concerning ^{13}C-^{13}C coupling constants by G. E. Maciel is quite useful, since no extensive treatment of this subject has appeared to date. Both theoretical and experimental aspects of the topic are explored.

Another chapter is devoted to ^{29}Si Fourier transform NMR. G. C. Levy and J. D. Cargioli have performed much of the original ^{29}Si NMR research, and here they have produced a well-written synopsis that treats ^{29}Si chemical shifts and coupling constants and presents as well an informative exploration of ^{29}Si spin lattice relaxation parameters and their usefulness to silicon chemists.

Other chapters worthy of particular notice are the survey of recent advances in ^{3}H and ^{2}H NMR and the review of NMR studies of nonhydrogen nuclei in oriented molecules, both by Peter Diehl. Recent Fourier NMR studies of simple fluorocarbons are well presented by L. Cavalli. A chapter by E. G. Brame explores recent applications of ^{19}F NMR to the important topic of fluorocarbon polymers. Finally, Maciel summarizes applications of Fourier transform NMR studies of metal nuclei, a potentially most exciting kind of research. The chapter provides much needed introductory material and references for the worker just beginning such research. That, I think, was the overall purpose of the text, and, in general, the book succeeds as well as could be expected, given its origins in a lecture course.

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Low Temperature Physics

Superfluid Hydrodynamics. SETH J. PUTTERMAN. North-Holland, Amsterdam, and Elsevier, New York, 1974. xxii, 444 pp., illus. Cloth, $48.10; paper, $25. North-Holland Series in Low Temperature Physics, vol. 3.

As its title suggests, this book is mainly about helium below the lambda point, its remarkable mechanical and thermal properties, and their resolution through the two-fluid model. It is the work of an enthusiast who, moreover, has proved and reevaluated the theoretical bases of his subject, even those that are well known and generally accepted. Sometimes new light reaches murky corners. The author is well endowed with critical faculties and powers of exposition, and a fresh and stimulating text results from their application. The parts of the book interrelate well, and the material is presented in a consistent and generally attractive notation.

The book appears to contain original unpublished material. This includes: new thermodynamic stability conditions (analogous to $C_p > 0$) for the two-fluid model; a clarification of the boundary and shock jump conditions to which the governing equations must be subjected; a reconsideration of sound propagation in a counterflow; the prediction of superfluid transverse sound and an examination of its properties; a novel approach to normal fluid drag on a superfluid vortex; a study of the Brownian motion of such vortices; and many fresh ideas on thermal fluctuations in the two-fluid model. Also the discussion of the fluid mechanics of the condensed ideal Bose gas rests on the author's published work. Though reliable in its mathematics, the book strikes a physical attitude on most questions. Two-fluid equations are derived by the use of ideas of LTE (local thermodynamic equilibrium) that rational mechanists, such as Clifford Truesdell, are unlikely to bless.

An interesting feature of the text is the author's insistence on applying continuum equations to flows on the microscale, for example, to motions in films only a few atomic layers thick. In these days of increasing dominance of the field by many-body theorists, this approach serves to remind us how successful continuum models can be. Even if the many-body approach is in some sense the "right" one, the day on which we hold an approximation as acceptable as that of BCS (Bardeen-Cooper-Schrieffer) for superconductors does not appear to be imminent. Meanwhile, the many-body theorists are sometimes forced to make drastic approximations motivated more by mathematical expediency than by physical reality. It is then hard to be sure that the consequent results are any more "right" than those derived from the (more tractable) continuum approach. I am sure that the author will think his time well spent if his book leads, as it ought, to a better recognition of the power of the continuum model, as distinct from its limitations.

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Books Received

Annual Review of Physical Chemistry. Vol. 25, 1974. H. Eyring, C. J. Christensen, and H. S. Johnston, Eds. Annual Reviews, Palo Alto, Calif., 1974. x, 566 pp., illus. $12.

Aquatic Vegetation and Its Use and Control. D. S. Mitchell, Ed. Unesco, Paris, 1974 (U.S. distributor, Unipub, New York). 136 pp., illus. Paper, $6.60.

Arterial Lesions and Arteriosclerosis. H. Jellinek, Ed. Translated from the Hungarian. Plenum, New York, and Akadémiai Kiadó, Budapest, 1974. 332 pp. + plates. $27.50.

Aspects of Zoogeography. Paul Müller. Junk, The Hague, 1974. viii, 208 pp., illus. Paper, Dfl. 35.

Astrophysics of Gaseous Nebulae. Donald E. Osterbrock. Freeman, San Francisco, 1974. xvi, 252 pp., illus. $17.

Atlas of Stereochemistry. Absolute Configurations of Organic Molecules. W. Klyne and J. Buckingham. Oxford University Press, New York, 1974. xvi, 312 pp., illus. $39.95.

Atlas of the Sea. Robert Barton. Illustrated by David Nockels. Maps by Geographical Projects, London. John Day Co. (Intext), New York, 1974. 128 pp. $10.

Buffers for pH and Metal Ion Control. D. D. Perrin and Boyd Dempsey. Chapman and Hall, London, and Halsted (Wiley), New York, 1974. viii, 176 pp., illus. $11.50. Chapman and Hall Laboratory Manuals in Physical Chemistry and Biochemistry.

By the Evidence. Memoirs, 1932–1951. L. S. B. Leakey. Harcourt Brace Jovanovich, New York, 1974. x, 276 pp. + plates. $9.95.

Carcinogenesis Testing of Chemicals. Proceedings of a conference, Washington, D.C., May 1973. Leon Golberg, Ed. CRC Press (Chemical Rubber Co.), Cleveland, 1974. xvi, 144 pp., illus. $25.

Cardiovascular Disease. Epidemiology, Prevention, and Rehabilitation. A Guide to the Literature. Vol. 1, 1960–1973. Senta S. Rogers and Irvin C. Mohler. IFI/Plenum, New York, 1974. xii, 606 pp. $49.50.

The Chemistry of Diacetylenes. M. F. Shostakovskii and A. V. Bogdanova. Translated from the Russian edition (Moscow, 1971). Halsted (Wiley), New York, and Israel Program for Scientific Translations, Jerusalem, 1974. xviii, 494 pp., illus. $45.

The Classical Dynamics of Particles. Galilean and Lorentz Relativity. Ronald A. Mann. Academic Press, New York, 1974. x, 300 pp., illus. $19.50.

Clinical Prediction in Psychotherapy. Leonard Horwitz. Aronson, New York, 1974. xxiv, 372 pp. $15.

Comparative Pathology of the Heart. Papers from a symposium, Boston, Sept. 1973. F. Homburger and I. Lucas, Eds. Karger, Basel, 1974. xii, 380 pp., illus. $95. Advances in Cardiology, vol. 13.

Comparative Physiology. Locomotion, Respiration, Transport and Blood. Proceedings of a congress, Acquasparta, Italy, Sept. 1972. Liana Bolis, K. Schmidt-Nielsen, and S. H. P. Maddrell, Eds. North-Hol-