

transformation of science that took place during the seventeenth century. They may regret that limitations imposed by lack of space and the intended general audience kept the author from giving more of the details of the science of the period, those details that constitute so much of its real interest. A number of the illustrations may tantalize the physicist reader enough to make him read more deeply elsewhere in order to find out, for example, how Huygens was able to solve the problem of the physical pendulum when Newton was still a schoolboy. But if Westfall's book stimulates such further study it will have fulfilled its purpose.

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Theory of Experiments in Paramagnetic Resonance, Vol. 33 of International Series of Monographs in Natural Philosophy

J. Talpe
260 pp. Pergamon,
New York 1971. \$12.00

This monograph by Jan Talpe presents the field of electron spin resonance from a somewhat unconventional perspective, and as a result it constitutes good supplementary reading for workers in the field. The potential audience is graduate students and research workers in physics and chemistry.

The book begins by presenting high-frequency magnetic susceptibility as a particular example of a complex transfer function. This is discussed in terms of a derived relaxation function, which is analogous to Ryogo Kubo and Kazuhisa Tomita's transposed relaxation function. The author provides an insight into the nature of the magnetic resonance phenomenon by comparing the behavior of the susceptibility with the role played by the admittance in an electrical circuit. Nonresonance relaxation or "drag" is treated briefly.

The various characteristics of the paramagnetic resonance line are treated in great detail, including relaxation, resolved and unresolved structure, high and low field limits, shape functions, folding, inhomogeneous broadening and anisotropic broadening. Various aspects of Lorentzian and Gaussian line-shapes are discussed in a manner that supplements the treatments found in other books.

The first half of chapter 3 treats electromagnetic field configurations. It would have helped if the discussion in the text had been supplemented by more figures. The second half of the chapter discusses microwave components and spectrometer operation in

terms of the Smith diagram, and thereby provides a good physical insight into their functions.

The last chapter on signal enhancement discusses general background material first and then takes up the principles of lock-in-detector operation. It ends with a short qualitative section on noise suppression and signal accumulation. No mention is made of resolution enhancement techniques.

The book has a very short subject index and no author index. It employs SI units, which is a good trend for the future and magnetic susceptibilities are defined in relation to the B-field rather than the H-field. These unconventional features should not present any inconvenience to the reader.

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new books

Conference Proceedings

Fourth Symposium on the Structure of Low-Medium Mass Nuclei (Conf. proc. The Nuclear Structure Laboratory, Univ. of Kansas). J. P. Davidson, ed. 266 pp. Univ. Press of Kansas, New York, 1972. \$12.50

Auxiliary Instrumentation for Large Telescopes (Conf. proc. ESO/CERN, Geneva, 2-5 May 1972). S. Laustsen and A. Reiz, ed. CERN, Geneva, Switzerland, 1972

Elementary Particles (Conf. proc. of the Amsterdam International Conference, Amsterdam, The Netherlands, 30 June-6 July 1971). A. G. Tenner and M. J. G. Veltman, ed. 472 pp. American Elsevier, New York, 1972

The Physics of Electronic and Atomic Collisions: invited papers and progress reports (Conf. proc. VII ICPEAC, Amsterdam, The Netherlands, 26-30 July 1971). T. R. Govers and F. J. De Heer, ed. 496 pp. American Elsevier, New York, 1972. \$39.50

Proceedings of the Frequency Standards and Metrology Seminar (Conf. proc. Quebec, Canada, 30 August-1 Sept). 493 pp. Laval University, Quebec, Canada, 1971. \$10.00

Adsorption-Desorption Phenomena (Conf. proc. II International Conf., Florence, April 1971). F. Ricca, ed. 462 pp. Academic, New York, 1972. \$20.50; £6.50

Mesospheric Models and Related Experiments (Conf. proc. Fourth Esrin-Eslab Symposium, Frascati, Italy, 6-10 July 1970). Vol. 25. G. Fiocco, ed. 298 pp. Springer-Verlag, New York, 1971.

External Galaxies and Quasi-Stellar Objects (Conf. proc. International Astronomical Union, Symposium No. 44, Uppsala, Sweden, 10-14 August 1970). D. S.

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