

volumes, the OCT Consolidated Index series will rank as one of the most important central reference sources. The present volume will prove most useful, and is highly recommended to all having need for "best" numerical property values.

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Geologic Map

The **Geologic Map of New York, 1961**, prepared by the New York State Geological Survey (New York State Museum and Science Service, Albany, 1962. 5 maps. 10 pp. Illus. \$11), the first new geologic map of New York State in three-score years, is not only a splendid scientific achievement in mapping, but the accompanying text provides a brief, comprehensive, geologic history of the area.

The map itself is in five sheets, each about 2½ by 3 feet in size. An enormous amount of information is presented, with respect to the kinds of rock, their ages, and their distribution within the State. The rocks are divided into 168 map units.

Geologic history, step-by-step, is in four sheets of text. Diagrams and figures of many kinds make the history both simple and interesting. A physiographic diagram of the State is an unexpected bonus. But note: to get the map and text, one must order the complete map folio, at \$11, not the separate map sheets, at \$2 each (details from the Museum).

All that is needed now is a seven-armed Martian to handle the folio in a high wind, on a loose talus slope. Of course, Earth Men can take separate, folded sheets into the field.

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New Books

Mathematics, Physical Sciences, and Engineering

Advances in Heterocyclic Chemistry. vol. 1. A. R. Katritzky, Ed. Academic Press, New York, 1963. 488 pp. Illus. \$15.

Analytic Geometry. R. S. Underwood and Fred W. Sparks. Houghton Mifflin, Boston, ed. 3, 1963. 313 pp. Illus. \$4.75.

Basic Concepts of Nuclear Chemistry. Ralph T. Overman. Chapman and Hall,

London; Reinhold, New York, 1963. 128 pp. Illus. Paper, \$1.95.

Basic Electricity. Prepared by Bureau of Naval Personnel. Dover, New York (© 1960), 1962. 462 pp. Illus. Paper, \$2.65.

Beziehungen Zwischen den Physikalisch-Chemischen Eigenschaften und der Wirkung von Lokalanästhetica. Jakob Buchi and Xavier Perlia. Editio Cantor, Württemberg, Germany, 1963. 284 pp. Illus.

The Chemistry of the Lanthanides. Therald Moeller. Reinhold, New York; Chapman and Hall, London, 1963. 127 pp. Illus. Paper, \$1.95.

Continued Fractions. C. D. Olds. Random House, New York, 1963. 170 pp. Illus. Paper, \$1.95.

Cosmic Rays. A. W. Wolfendale. Philosophical Library, New York, 1963. 232 pp. Illus. \$10.

A Course in Higher Geodesy. Spheroidal geodesy and fundamentals of gravimetry and practical astronomy. P. S. Zakatov. Translated from the Russian. Published for the U.S. National Science Foundation by the Israel Program for Scientific Translations, ed. 2, 1962 (order from the Office of Technical Services, U.S. Department of Commerce, Washington, D.C.). 400 pp. Illus. Paper, \$4.

Crystal Data. Determinative tables. J. D. H. Donnay and Gabrielle Donnay, Eds. American Crystallographic Assoc., 1963 (order from Polycrystal Book Service, Brooklyn, N.Y.). 1312 pp. \$20.

Dynamics and Thermodynamics of Planetary Entry. W. H. T. Loh. Prentice-Hall, Englewood Cliffs, N.J., 1963. 284 pp. Illus.

Electrochemistry. Theoretical principles and practical applications. Giulio Milazzo. Translated from the Italian by P. J. Mill. Elsevier, New York, 1963. 724 pp. Illus. \$20.

Electron Scattering and Nuclear and Nucleon Structure. A collection of reprints with an introduction. Robert Hofstadter. Benjamin, New York, 1963. 704 pp. Illus. Paper, \$6.95; cloth, \$10.

Electronic Circuits and Instrumentation Systems. Jack J. Studer. Wiley, New York, 1963. 437 pp. Illus. \$10.75.

Encyclopaedic Dictionary of Physics. vol. 6, *Radiation, Continuous to Stellar Luminosity.* J. Thewlis, Ed. Macmillan, New York; Pergamon, London, 1962. 883 pp. Illus.

Ergebnisse der Angewandten Mathematik. F. L. Bauer, Ed. vol. 8, *Antiplane Elastic Systems.* L. M. Milne-Thomson. Springer, Berlin; Academic Press, New York, 1962. 273 pp. Illus. Paper, \$11.

Exploring the Atmosphere. G. M. B. Dobson. Oxford Univ. Press, New York, 1963. 200 pp. Illus. \$3.40.

Flight Performance Handbook for Orbital Operations. Orbital mechanics and astrodynamical formulae, theorems, techniques, and applications. Raymond W. Wolverton, Ed. Wiley, New York, 1963. Unpag. Illus. \$25.

