

same sites as adenosine triphosphate, thus acting as a competitive inhibitor of the adenosine triphosphate effects (adenosine triphosphatase, viscosity response, superprecipitation). Magnesium ions seem to mediate the binding of pyrophosphate. Engelhardt, reviewing the work of his laboratory, emphasizes that myosin can combine with substances like Congo red or nucleic acid, reproducing the properties of actomyosin. On the other hand, a myosin-like protein from sperm combines with actin, also giving an actomyosin-like complex.

Considerable attention was given by the authors to the relaxing factors. Ebashi, discoverer of the relaxing effect of microsome preparations, reports on his studies on the effect of surface active agents and phosphatases upon the granules. The adenosine triphosphatase and the relaxing activity can be dissociated, the latter being more labile than the former. The factor proved to be identical with the Kielly-Meyerhof granules. Lorand, Molnar, and Moos also present data on the relaxing system.

In a very interesting paper Natori and Sakai describe their experiments with isolated myofibrils. The dissection under oil permits the myofibrils to remain native, showing the same mechanoelastic properties as the muscle fibers and contracting upon addition of minute amounts of watery solutions. Strikingly, in their effect on contracting ability, "no difference could be found between ATP distilled water and NaCl solution." Watanabe attempts to elucidate the role of sulfhydryl groups in contraction and relaxation of glycerinated fibers from the effect of heavy metals and sulfhydryl reagents upon the mechanical properties of the fibers.

Space does not permit review of the remaining 12 papers. The book presents a valuable source of material for all those who are engaged in investigation of muscular contraction. It is well printed, with numerous graphs and tables, but there are many typographical errors and the English of the Japanese workers sometimes is peculiar, though this does not affect one's understanding of the text.

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## New Books

*Air Pollution Control.* W. L. Faith. Wiley, New York; Chapman & Hall, London, 1959. 266 pp. \$8.50.

*Analysis of Straight-Line Data.* Forman S. Acton. Wiley, New York; Chapman & Hall, London, 1959. 280 pp. \$9.

*Applications of Finite Groups.* J. S. Lomont. Academic Press, New York, 1959. 357 pp. \$11.

*Chemistry.* The elements and their reactions. Eric Hutchinson. Saunders, Philadelphia, Pa., 1959. 758 pp.

*Chromatographic Reviews.* Progress in chromatography, electrophoresis and related methods. vol. 1. Michael Lederer, Ed. Elsevier, Amsterdam, Netherlands, 1959 (order from Van Nostrand, Princeton, N.J.). 285 pp. \$8.75.

*The Determination of Molecular Structure.* P. J. Wheatley. Oxford Univ. Press, New York, 1959. 270 pp. \$5.60.

*The Earth.* Its origin, history and physical condition. Harold Jeffreys. Cambridge Univ. Press, New York, ed. 4, 1959. 436 pp. \$13.50.

*East and West in India's Development.* Wilfred Malenbaum. National Planning Assoc., Washington, D.C., 1959. 78 pp. \$1.75.

*501 Questions and Answers in Anatomy.* Stanley D. Miroyiannis. Vantage Press, New York, 1959. 332 pp. \$5.

*General Biology.* James W. Mavor. Macmillan, New York, ed. 5, 1959. 707 pp. \$6.75.

*Groupes algébriques et corps de classes.* Publications de l'Institut de Mathématique de l'Université de Nancago. Jean-Pierre Serre. Hermann, Paris, 1959. 202 pp. Paper, F. 3000.

*Handbook of Toxicology.* vol. 3, *Insecticides*, William O. Negherbon, 871 pp.; vol. 4, *Tranquilizers*, Rudolph M. Grebe, Ed., 128 pp.; vol. 5, *Fungicides*, Dorothy S. Dittmer, Ed., 251 pp. Prepared under the direction of the Committee on the Handbook of Biological Data, National Academy of Sciences-National Research Council. Saunders, Philadelphia, Pa., 1959.

*An Introduction to Chemical Engineering.* Charles E. Littlejohn and George F. Meenaghan. Reinhold, New York; Chapman & Hall, London, 1959. 284 pp. \$7.80.

*Landscape from the Air.* A physical geography in oblique air photographs. F. J. Monkhouse. Cambridge Univ. Press, New York, 1959. 63 pp. Paper, \$1.75.

