phragm muscle, and some provocative thoughts concerning the action of hormones on the cell as a whole. Other subjects covered are the action of parathyroid hormone on mitochondrial metabolism, melanotrophic and lipolytic activities of various synthetic peptides, the action of thyroid hormones in vitro, the cellular location of adenyl cyclase, the mechanism of action of steroid hormones, and the regulation of biological function mediated by changes in protein structure.

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Botany

Pollen Physiology and Fertilization. A symposium held at the University of Nijmegen, Netherlands, in August 1963. H. F. Linskens, Ed. North-Holland, Amsterdam, 1964. xii + 257 pp. Illus. $11.20.

In this volume papers contributed by 37 authors are arranged in seven sections: Physiology of the Embryo Sac; Biochemistry of Pollen Wall Formation; Metabolism of Pollen Tubes; Boron and Pollen Tube Growth; Chemotropism of Pollen Tubes; Controlled Fertilization; and The Incompatibility Barrier. Within so wide a range of topics, the individual papers vary in their valid contribution to the expressed purpose of the symposium —to focus attention on "those fundamental processes in higher plants leading to formation of the zygote."

The following papers are representative of the collection. J. Heslop-Harrison has provided a provocative account of detailed observations on pollen development in *Cannabis* and *Silene*. The synthesis of callose in pollen mother cells of *Cucurbita* is briefly described, primarily in the form of a model based on electron microscopy by W. Eschrich. L. Waterkeyn's detailed report on the incidence of callose in the microsporocyte, microspore, and pollen grain of *Pinus* represents a continuation of long-term studies carried on at the Institut J. B. Carnoy. In describing pore formation in pollen of *Poa*, J. R. Rowley includes a thought-provoking discussion of the still-controversial matters of exine formation and function. E. A. Britikov, N. A. Musatova, S. V. Vladimirtseva, and M. A. Protsenko suggest, on the basis of an extensive exploration of approximately 200 species of seed plants, that the unusually high proline content of pollen relates, in part, to active protein synthesis after pollination. According to J. Tupý, exogenous proline does not stimulate the growth of pollen tubes in short-term cultures. E. Hrabetová and J. Tupý found that raffinose is the best substrate for pollen tube cultures of long duration. The relation of boron to pollen tube growth continues to be a topic of research interest. I. K. Vasil points out that the general deficiency of boron in pollen is counterbalanced by comparatively high levels of boron in stigmatic and stylar tissues. P. Fähnrich found that five different homologues of boron were ineffective stimulants for germinating pollen. R. G. Stanley and F. A. Loewus concluded, on the basis of their observations on germinating pollen of *Pyrus*, that boron plays a definite role in pectin synthesis.

Small populations of pollen grains rarely germinate well in vitro, but J. L. Brewbaker and B. H. Kwack provide evidence which indicates that calcium overcomes this population effect. Their use of the expressions "pollen elongation" and "pollen growth," with reference to growth of pollen *tubes*, seems inappropriate in terms of ontogeny of the pollen grain. W. G. Rosen calls attention to the contradictory nature of much of the literature on chemotropism in pollen tubes. M. M. A. Sassens presents a photographic record of the generative *cell* of *Petunia* pollen.

P. Maheshwari and K. Kanta describe the control of fertilization in four species in the *Papaveraceae*, and in two Solanaceous species, through use of intraovarian pollination as well as test-tube fertilization. I. M. Polyakov stresses the multistage nature of the fertilization process. In analyzing the successive steps involved in fertilization, the designation of one step as *gamogenesis* appears unfortunate because the term is applied to the phase that is typified by fusion, rather than by generation, of gametic elements. According to M. Kroh, two enzyme systems, cutinase and pectinase, are operative in the initial penetration of pollen tubes into the walls of stigmatic papillae in the *Cruciferae*. It is suggested that, in self-incompatible crucifers, formation of activator-enzyme complex is inhibited by the stigma. By removing anthers in *Petunia*, H. F. Linskens uncovered evidence of a growth principle responsible for normal maturation of the female organs. Figures 5 through 8 in this paper are somewhat difficult to interpret owing to their skimpy explanatory legends. According to A. Hecht, inactivation of incompatibility substance in stigmas and styles of *Oenothera* is a temperature-dependent chemical process. M. Hagman applied disc electrophoresis and serological reactions in a pilot observation of pollen and style relationships in three species of *Betula*.

