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energy may yet be found. He suggests, "Just as we have rules designed to keep us from killing one another with our automobiles, so there must be rules that keep us from killing one another with our fluctuating breeding habits and with our lack of attention to the soundness of our individual genetic stock."

LEONARD CARMICHAEL

The Smithsonian Institution, Washington 25, D.C.

Dielectric Aerials. D. G. Kiely Methuen, London; Wiley, New York, 1953. xii + 132 pp. Illus. \$2.

Dielectric aerials, also called "polyrod antennas," may be thought of as wave guides from which energy "leaks" out the sides and the resulting interference sets up a radiation pattern, usually with end-fire directivity. The dielectric antenna may have the form of a rod, a tube, or a horn. It has been used mainly where a compact array is desired or metal is not wanted.

The author states that "no complete theory of the mechanism of the radiation of dielectric rods exists at present" and even less work has been reported on tubes and horns. After a chapter on wave propagation along dielectric rods, three methods are presented that have been used as a theoretical basis for the observed behavior of polyrod antennas. The first utilizes the Huyghens principle and elementary ray theory; the second considers the rod to be a type of lens; the third, and favored, method is based upon a set of fictitious electric and magnetic surface currents following Schelkunoff. After developing the three methods and comparing results for pattern calculations, the author deals briefly with band width, losses, and practical applications.

The analysis of tubular structures and horns is more complicated mathematically and less practical experience has been reported. There is a good summary of the material available.

Minor differences of notation and terminology (such as the Continental usage of delta for the Laplacian) should cause no difficulty. Perspective drawings of field configurations would have been helpful at several points. The mks system of units is used. The bibliography contains 29 items.

This book conforms to the usual high standards of the "Monographs on Physical Subjects" and should be a welcome and useful addition to the literature on antennas and radiation.

PAUL H. NELSON

*Electrical Engineering Department
University of Florida*

Solubilities of Inorganic and Organic Compounds: A Compilation of Solubility Data from the Periodical Literature. Supplement to ed. 3. Atherton Seidell and William F. Linke. Van Nostrand, New York, 1952. 1254 pp. \$12.50.

This supplementary volume to the third edition of *Solubilities* contains literature data published in the years 1939-49, inclusive. Ownership of the book and

responsibility for publication have been assumed by the American Chemical Society.

This issue contains four parts. The inorganic section, compiled by Seidell, is arranged in alphabetical order according to the elements, and contains 567 pages.

The organic part, compiled by Linke, is made up of 252 pages. The compounds are arranged according to increasing number of carbon atoms in the molecular formula. Although in a compilation of this kind some errors are bound to occur, it should be emphasized that the naming of a number of carbon compounds does not comply with the adopted rules. Thus, amines such as dimethylamine and ethylamine are expressed in two words, as are compounds such as hexachlorobenzene, trinitroresorcinol, and many others. β -Hydroxypropionic acid is incorrectly designated on page 608 as " β -Oxy Propionic Acid." 2-Bromopropionic acid is listed as "Bromo Propionic Acid," which is ambiguous. On page 609, 1-propanesulfonamide is incorrectly listed as "Propane-1 Sulfamide," and on page 654 "p-Nitro Hydroquinone" should read o-nitrohydroquinone. On page 603, the structural formula for propargyl alcohol contains a double bond instead of a triple bond, and on page 701, acetophenone is misspelled.

The third part contains a valuable 180-page compilation by Dr. Francis, of Socony-Vacuum Oil Co., of ternary aqueous and nonaqueous systems and also five pages of quaternary aqueous and nonaqueous systems.

The fourth part is a review, based on 142 references, by Dr. Bates, of the National Bureau of Standards, entitled "Recent contributions to the theory of electrolyte solubility."

HENRY FEUER

Department of Chemistry, Purdue University

New Books

The Western End of Lake Erie and its Ecology. Thomas H. Langlois. J. W. Edwards, Ann Arbor, Mich., 1954. xx + 479 pp. Illus. \$10.