*A New Method in the Theory of Superconductivity.* N. N. Bogoliubov, V. V. Tolmachev, D. V. Shirkov. Translated from Russian. Consultants Bureau, New York; Chapman & Hall, London, 1959. 121 pp. \$5.75.

*The Nimonic Alloys.* W. Betteridge. Arnold, London; St. Martin's Press, New York, 1959. 344 pp. \$15.

*101 Best Nature Games and Projects.* Lillian and Godfrey Frankel. Sterling, New York; Mayflower, London, 1959. 128 pp. \$2.50 (juvenile book).

*Peripheral Vascular Diseases.* An objective approach. Travis Winsor. Thomas, Springfield, Ill., 1959. 863 pp. \$16.50.

*Personal and Community Health.* C. E. Turner. Mosby, St. Louis, Mo., ed. 11, 1959. 446 pp. \$5.50.

*The Physical Sciences.* E. J. Cable, R. W. Getchell, W. H. Kadesch, W. J. Poppy, H. E. Crull. Prentice-Hall, Englewood Cliffs, N.J., ed. 4, 1959. 566 pp. \$6.95.

*The Physics of Electricity and Magnetism.* William Taussig Scott. Wiley, New York; Chapman & Hall, London, 1959. 651 pp. \$8.75.

*Research in Aging.* Veterans Administration, Washington, D. C., 1959 (order from Supt. of Documents, GPO, Washington 25). 130 pp. \$1.50.

*The Riddle of the Scrolls.* H. E. Del Medico. Translated by H. Garner. Robert M. McBride, Co., New York, 1959. 432 pp. \$4.95.

*Rocket Propellants.* Francis A. Warren. Reinhold, New York; Chapman & Hall, London, 1959. 226 pp. \$6.50.

*A Science Reader.* Lawrence V. Ryan, Ed. Rinehart, New York, 1959. 320 pp.

*The Scientific Principles of Crop Protection.* Hubert Martin. Arnold, London, ed. 4, 1959. 358 pp. \$12.50.

*Solid State Magnetic and Dielectric Devices.* H. W. Katz, Ed. Wiley, New York; Chapman & Hall, London, 1959. 563 pp. \$13.50.

*Les structures inframicroscopiques normales et pathologiques des cellules et des tissus.* Signification, physiologique et pathogénique. A. Policard and C. A. Baud. Masson, Paris, 1958. 475 pp. F. 5200.

*Successful Technical Writing.* Technical articles, papers, reports, instruction and training manuals, and books. Tyler G. Hicks. McGraw-Hill, New York, 1959. 305 pp. \$5.50.

*Thermodynamic and Transport Properties of Gases, Liquids, and Solids.* A symposium. Y. S. Touloukian, general chairman. McGraw-Hill, New York, 1959. 481 pp. \$12.50. The papers were presented at a symposium on thermal properties and are arranged in the following sections: "Theoretical estimation of transport properties"; "Review of recent work on transport properties"; "Thermodynamic properties: gases and liquids"; "PVT data and equation of state"; "Thermodynamic properties of boron compounds"; "Transport properties: experimental"; "High temperature transport properties of metals and ceramics"; and "High temperature thermodynamic properties of gases." The symposium was sponsored by the American Society of Mechanical Engineers.

*Tomorrow—the Moon.* Planes, missiles, satellites, space travel. Abraham and Rebecca B. Marcus. Prentice-Hall, Englewood Cliffs, N.J., 1959. 160 pp. \$3.50.

*Trigonometric Series.* vols. 1 and 2. A. Zygmund. Cambridge Univ. Press, New York, 1959. 395 pp. and 361 pp. \$15 each; set, \$27.50.

*The United States in World Affairs, 1958.* Richard P. Stebbins. Harper, New York, 1959. 489 pp. \$6.

*The Upper Atmosphere.* H. S. W. Massey and R. L. F. Boyd. Philosophical Library, New York, 1959. 345 pp. \$17.50.

*Vascular Plants of the Pacific Northwest.* pt. 4, *Ericaceae through Campanulaceae.* C. Leo Hitchcock, Arthur Cronquist, Marion Ownbey. Univ. of Washington Press, Seattle, 1959. 510 pp. \$12.

*Vegetation of the Outer Banks of North Carolina.* Clair A. Brown. Louisiana State Univ. Press, Baton Rouge, 1959. 189 pp. \$3.

*Wound Healing and Tissue Repair.* W. Bradford Patterson. Univ. of Chicago Press, Chicago, 1959. 94 pp. \$2.75.