There is no summarizing chapter, although helpful portions of the recorded discussions are included. Many of the papers provide up-to-date, critical citations to the literature. There are occasional typographical errors, and "species" is applied (p. 194) where agronomic variety is obviously involved. The expression "tubes of immature pollen" (p. 236), without further description, appears to be a non sequitur. Use of the term *microspore* (p. 121) as a synonym for pollen grain is unfortunate. The pollen grain released from the mature anther is, of course, the two- or three-celled gametophyte.

The volume has been attractively produced with admirable promptness.

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New Books

General

Alluvial and Palynological Reconstruction of Environments, Navajo Reservoir District (Anthropology Paper No. 13). James Schoenwetter and Frank W. Eddy, with a section by Eleanor Jane Nettle. Museum of New Mexico Press, Santa Fe, 1964. 155 pp. Illus. Paper, $3. A report on field studies performed during parts of 1958, 1961, 1962, and 1963 as part of a program to investigate and study materials relative to the prehistoric occupation of the area that is now being flooded by Lake Navajo.

American Aspects. D. W. Brogan. Harper and Row, New York, 1964. 207 pp. $4.

Animal Communication. Hubert Frings and Mable Frings. Blaisdell (Ginn), New York, 1964. 216 pp. Illus. Paper, $2.50.

Anthropological Papers. Nos. 68–74 (*Bull. Bur. Amer. Ethnol. No. 191*). Frank H. H. Roberts, Jr., Ed. Smithsonian Institution, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D.C.). 431 pp.

(Continued on page 644)

NEW BOOKS

(Continued from page 602)

Illus. Plates. $2.25. Seven papers: "The prehistory of Panamá Viejo" by Leo P. Biese; "The language of Santa Ana Pueblo" by Irvine Davis; "Observations on certain ancient tribes of the Northern Appalachian Province" by Bernard G. Hoffman; "El Limón, an early tomb site in Coclé Province, Panama," "Archeological notes on Almirante Bay, Bocas del Toro, Panama," and "The archeology of Taboga, Urabá, and Taboguilla Islands, Panama" by Matthew W. Stirling and Marion Stirling; and "Iroquois masks and maskmaking at Onondaga," by Jean Hendry.

Astronautics and Aeronautics, 1963. Chronology on science, technology, and policy. Prepared by the NASA Historical Staff. Natl. Aeronautics and Space Administration, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D.C.). 618 pp. Paper, $2.

Astronomy for the Layman. Arthur T. Adams. Vantage Press, New York, 1964. 217 pp. Illus. $3.95.

BSCS Biology-Implementation in the Schools (Bulletin No. 3). Arnold B. Grobman, Paul DeH. Hurd, Paul Klinge, Margaret McKibben Lawler, and Elra Palmer. Hulda Grobman, Ed. Biological Sciences Curriculum Study, Boulder, Colo., 1964. 102 pp. Illus. Paper, $3.50; cloth, $5.

Bird Art in Science: The Growth of a Tradition. R. L. Scheffel. State Education Department, Univ. of the State of New York, Albany, 1964. 36 pp. Illus. Paper, 50¢ (order from New York State Museum and Science Service, Albany). A supplement to the New York State Museum's permanent exhibit, Bird Art in Science.

Byron's Journal of His Cincumnavigation 1764–1766. Robert E. Gallagher, Ed. Published for the Hakluyt Society by Cambridge Univ. Press, New York, 1964. 312 pp. Illus. $7.50.