Electronics. A textbook for students in science and engineering. Thomas Benjamin Brown. Wiley, New York; Chapman & Hall, London, 1954. xi + 545 pp. Illus. \$7.50.

The Collected Papers of Stephen P. Timoshenko (In German, French, and English). McGraw-Hill, New York-London, 1953. xxv + 642 pp. Illus. \$15.

The Biochemistry of Genetics. J. B. S. Haldane. Macmillan, New York, 1954. 144 pp. \$2.75.

Cohort Fertility. Native white women in the U.S. Pascal K. Whelpton. Princeton Univ. Press, Princeton, N.J., 1954. xxv + 492 pp. Illus. \$6.

Characteristics and Applications of Resistance Strain Gages. Proc. of NBS Symposium held Nov. 8-9, 1951. National Bur. of Standards, Washington, D.C., 1954 (Order from Supt. of Documents, GPO, Washington 25, D.C.). iv + 140 pp. Illus. \$1.50.

Sea-Birds. An introduction to the natural history of the sea-birds of the North Atlantic. James Fisher and R. M. Lockley. Houghton, Mifflin, Boston, 1954. xvi + 320 pp. Illus. + plates. \$6.

Dynamics of Growth Processes. L. M. Kozloff *et al.* Edgar J. Boell, Ed. Princeton Univ. Press, Princeton, N.J., 1954. vii + 304 pp. Illus. + plates. \$7.50.

Fundamentals of the Working of Metals. G. Sachs. Interscience, New York; Pergamon Press, London, 1954. vii + 158 pp. Illus. + plates. \$4.75.

Energy Transfer in Hot Gases. Proc. of NBS Symposium held Sept. 17-18, 1951. National Bur. of Standards, Washington, D.C., 1954 (Order from Supt. of Documents, GPO, Washington 25, D.C.). iv + 126 pp. Illus. \$1.50.

General Chemistry. Edwin C. Markham and Sherman E. Smith. Houghton, Mifflin, Boston, 1954. x + 613 pp. Illus. \$6.

After High School—What? Ralph F. Berdie; with chapters by Wilber L. Layton and Ben Willerman. Univ. of Minnesota Press, Minneapolis, 1954. xii + 240 pp. \$4.25.

Tropical Meteorology. Herbert Riehl. McGraw-Hill, New York-London, 1954. x + 392 pp. Illus. \$8.50.

L'Hygiène de la Vue. Ernest Baumgardt. Presses Universitaires de France, Paris, 1954. 125 pp. Illus.

Airplane Structures. Vol. I. ed. 4. Alfred S. Niles and Joseph S. Newell. Wiley, New York; Chapman & Hall, London, 1954. xv + 607 pp. Illus. \$7.75.

Synthetische Artbildung. Vols. I and II. Grundlinien einer exakten Biologie. Heribert Nilsson. Verlag CWK Gleerup, Lund, Sweden, 1953. 1303 pp. Illus. Cloth, 250 krona; paper, 225 krona.

Modern Chemical Processes. Vol. III. A series of articles describing chemical manufacturing plants. Eds. of *Industrial and Engineering Chemistry*. Reinhold, New York, 1954. v + 276 pp. Illus. \$5.

Name Reactions in Organic Chemistry. Alexander R. Surrey. Academic Press, New York, 1954. viii + 192 pp. \$4.

Theory of Functions of a Complex Variable. Vol. I. C. Carathéodory. Trans. by F. Steinhardt. Chelsea, New York, 1954. xii + 301 pp. Illus. \$4.95.

Dvorine Pseudo-Isochromatic Plates. ed. 2. Israel Dvorine. Israel Dvorine, 2328 Eutaw Pl., Baltimore 7, Md. \$12.

Silage Fermentation. A. J. G. Barnett. Academic Press, New York; Butterworths, London, 1954. x + 208 pp. Illus. \$5.