Les Fondements de la Mécanique Statistique Classique et Quantique. R. Jancel. Gauthier-Villars, Paris, 1963. 330 pp. Illus. Paper, NF. 70.

A Fortran Primer. Elliott I. Organick. Addison-Wesley, Reading, Mass., 1963. 192 pp. Illus. Paper, \$3.95.

General Stochastic Processes in the

Theory of Queues. Václav E. Beneš. Addison-Wesley, Reading, Mass., 1963. 96 pp. Illus. \$5.75.

Generalized Analytic Functions. I. N. Vekua. Translated from *Obobshchennyye analiticheskiye funktsii* (Moscow, 1959) by Ian N. Sneddon. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 698 pp. Illus. \$14.75.

Graphs and Their Uses. Oystein Ore. Random House, New York, 1963. 139 pp. Illus. Paper, \$1.95.

Handbook of Analytical Chemistry. Louis Meites, Ed. McGraw-Hill, New York, 1963. Unpag. Illus. \$47.50.

Heat and Its Workings. Morton Mott-Smith. Dover, New York (© 1933), 1962. 175 pp. Illus. Paper, \$1.

Hydrogen in Steel. Effect of hydrogen on iron and steel during production, fabrication, and use. Michael Smialowski. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 468 pp. Illus. \$10.

Ice and Snow. Properties, processes, and applications. Proceedings of a conference (Cambridge, Mass.), February 1962. W. D. Kingery, Ed., M.I.T. Press, Cambridge, Mass. 1963. 700 pp. Illus. \$16.

Infrared Spectra of Inorganic and Coordination Compounds. Kazuo Nakamoto. Wiley, New York, 1963. 340 pp. Illus. \$9.50.

An Introduction to Digital Computing. Bruce W. Arden. Addison-Wesley, Reading, Mass., 1963. 399 pp. Illus. \$8.75.

An Introduction to Linear Programming and the Theory of Games. A. M. Glicksman. Wiley, New York, 1963. 141 pp. Illus. Paper, \$2.25; cloth, \$4.95.

An Introduction to Plasma Physics. W. B. Thompson. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 264 pp. Illus. \$10.

An Introduction to the Calculus of Variations. L. A. Pars. Wiley, New York, 1962. 362 pp. Illus. \$8.50.

An Introduction to Waves, Rays and Radiation in Plasma Media. J. J. Brandstatter. McGraw-Hill, New York, 1963. 704 pp. Illus. \$15.

Introductory Mechanics. Edwin F. Taylor. Wiley, New York, 1963. 443 pp. Illus. \$8.75.

Ion Exchange Separations in Analytical Chemistry. Olof Samuelson, Almqvist and Wiksell, Stockholm; Wiley, New York, 1963. 474 pp. Illus. \$9.50.

The Ionosphere. Proceedings of the International Conference (London), July 1962. A. C. Stickland, Ed. Institute of Physics and the Physical Society, London, 1963 (order from Chapman and Hall, London). 538 pp. Illus. £5 5s.

Kirk-Othmer Encyclopedia of Chemical Technology. vol. 1, *A to Aluminum.* Herman F. Mark, John J. McKetta, Jr., and Donald F. Othmer, Eds. Interscience (Wiley), New York, ed. 2, 1963. 1010 pp. Illus. \$45 each volume.

Lectures in Materials Science. Cornell Materials Science Center Lecture Series. P. J. W. Debye, N. Bloembergen, P. J. Flory, and F. Bitter. Paul Leurgans, Ed. Benjamin, New York, 1963. 121 pp. Illus. Paper, \$3.95; cloth, \$7.

Magnetism. E. W. Lee. Penguin Books, Baltimore, Md., 1963. 287 pp. Illus. Paper, \$1.65.

Marine Sciences Instrumentation. vol. 2. Proceedings of a symposium held at

San Diego, Calif., November 1962. R. D. Gaul, Ed. Plenum Press, New York, 1963. 203 pp. Illus. \$10.

Mathematical Tables and Formulas. Compiled by Robert D. Carmichael and Edwin R. Smith. Dover, New York (© 1931), 1962. 277 pp. Illus. Paper, \$1.

Methods of Experimental Physics. L. Marton, Ed. vol. 5, pt. B, *Nuclear Physics*. Luke C. L. Yuan and Chien-Shiung Wu, Eds. Academic Press, New York, 1963. 904 pp. Illus. \$22.50.

Mineralogie und Petrographie in Einzeldarsellungen. W. V. Engelhardt and J. Zemmann. vol. 3, *Entstehung und Stoffbestand der Salzlagertstätten*. Otto Braitsch. Springer, Berlin, 1962. 240 pp. Illus. Paper, DM. 56.

Modern Chemical Kinetics. Henry Eyring and Edward M. Eyring. Chapman and Hall, London; Reinhold, New York, 1963. 124 pp. Illus. Paper, \$1.95.