Catalogue of Data in World Data Center A: Oceanography. Data received during the period 1 July 1957 to 31 December 1963. Compiled by W. C. Jacobs. World Data Center A: Oceanography, Washington, D.C., 1964. Unpaged.

A Cheyenne Sketchbook: Cohoe. Commentary by E. Adamson Hoebel and Karen Daniels Petersen. Univ. of Oklahoma Press, Norman, 1964. 112 pp. Illus. $5.95.

Computers: Theory and Uses. Vincent S. Darnowski. Hugh Allen, Jr., Ed. Natl. Science Teachers Assoc., Washington, D.C. 116 pp. Illus. Paper, $1.

The Concept of Nature. The Tarner lectures delivered in Trinity College, November 1919. Alfred North Whitehead. Cambridge Univ. Press, New York, 1964. 212 pp. Paper, $1.95; cloth, $5 (reprint of the 1920 edition).

Disaster Handbook. Solomon Garb and Evelyn Eng. Springer, New York, 1964. 256 pp. Illus. Paper, $3.50; cloth, $4.75.

Drinking Among Teen-Agers. A sociological intrepretation of alcohol use by high-school students. George L. Maddox and Bevode C. McCall. Rutgers Center

of Alcohol Studies, New Brunswick, N.J., 1964. 143 pp. $6.

Effects of Atomic Radiation. Report of the United Nations Scientific Committee, 19th session. United Nations, New York, 1964. 124 pp. Illus. Paper, $1.50.

Elementary Teacher's Classroom Science Demonstrations and Activities. David E. Hennessy Prentice-Hall, Englewood Cliffs, N.J., 1964. 320 pp. Illus. $7.95.

Exploration of the Universe. H. C. King. New American Library, New York, 1964. 335 pp. Illus. Paper, 75¢.

Willard Gibbs. Muriel Rukeyser. Dutton, New York, 1964. 475 pp. Illus. Paper, $1.95 (reprint of the 1942 edition).

International Yearbook of Education. vol. 25. International Bureau of Education, Geneva; UNESCO, Paris, 1963 (order from Columbia Univ. Press, New York). 557 pp. Paper, $6.50. Contains individual reports of 98 countries and an analysis of the educational trends that have influenced the progress of education in these countries in 1962 and 1963.

Laboratory Animals. vol. 2, *Animals for Research*. A directory of sources of laboratory animals, equipment, and materials. Natl. Acad. Sciences–Natl. Research Council, Washington, D.C., ed. 5, 1964. 95 pp. Paper, $2.

Law, Science, and Technology: A Symposium. (*George Washington Law Rev.* **33**, No. 1). George Washington Univ., Washington, D.C., 1964. 458 pp. Paper, $4.95. Twelve papers concerned with the impact of science and technology on legal processes. The contributors are Thomas A. Cowan; Arthur Selwyn Miller; Robert G. Dixon, Jr.; W. Wallace Kirkpatrick; Harold P. Green; Samuel D. Estep; Spencer M. Beresford; J. Forrester Davison; Donald B. King; Donald N. Michael; Irving Kayton; and Louis H. Mayo and Ernest M. Jones.

Lightning in His Hand: The Life Story of Nikola Tesla. Inez Hunt and Wanetta W. Draper. Sage Books and Swallow, Denver, Colo., 1964. 269 pp. Illus. $5.

Listen to Leaders in Engineering. Albert Love and James Saxon Childers, Eds. Tupper and Love, Atlanta, Ga.; McKay, New York, 1965. 350 pp. $5.95. Twenty-two chapters written by Vannevar Bush, Gordon Stanley Brown, Frederick Emmons Terman, Andrew S. Schultz, Jr., George E. Holbrook, Nathan M. Newmark, Rolf Eliassen, George S. Schairer, Wernher von Braun, Manson Benedict, Simon Ramo, Oscar T. Marzke, Philip Sporn, Bernard M. Oliver, John R. Pierce, Edward E. David, Jr., Charles Stark Draper, Walter A. Rosenblith, Newman A. Hall, William O. Baker, James R. Killian, Jr., and Jerome B. Wiesner.

