

One of my pet projects has been the attempt (unsuccessful to date) to invent a variational principle for limit cycles—the nonlinear extension of the steady-state concept—particularly in the context of oscillatory chemical reactions. Lavenda seems also to be groping in this direction. He had not got there when he finished the book. At this point, it appears most likely that the kind of thermodynamic guidelines the book develops will be useful in that endeavor. The question, "Is this an important book?" may well be answered only in the light of

any future discoveries it catalyzes.

STEFAN MACHLUP

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## book notes

**The Structure of Matter.** R. M. Turnbull. 277 pp. Blackie, Glasgow, UK, 1979. \$17.95 (paperback)

"This book is an endeavour to present a concise account of atomic, nuclear and elementary particle physics... in the hope that students in the early years of

an undergraduate course may gain a glimpse of developments and ideas in current research," states Robert M. Turnbull in the Preface of *The Structure of Matter*. The author, who is senior lecturer in the development of natural philosophy, University of Glasgow, seems to have fulfilled his intentions. The early chapters focus on particle-wave duality and other basic concepts. A five-chapter look at the extranuclear structure of atoms and a similar section on the atomic nucleus follow. Turnbull devotes final three chapters to elementary particles. The approach is essentially conceptual with the more difficult mathematics deferred to later sections. Each chapter finishes with a bibliography listing suggested further readings and original papers. A short appendix of problems and answers is included.

**McGraw-Hill Modern Scientists and Engineers**, Vols. 1, 2 and 3. S. P. Parker, ed. 465, 449 and 452 pp. McGraw-Hill, New York 1980. \$110.00 for the set.

*Modern Scientists and Engineers* is a revised and enlarged version of the 1966 reference book, *Modern Men of Science*. The new three-volume set contains biographies of some 1100 international scientists and engineers selected from those who received major scientific awards and prizes since the 1920's. Since more than 90 percent of the articles are autobiographical the portrayal of the scientific endeavor is decidedly personal. The text was compiled and edited by the staff of the *McGraw-Hill Encyclopedia of Science and Technology* and provides cross references both to scientific topics and to other scientists. Almost every biographical essay is accompanied by a sketched portrait.

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**Theory & Applications of Electron Spin Resonance.** W. Gordy. 635 pp. Wiley-Interscience, New York, 1980. \$39.95

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Burstein, H. Kawamura, eds. 116 pp. Pergamon, Elmsford, N.Y., 1980. \$20.00

**Imaging Processes and Coherence in Physics** (Proc. of a wrkshp., Les Houches, France, March 1979). M. Schlenker, M. Fink, J. P. Goedgebuer, C. Malgrange, J. C. Vienot, R. H. Wade, eds. 596 pp. Springer, New York, 1980. \$34.90

**Holography and Coherent Optics.** L. M. Soroko. 834 pp. Plenum, New York, 1980 (Russian ed., Nauka, Moscow, USSR, 1971). \$59.50

**Physics and Music: The Science of Musical Sound.** H. E. White, D. H. White. 432 pp. Saunders (Holt, Rinehart and Winston), Philadelphia, Pa, 1980. \$21.00

## Quantum Electronics and Lasers

**Gaseous Electronics and Gas Lasers.** B. E. Cherrington. 278 pp. Pergamon, Elmsford, N.Y., 1979. \$41.00

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**Crystals: Growth, Properties and Applications, Vol. 2.** H. C. Freyhardt, ed. 197 pp. Springer, New York, 1980. \$48.40

**Thermal Expansion of Crystals.** R. S. Krishnan, R. Srinivasan, S. Devanarayanan. 314 pp. Pergamon, Elmsford, N.Y., 1979. \$35.00

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**Interactions in Magnetically Ordered Solids.** K. P. Sinha, N. Kumar. 190 pp. Oxford U., New York, 1980. \$36.50

**Handbook on Semiconductors, Vol. 2: Optical Properties of Solids.** M. Balkanski, ed. 641 pp. North-Holland, New York, 1980. \$122.00

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gy Analysis, Oak Ridge Assoc. U., Oak Ridge, Tenn., 1980 (Price not stated)

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**The Image of Eternity: Roots of Time in the Physical World.** D. Park. 158 pp. U. Massachusetts, Amherst, Mass., 1980. \$14.50

**Problem Solving and Education: Issues in Teaching and Research.** D. T. Tuma, F. Reif, eds. 223 pp. Lawrence Erlbaum, Hillsdale, N.J., 1980 (dist.: Halsted (Wiley), New York). \$16.50

**The Evolution of Mechanics.** P. M. M. Duhem. 235 pp. Sijthoff & Noordhoff, Alphen ann den Rijn, The Netherlands, 1980. \$47.50

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