Modern Developments in Heat Transfer. Warren Ibele, Ed. Academic Press, New York, 1963. 505 pp. Illus. \$18.

Modern Multidimensional Calculus. M. E. Munroe. Addison-Wesley, Reading, Mass., 1963. 400 pp. Illus. \$9.75.

New Chemical Engineering Separation Techniques. Herbert M. Schoen, Ed. Interscience (Wiley), New York, 1962. 451 pp. Illus.

New Data on Rare Element Mineralogy. A. I. Ginzburg, Ed. Translated from the Russian (Moscow, 1961). Consultants Bureau, New York, 1963. 144 pp. Illus. \$17.50.

Non-Equilibrium Statistical Mechanics. vol. 1. I. Prigogine. Interscience (Wiley), New York, 1962. 327 pp. Illus. \$12.50.

Nonlinear Problems. Proceedings of a symposium (Mathematics Research Center, Madison, Wisc.), April and May 1962. Rudolph E. Langer, Ed. Univ. of Wisconsin Press, Madison, 1963. 334 pp. Illus. \$7.50.

Nouveau Traité de Chimie Minérale. vol. 8, *Germanium, Étain, Plomb* (855 pp.); vol. 9, *Titane, Zirconium, Hafnium, Thorium* (1251 pp.). Paul Pascal, Ed. Masson, Paris, 1963. Illus.

Nuclear Physics. Irving Kaplan. Addison-Wesley, Reading, Mass., ed. 2, 1963. 784 pp. Illus. \$11.50.

Nuclear Physics and the Fundamental Particles. Harry H. Heckman and Paul W. Starring. Holt, Rinehart, and Winston, New York, 1963. 416 pp. Illus. Paper.

Numerical Solution of Ordinary and Partial Differential Equations. L. Fox. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 519 pp. Illus. \$10.

Ordinary Differential Equations. Walter Leighton. Wadsworth, Belmont, Calif., 1963. 272 pp. Illus.

Ordinary Differential Equations. An elementary textbook for students of mathematics, engineering and the sciences. Morris Tenenbaum and Harry Pollard. Harper and Row, New York, 1963. 828 pp. Illus. \$10.75.

Phthalocyanine Compounds. Frank H. Moser and Arthur L. Thomas. Reinhold, New York; Chapman and Hall, London, 1963. 381 pp. Illus. \$18.

Physical Geochemistry. F. Gordon Smith. Addison-Wesley, Reading, Mass., 1963. 634 pp. Illus. \$15.

Physical Methods in Heterocyclic Chemistry. vols. 1 and 2. A. R. Katritzky,

Ed. Academic Press, New York, 1963. vol. 1, 358 pp., \$12; vol. 2, 410 pp., \$14. Illus.

Plasma Physics and Magnetofluidmechanics. Ali Bulent Cambel. McGraw-Hill, New York, 1963. 318 pp. Illus. \$11.50.

Principles of Magnetic Resonance. With examples from solid state physics. Charles P. Slichter. Harper and Row, New York, 1963. 256 pp. Illus. \$8.25.

Principles of Modern Mathematics. vol. 1. William E. Hartnett. Harper and Row, New York, 1963. 432 pp. Illus. \$7.75.

Reaction Heats and Bond Strengths. C. T. Mortimer. Pergamon, London; Addison-Wesley, Reading, Mass., 1962. 242 pp. Illus. \$5.

Research in Surface Forces. B. V. Deryagin, Ed. Translated from the Russian (Moscow, 1961). Consultants Bureau, New York, 1963. 194 pp. Illus. Paper.

Self-Organizing Systems. 1962. Marshall C. Yovits, George T. Jacobi, and Gordon D. Goldstein, Eds. Spartan, Washington, D.C., 1962. 575 pp. Illus.

Semiconductor Materials. Proceedings of the 4th All-Union Conference, U.S.S.R. N. Kh. Abrikosov, Ed. Translated from the Russian. Consultants Bureau, New York, 1963. 143 pp. Illus. Paper, \$17.50.

Shock and Vibration Engineering. vol. 1. Charles T. Morrow. Wiley, New York, 1963. 404 pp. Illus. \$12.

The Solar Corona. Proceedings of the International Astronomical Union Symposium, No. 16 (Cloudcroft, N.M.), August 1961. John W. Evans, Ed. Academic Press, New York, 1963. 356 pp. Illus. \$14.

Solid State Physics. Advances in research and applications. Frederick Seitz and David Turnbull, Eds. supplement 3, *Theory of Lattice Dynamics in the Harmonic Approximation*. A. A. Maradudin, E. W. Montroll, and G. H. Weiss. Academic Press, New York, 1963. 327 pp. Illus. \$10.