Listen to Leaders in Science. Albert Love and James Saxon Childers, Eds. Tupper and Love, Atlanta; McKay, New York, 1965. 288 pp. $5.50. Eighteen chapters contributed by George W. Beadle, Lee A. DuBridge, Glenn T. Seaborg, Robert Oppenheimer, Donald H. Menzel, M. King Hubbert, Frank Press, George Wald, Jackson W. Foster, George Gaylord Simpson, James Bonner, James F. Crow, David G. Mandelbaum, George A. Miller, John W. Tukey, Roger Revelle, Henry G. Houghton, and Warren Weaver.

Personal Knowledge: Towards a Post-Critical Philosophy. Michael Polanyi. Harper and Row, New York, 1964 (reprint of the 1962 edition). 444 pp. Paper, $2.75.

Public Papers of the Presidents of the United States: Harry S. Truman, 1949. General Services Administration, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D.C.). 707 pp. $6.75. Contains the public messages, speeches, and statements of the president.

Radiation Preservation of Foodstuffs. Second Scandinavian Meeting on Food Preservation by Ionizing Radiation (Stockholm), September 1963; arranged by the Committee for Technical Applications of Ionizing Radiation, Royal Swedish Academy of Engineering Sciences. Per-Olof Kinell and Vera Runnström-Reio, Eds. Johanssons, Karlshamn, Sweden, 1964. 87 pp. Illus. Paper, Kr. 25. Eighteen papers on experimental techniques, application to special foodstuffs, and the fundamental problems involved. The contributors are K. Abrahamsson, A. Brynjolfsson, P.-I. E. Hansen, J. B. Henriksen, B. Henricson, N. W. Holm, M. Jaarma, N. Molin, T. Nilsson, C. G. Österlundh, E. F. Reber, D. N. Rhodes, K. Sehested, J. P. Skou, E. von Sydow, G. Thaarup, and T. A. Truelsen.

The Reconstruction of Past Environments. Proceedings, Fort Burgwin Conference on Paleoecology, 1962. Assembled by James J. Hester and James Schoenwetter. Fort Burgwin Research Center, Ranches of Taos, N.M., 1964. 95 pp. Illus. Paper, $3. Sixteen papers given at the conference.

Religion and the State University. Erich A. Walter, Ed. Univ. of Michigan Press, Ann Arbor, 1964 (reprint, 1958 edition). 320 pp. Paper, $2.25.

The Research State: A History of Science in New Jersey. John R. Pierce and Arthur G. Tressler. Van Nostrand, Princeton, N.J., 1964. 183 pp. Illus. $3.95.

David Rittenhouse. Brooke Hindle. Princeton Univ. Press, Princeton, N.J., 1964. 408 pp. Illus. $8.50.

Rocket and Missile Technology. Gene Gurney, Ed. Watts, New York, 1964. 414 pp. Illus. $5.95. A compilation of some 40 selections, reprints from various sources, covering the spectrum of rocket and missile technology. Among the contributors are Walter Sullivan, John K. O'Doherty, William A. Kinney, and Sir Bernard Lovell.

Russia in the Thaw. Alberto Ronchey. Translated from the Italian edition (1963) by Raymond Rosenthal. Norton, New York, 1964. 249 pp. Illus. $5.

Science and Cancer. Michael B. Shimkin. U.S. Department of Health, Education, and Welfare, Washington, D.C., 1964. 143 pp. Illus. Paper, 60¢ (order from Superintendent of Documents, Washington, D.C.).

The Science Book of Meteorology. An introduction to the atmosphere and its phenomena. With a special section on the World Meteorological Organization. David C. Knight. Watts, New York, 1965. 215 pp. Illus. $4.95 (juvenile book).

