscopy, addressed mainly to researchers and students who need to use ¹³C NMR spectroscopy in their analytical or organic chemistry research. This well-written manual should be available to students in every NMR laboratory with a serious interest in ¹³C and organic chemistry. Following a succinct and simple introduction to ¹³C NMR spectroscopy, Part I treats the following aspects: recording ¹³C NMR spectra (chapters 2-3), spectral assignments (chapter 4), solvents and standards (chapter 5), chemical shifts (chapter 6), coupling constants (chapter 8), and spin-lattice relaxation times/relaxation mechanisms (chapter 9). The explanations are clear and simple, in a precise style. Part II contains a number of representative examples of ¹³C NMR analyses of organic compounds. The bibliography, though not extensive, contains basic references in this field. The book also has two useful appendices and a subject index that facilitates finding specific subjects or NMR spectra. There are 76 exercises and solutions representing various classes of organic compounds. For the more advanced reader, however, the absence of applications of recent NMR techniques now in standard use, such as 2D NMR, WALTZ and MLEV decoupling, APT, INEPT, and DEPT pulse sequences, is certainly a drawback; this is apparently the result of the fact that the very successful 1977 German edition was simply translated without updating. There also are a few inaccuracies due to translation, such as the use of 'wide' instead of 'broad.'

I. C. Baianu
Department of Food Science
University of Illinois
Urbana, IL 61801

Surfactants, Adsorption, Surface Spectroscopy and Disperse Systems (Progress in Colloid & Polymer Science, Vol. 70), edited by B. Lindman, G. Olofsson and P. Stenius (Dr. Dietrich Steinkopff Verlag, PO Box 111008, Darmstadt, West Germany, and Springer Verlag-New York, 175 Fifth Ave., New York, NY 10010, 1985, 128 pp., hardcover, DM 94, US \$36).

This relatively slender volume contains 19 predominantly theoretical papers on the title subjects that were originally presented at the 8th Scandinavian Symposium on Surface Chemistry held at the University of Lund, Sweden, in June 1984. In the surfactant portion, the main focus is on the micelle—its mean lifetime, shape and hydration. Evidence is presented for both a spherical micelle as well as an oblate ellipsoid. In a paper by K. S. Birdi, shape transitions are described in the presence of medium long (C₆-C₈) alcohols as a function of pressure and temperature. Systems containing both an anionic and a cationic surfactant are treated in a thermodynamic model in a paper by Jokela. On the subject of adsorption and surface spectroscopy, G. A. Somorjai

presents a detailed review of many surface analytical techniques now available which have been brought to bear on the study of many solid-gas and solid-liquid interfaces. The importance of such adsorption phenomena is well recognized in catalysis. The main emphasis in a number of papers on adsorption is its impact on biologically important phenomena. An FT-IRAS study of adsorption of proteins on metal surfaces by I. Lundström and coworkers is easily recognized as bearing on protein films formed initially on foreign surfaces in contact with blood, which in turn affect blood clotting, thrombus formation and cell adhesion. The final section on disperse systems is not as well focused as the earlier ones. It includes an interesting discussion by E. Wolfram on flow patterns of immiscible liquid/fluid displacement in a capillary tube, a phenomenon of interest to workers in enhanced oil recovery. As is almost inevitable in a symposium record of this kind, the book is a bit of a grab bag of subject matter in basic surface chemistry. While the subjects well may be of relevance to readers engaged in industrial surface chemistry, the book is primarily of interest to theoretical surface chemists.

Arno Cahn
Arno Cahn Consulting Services Inc.
Pearl River, NY 10965

New Publications

Joboba: New Crop for Arid Lands, New Raw Material for Industry, Report of an Ad Hoc Panel of the Advisory Committee on Technology Innovation, National Research Council, National Academy Press, Washington, D.C., 1985, 102 pp., \$10. Copies available from the Joboba Growers Association, 3320 E. Shea Blvd., Suite 290, Phoenix, AZ 85028.

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Corrosion Basics—An Introduction, 1985, 353 pp., \$32 NACE members, \$40 nonmembers (update of *Basic Corrosion Course*).

Introduction to Corrosion Prevention and Control (Revised Edition), by P. J. Gellings, 1985, 138 pp., \$16 members, \$20 nonmembers.

Corrosion Data Survey (Metals Section), 6th Edition, 1985, 192 pp., \$130 NACE members, \$160 nonmembers.

Membrane Receptors and Cellular Regulation, edited by Michael P. Czech and C. Ronald Kahn, Alan R. Liss Inc., 41 E. 11th St., New York, NY 10003, 1985, 444 pp., \$96.

1985 Soya Bluebook, American Soybean Association, PO Box 27300, St. Louis, MO 63141, USA, 1985, 272 pp., US \$25 in U.S., Canada and Mexico; US \$34 elsewhere; prepaid orders in U.S. dollars only. Directory includes data on organization, companies processing and using soy products, industry suppliers, and statistical data on soy production and trade.

Synthetic Reagents, Vol. 6, edited by J. S. Pizey, John Wiley & Sons Inc., 605 Third Ave., New York, NY 10158, 1985, 438 pp., \$89.95.

Membrane Fluidity In Biology, Vol. 3, edited by Roland C. Aloia and Joan M. Boggs, Academic Press Inc., Orlando, FL 32887, 1985, 316 pp., \$64.50.

Proceedings of 1985 Congress of International Association of Seed Crushers, IASC, PO Box 31, 8 Salisbury Square, London EC4P 4AN, England, 1985, 119 pp., £26 (includes surface postage).

Encyclopedia of Emulsion Technology, Volume 2: Applications, edited by Paul Becher, Marcel Dekker Inc. 270 Madison Ave., New York, NY 10016, 1985, 536 pp., \$95 U.S. and Canada, \$114 elsewhere.

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