Solids under Pressure. William Paul and Douglas M. Warschauer, Eds. McGraw-Hill, New York, 1963. 496 pp. Illus. \$15.

Spectrochemical Abstracts. vol. 8, 1958-1961. Ernest H. S. van Someren, F. Lachman, and F. T. Birks. Hilger and Watts, London, 1963. 103 pp. Paper, 42s.

Stability of Motion. Applications of Lyapunov's second method to differential systems and equations with delay. N. N. Krasovskii. Translated from the Russian (Moscow, 1959) by J. L. Brenner. Stanford Univ. Press, Stanford, Calif., 1963. 194 pp. Illus. \$6.

Standard Wolfcampian Series (Permian), Glass Mountains, Texas. Charles A. Ross. Geological Soc. of America, New York, 1963. 213 pp. Illus.

Structure Reports for 1953. vol. 17. W. B. Pearson, J. Wyart, and J. Monteath Robertson, Eds. Published for the International Union of Crystallography by Oosthoek's, Utrecht, 1963. 871 pp. Illus. \$35.

Studies in Modern Algebra. A. A. Albert, Ed. Mathematical Assoc. of America, Buffalo, N.Y., and Prentice-Hall, Englewood Cliffs, N.J., 1963. 196 pp. Illus.

Theoretical Physics. Lectures presented at a seminar (Trieste), July and August 1962. R. Capps *et al.* International Atomic

Energy Agency, Vienna, 1963 (order from International Publications, New York). 648 pp. Illus. Paper, \$12.

Thermodynamics. An introductory text for engineering students. John F. Lee and Francis Weston Sears. Addison-Wesley, Reading, Mass., ed. 2, 1963. 636 pp. Illus. \$9.75.

Time Series Analysis. Proceedings of a symposium (Providence, R.I.), June 1962. Murray Rosenblatt, Ed. Wiley, New York, 1963. 511 pp. Illus. \$16.50.

Topics in Organic Chemistry. Louis F. Fieser and Mary Fieser. Chapman and Hall, London; Reinhold, New York, 1963. 680 pp. Illus. \$10.

A Treatise on Radiative Transfer. V. V. Sobolev. Translated from the Russian (*Transport of Radiant Energy in Stellar and Planetary Atmospheres*) by S. I. Gaposchkin. Van Nostrand, Princeton, N.J., 1963. 331 pp. Illus. \$9.75.

Weak Interactions. And topics in dispersion physics. Lecture notes from the Second Bergen International School of Physics, May and June 1962. Christian Fronsdal, Ed. Benjamin, New York, 1963. 344 pp. Illus. Paper, \$4.95; cloth, \$8.

Economics and the Social Sciences

Administration and Economic Development in India. Ralph Braibanti and Joseph J. Spengler, Eds. Duke Univ. Press, Durham, N.C., 1963. 322 pp. \$7.50.

Anthropology A to Z. Carleton S. Coon and Edward E. Hunt, Jr., Eds. Translated from the German (*Anthropologie*, 1959) by Hans Gunthardt *et al.* Grosset and Dunlap, New York, 1963. 285 pp. Illus. Paper, \$2.50; cloth, \$4.75.

Education and Culture. Anthropological approaches. George D. Spindler. Holt, Rinehart, and Winston, New York, 1963. 591 pp. Paper, \$4.75.

Disarmament and the Economy. Emile Benoit and Kenneth E. Boulding. Harper and Row, New York, 1963. 320 pp. \$5.75.

A Handbook of Psychoanalysis. Hans Herma and Gertrud M. Kurth, Eds. World, Cleveland, Ohio (© 1950), 1963. 345 pp. Illus. Paper, \$1.65.

Progress and Decline. The group in evolution. Hugh Miller. Ward Ritchie Press, Los Angeles, 1963. 292 pp. \$10.

Psychology: A Study of a Science. vol. 5, *The Process Areas, the Person, and Some Applied Fields: Their Place in Psychology and in Science*. Study 2, *Empirical Substructure and Relations With Other Sciences*. Sigmund Koch, Ed. McGraw-Hill, New York, 1963. 979 pp. \$13.50.

School Leavers. Their aspirations and expectations. Thelma Veness. Humanities Press, New York, 1962. 278 pp. Illus. \$5.

Signs, Signals, and Symbols. A presentation of a British approach to speech pathology and therapy. Stella E. Mason, Ed. Methuen, London, 1963. 224 pp. Illus. 35s.

Varieties of Classic Social Theory. Hendrik M. Ruitenbeek, Ed. Dutton, New York, 1963. 477 pp. Paper, \$2.75.

Varieties of Modern Social Theory. Hendrik M. Ruitenbeek, Ed. Dutton, New York, 1963. 448 pp. Paper, \$2.65.

Youth: Change and Challenge. Erik H. Erikson, Ed. Basic Books, New York (© 1961), 1963. 300 pp. \$6.50.