Science for High School Students. Nu-

clear Research Foundation School Certificate Integrated Science Textbook Group of Authors and Editors. H. Messel, Chairman. Nuclear Research Foundation, Univ. of Sydney, Sydney, Australia, 1964. 1040 pp. [*Teachers' Manual* (1964 edition), 480 pp.] Illus. A 4-year course in physics, chemistry, biology, and geology, based on and covering the science syllabus approved by the New South Wales Secondary Schools Board and prepared under the guidance of H. S. Wyndham.

Scientific Research Films Made at U.S. Universities: A 1960–1961 Survey. Office of Scientific Personnel, Natl. Research Council–Natl. Acad. of Sciences: American Science Film Assoc., Washington, D.C., 1964. 50 pp. Paper.

Secondary School Science Teaching Practices. H. Seymour Fowler. Center for Applied Research in Education, New York, 1964. 127 pp. $3.95.

So You Want to Be a Chemist. Alan E. Nourse. Harper and Row, New York, 1964. 182 pp. $3.50 (juvenile book).

Strawberry Diseases. A. G. Plakidas. Louisiana State Univ. Press, Baton Rouge, 1964. 207 pp. Illus. $5.

Style Manual for Biological Journals. Prepared by the Committee on Form and Style of the Conference of Biological Editors. Published for the Conference by the American Inst. of Biological Sciences, Washington, D.C., ed. 2, 1964. 127 pp. Illus. $3.

Supply and Costs in the U.S. Petroleum Industry. Franklin M. Fisher. Published for Resources for the Future by Johns Hopkins Press, Baltimore, Md., 1964. 191 pp. Illus. Paper, $5.

Transistor Manual. J. F. Cleary, Ed. General Electric Co., Syracuse, N.Y., ed. 7, 1964. 662 pp. Illus. Paper, $2.

The Treasury of Mathematics. A collection of source material in mathematics, edited and presented with introductory biographical and historical sketches. Henrietta O. Midonick, Ed. Philosophical Library, New York, 1965. 844 pp. Illus. $15. 54 papers.

United Kingdom Postgraduate Awards 1964–66. Association of Commonwealth Universities, London, ed. 12, 1964. 168 pp. Paper, $1. Summarized information about fellowships, scholarships, and grants, available at universities in the United Kingdom and a short list of awards offered outside the UK.

Visual Perception: The Nineteenth Century. William N. Dember. Wiley, New York, 1964. 234 pp. Illus. $4.95.

World Prospects for Natural Resources. Some projections of demand and indicators of supply to the year 2000. Joseph L. Fisher and Neal Potter. Published for Resources for the Future by Johns Hopkins Press, Baltimore, Md., 1964. 79 pp. Illus. Paper, $1.50.

Mathematics, Physical Sciences, and Engineering

Absolute Stability of Regulator Systems. M. A. Aizerman and F. R. Gantmacher. Translated from the Russian edition (Moscow, 1963) by E. Polak. Holden-Day, San Francisco, Calif., 1964. 182 pp. Illus. $8.95.

A-C Carrier Control Systems. Keith A. Ivey. Wiley, New York, 1964. 363 pp. Illus. $12.

Advances in Hydroscience. vol. 1. Ven Te Chow, Ed. Academic Press, New York, 1964. 452 pp. Illus. $15. Five papers: "Sonar" by Bradford A. Becken; "Hydroelasticity" by S. R. Heller, Jr.; "Statistical hydrodynamics in porous media" by Adrian E. Scheidegger; "New contributions to hydroballistics" by F. S. Burt; and "Hydraulics of wells" by Mahdi S. Hantush.

Aerodynamics of Turbines and Compressors. W. R. Hawthorne, Ed. Princeton Univ. Press, Princeton, N.J., 1964. 630 pp. Illus. $17.50. The papers are: "Theory of two-dimensional flow through cascades" by F. S. Weinig; "Three-dimensional flow in turbomachines" by Frank E. Marble; "Experimental techniques" by John R. Erwin; "Flow in cascades" by A. R. Howell; "The axial compressor stage" by W. D. Rannie; "The supersonic compressor" by John R. Erwin and Antonio Ferri; "Aerodynamic design of axial flow turbines" by E. Duncombe; "The radial turbine" by Werner T. von der Nuell; "The centrifugal compressor" by Edward S. Taylor; and "Blading interaction effects in turbines" by Hans Kraft. There is an introduction by the editor.

Alkylation with Olefins. A. V. Topchiev, S. V. Zavgorodnii, and V. G. Kryuchkova. Elsevier. New York, 1964. 316 pp. Illus. $16.

Analysis Instrumentation, 1964. Proceedings, 10th National Analysis Instrumentation Symposium (San Francisco, Calif.), 1964. L. Fowler, R. J. Harmon, and D. K. Roe, Eds. Plenum Press, New York, 1964. 350 pp. Illus. $14.50. Twenty-eight papers.

Amplifier and Memory Devices: With Films and Diodes. Noah S. Prywes, Ed. McGraw-Hill, New York, 1965. 472 pp. Illus. $17.50. Four parts: Tunnel Diodes, by W. F. Chow, A. Chynoweth, and M. Hines; Parametric Amplifiers, by D. Leenov and N. S. Prywes; Magnetic Films, by A. V. Pohm and S. Rubens; and Superconducting Devices, by H. H. Edwards and V. L. Newhouse.

Analytical Chemistry. vol. 4, pt. 1, *Solid State Charged Particle Detectors*. Niels J. Hansen. Carl E. Crouthamel, Ed. Pergamon, London; Macmillan, New York, 1964. 78 pp. Illus. Paper, $4.25.

Annual Review of Nuclear Science. vol. 14. Emilio Segrè, Gerhart Friedlander, and H. Pierre Noyes, Eds. Annual Reviews, Palo Alto, Calif., 1964. 518 pp. Illus. $8.50. Fourteen papers: "Alpha decay" by H. J. Mang; "Recent progress in the theory of nuclear matter" by A. G. Petschek: "Nucleon, two-nucleon reactions above 100 MeV" by J. Robb Grover and A. A. Caretto, Jr.; "Dynamic orientation of nuclei" by Carson D. Jeffries; "Structure of the proton" by Robert R. Wilson and Joseph S. Levinger; "Symmetries among the strongly interacting particles" by R. E. Cutkosky; "Spark chambers" by W. A. Wenzel: "Data systems for multiparameter analysis" by R. J. Spinrad; "Modern techniques used in nuclear design of reactors" by G. D. Joanou and H. B. Stewart; "Breeder reactors" by Lloyd G. Alexander; "Chemistry of the actinide elements" by B. B. Cunningham;

"Quantitation of cellular radiobiological responses" by G. F. Whitmore and J. E. Till; "Analysis of experiments in particle physics" by Frank T. Solmitz; "Electromagnetic moments of excited nuclear states" by K. Alder and R. M. Steffen.

Applications of Nuclear Physics. J. H. Fremlin. English Universities Press, London, 1964. 352 pp. Illus. 25s.

Applied Combinatorial Mathematics. Edwin F. Beckenbach, Ed. Wiley, New York, 1964. 630 pp. Illus. $13.50. A statewide lecture series offered by the University Extension, Engineering and Physical Sciences Divisions, University of California in 1962. Eighteen papers were contributed by George Pólya, Derrick H. Lehmer, Montgomery Phister, Jr., John Riordan, Elliott W. Montroll, N. G. de Bruijn, Frank Harary, Richard Bellman, Robert Kalaba, Edwin L. Peterson, Leo Breiman, Albert W. Tucker, Edwin F. Beckenbach, Marshall Hall, Jr., Jacob Wolfowitz, Charles B. Tompkins, Kenneth N. Trueblood, George Gamow, and Hermann Weyl.

Aspects Théoriques et Industriels de la Lyophilisation. Louis Rey, Ed. Hermann, Paris, 1964. 653 pp. Illus. F.84.

Atlas and Glossary of Primary Sedimentary Structures. F. J. Pettijohn and Paul Edwin Potter. Translations into Spanish, French, and German by Juan Carlos Riggi, Marie-Hélène Sachet, and Hans-Ulrich Schmincke. Springer Verlag, New York, 1964. 386 pp. Illus. $14.75.

An Atlas of VLF Emission Spectra Observed with the "Hiss Recorder" (*Natl. Bur. Standards Tech. Note 226*). Jean A. Koch and V. Christine Edens. Natl. Bur. Standards, Washington, D.C., 1964 (order from Superintendent of Documents, Washington, D.C.). 27 pp. Illus. Paper, 40¢.

Atoms, Molecules, and Quanta. vols. 1 and 2. Arthur Edward Ruark and Harold Clayton Urey. Dover, New York, 1964 (revised and corrected reprint of the 1930 edition). vol. 1, 463 pp.; vol. 2, 370 pp. Illus. Paper, $2.50 per volume.

Automatic Methods in Volumetric Analysis. D. C. M. Squirrell. Van Nostrand, Princeton, N.J., 1964. 211 pp. Illus. $6.75.

Basic Concepts of Geometry. Walter Prenowitz and Meyer Jordan. Blaisdell (Ginn), New York, 1965. 372 pp. Illus. $7.50.

Biogeochemical Methods of Prospecting. Dmitrii Petrovich Malyuga. Translated from the Russian edition (Moscow, 1963). Consultants Bureau, New York, 1964. 213 pp. Illus. $27.50.

Capacitors, Magnetic Circuits, and Transformers. Leander W. Matsch. Prentice-Hall, Englewood Cliffs, N.J. 1964. 364 pp. Illus. $16.

Celestial Mechanics and Astrodynamics. Papers presented at the American Institute of Aeronautics and Astronautics Astrodynamics Conference (New Haven, Conn.), 1963. Victor G. Szebehely, Ed. Academic Press, New York, 1964. 764 pp. Illus. $10.75. Twenty-nine papers.

Chemical Bonding. Audrey L. Companion. McGraw-Hill, New York, 1964. 167 pp. Illus. $4.50.

Chemical Transport Reactions. Harald Schäfer. Translated from the German edition (Weinheim, 1962) by Hans Frankfort. Academic Press, New York, 1964. 173 pp. Illus. $6.80.

Clays and Clay Minerals. Proceedings, 12th National Conference (Atlanta, Ga.), 1963. W. F. Bradley, Ed. Pergamon, London; Macmillan, New York, 1964. 704 pp. Illus. $25. Fifty-two papers presented at the conference, which was sponsored by the Committee on Clay Minerals of the National Academy of Sciences–National Research Council, and a report of a field trip taken by the group. The Clay Minerals Society was organized at the conference.

The Collision Theory of Chemical Reactions in Liquids. Alastair M. North. Methuen, London; Wiley, New York, 1964. 153 pp. Illus. $4.25.

Colloid Chemistry. The science of large molecules, small particles, and surfaces. Marjorie J. Vold and Robert D. Vold. Reinhold, New York; Chapman and Hall, London, 1964. 128 pp. Illus. Paper, $1.95.

Colloque sur le Paléogène. Bordeaux, September 1962. Mémoires du Bureau de Recherches Géologiques et Minières, No. 28. vols. 1 and 2. Éditions B.R.G.M., Paris, 1964. vol. 1, 560 pp.; vol. 2, 561 pp. Illus. Paper, F.240.99; cloth, F.270.

Combustion Chambers for Jet Propulsion Engines. V. S. Zuyev and L. S. Skubachevskii. Translated from the Russian edition by William E. Jones. B. P. Mullins, Translation Ed. Pergamon, London; Macmillan, New York, 1964. 259 pp. Illus. $10.

Communications-Electronics Terminology Handbook. A manual of definitions, abbreviations, acronyms, and designations. Public Affairs Press, Washington, D.C., 1965. 551 pp. $7.

Commutative Normed Rings. I. Gelfand, D. Raikov, and G. Shilov. Translated from the Russian edition (1960). Chelsea, New York, 1964. 306 pp. Illus. $6.50.

Conférence internationale sur les théories relativistes de la gravitation. Proceedings of a conference (Warsaw and Jablonna, Poland), 1962. L. Infeld, Ed. Gauthier-Villars, Paris; PWN-Éditions Scientifiques de Pologne, Warsaw, 1964. 397 pp. Illus. $7.50. Participants from the U.S. were: J. L. Anderson, R. L. Arnowitt, F. J Belinfante, P. G. Bergmann, D. R. Brill, B. S. Chandrasekhar, H. Van Dam, S. Deser, B. S. DeWitt, C. DeWitt, R. P. Feynman, D. Finkelstein, J. G. Fletcher, J. N. Goldberg, P. Havas, B. Hoffmann, A. I. Janis, R. P. Kerr, A. Komar, L. Markus, C. W. Misner, E. T. Newman, I. Robinson, R. K. Sachs, L. I. Schiff, A. Schild, R. Schiller, J. Stachel, A. H. Taub, L. H. Thomas, J. Weber, and J. A. Wheeler.

Continuous Measurement of Unsteady Flow. G. P. Katys. Translated from the Russian by D. P. Barrett. G. E. Walker, Translation Ed. Pergamon, London; Macmillan, New York, 1964. 225 pp. Illus. $9.

Determination of Molecular Weights and Polydispersity of High Polymers. S. R. Rafikov, S. A. Pavlova, and I. I. Tverdokhlebova. Translated from the Russian edition (Moscow, 1963) by J. Eliassaf. J. Schmorak, Translation Ed. Israel Program for Scientific Translations, Jerusalem; Davey, New York, 1964. 365 pp. Illus. $14.

Differential Equations. Shepley L. Ross.

Blaisdell (Ginn), New York, 1964. 608 pp. Illus. $10.

The Direct Observation of Dislocations. S. Amelinckx. Academic Press, New York, 1964. 497 pp. Illus. $17.

Disciplines and Techniques of Systems Control. John Peschon, Ed. Blaisdell (Ginn), New York, 1964. 559 pp. Illus. $12.50. Ten papers contributed by Roy C. Amara, Alexander A. Feldbaum, Eugene W. Henry, Alexander M. Letov, Connie L. McClure, Stanford K. Mitter, John Peschon, Lucas Pun, Leonard G. Shaw, and H. B. Smets.

The Dynamic Stability of Elastic Systems. V. V. Bolotin. Translated from the Russian edition (Moscow, 1956) by V. I. Weingarten, L. B. Greszczuk, K. N. Trirogoff, and K. D. Gallegos. Holden-Day, San Francisco, Calif., 1964. 463 pp. Illus. $12.95.

The Eightfold Way. Murray Gell-Mann and Yuval Ne'eman. Benjamin, New York, 1964. 329 pp. Illus. Paper, $3.95; cloth, $8.

Electrical Correcting Elements in Automatic Control and Regulation Circuits. G. K. Krug and Ye. K. Krug. Translated from the Russian edition by Andrew J. T. Colin. R. C. Glass, Translation Ed. Pergamon, London; Macmillan, New York, 1964. 96 pp. Illus. $5.

Electrical Engineering. Julius T. Franklin. Macmillan, New York, 1964. 399 pp. Illus. $9.

Electronic Structure and Chemical Bonding. Donald K. Sebera. Blaisdell (Ginn), New York, 1964. 310 pp. Illus. Paper, $3.50.

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