The Statistical Approach to X-ray Structure Analysis. Vladimir Vand and Ray Pepinsky. Pennsylvania State Univ., State College, 1953. xvi + 98 pp. Illus. Paper, \$1.50.

The Magic of Electronics. Edward J. Bukstein. Frederick Ungar Pub., New York, 1954. 256 pp. Illus. \$3.95.

A Short History of Technology. Harold G. Bowen and Charles F. Kettering. Thomas Alva Edison Foundation, West Orange, N.J., 1954. 118 pp. Illus.

Nine Tales of Space and Time. Raymond J. Healy, Ed. Henry Holt, New York, 1954. x + 307 pp. \$3.50.

Recent Progress in Hormone Research. Vol. IX. Proc. of the Laurentian Hormone Conf. Gregory Pineus, Ed. Academic Press, New York, 1954. 467 pp. Illus. \$9.50.

Physical and Chemical Aspects of Basic Mechanism in Radiobiology. John L. Magee, Martin D. Kamen, and Robert L. Platzman, Eds. National Res. Council, Washington, D.C., 1953. vii + 145 pp. Illus. \$1.

Introduction to College Physics. Rogers D. Rušk. Appleton-Century-Crofts, New York, 1954. xxii + 816 pp. Illus. \$6.50.

Peripheral Circulation in Man. A Ciba Foundation Symposium. G. E. W. Wolstenholme and Jessie S. Freeman, Eds. Little, Brown, Boston, 1954. xi + 219 pp. Illus. + plates. \$6.

(Continued on page 12A)

Miscellaneous Publications

Map Collections in the United States and Canada. A directory. Marie Cleckner Goodman. Special Libraries Assoc., New York 3, 1954. 170 pp. Illus. \$3.

Proceedings of the Eastern Joint Computer Conference. Washington, Dec. 8-10, 1953. Inst. of Radio Engineers, New York 21, 1954. 125 pp. Illus. \$3.

Fishes Found in the Fresh Waters of Texas. Frank T. Knapp. Ragland Studio and Litho Printing, Brunswick, Ga., 1953. 166 pp. Illus. \$2.

Geology of the Pilot Mountain Area, Virginia. Bull. No. 91. Richard V. Dietrich. Virginia Polytechnic Inst., Blacksburg, 1954. 32 pp. Illus. 25¢.

Scientific Journal of the Royal College of Science. vol. 23. Royal College of Science, London, S.W.7, 1953. 114 pp. Illus. 10s. 6d.

National Family Survey of Medical Costs and Voluntary Health Insurance. Odin W. Anderson. Health Information Foundation, New York 17, 1954. 80 pp.

A New Periodic Table of the Elements Based on the Structure of the Atom. S. I. Tomkeieff. Chapman & Hall, London, W.C.2, 1954. 33 pp. Illus. 10s.

Standardized Plant Names. Bull. No. 272. 132 pp. **Optimal Harvest Time of Pea Canning Crops.** Bull. No. 273. 43 pp. Illus. Commonwealth Scientific and Industrial Research Organization, Melbourne, Australia, 1953.

Brief Survey of the Technology and Economics of Water Supply. James C. DeHaven, Linn A. Gore, and Jack Hirschleifer. Rand Corp., Santa Monica, Calif., 1954. 55 pp. Illus.

Mammals of the Mexican State of San Luis Potosi. Biol. Sci. Ser. No. 1. Walter W. Dalquest. Louisiana State Univ. Press, Baton Rouge, 1953. 229 pp. Illus. \$3.50.

Curvature and Betti Numbers. Annals of Mathematics Studies, No. 32. K. Yano and S. Bochner. Princeton Univ. Press, Princeton, N.J. 1953. 190 pp. \$3.

Introduction to Human Biochemical Genetics. Eugenics Lab. Mems. 37. H. Harris. Cambridge Univ. Press, New York 22, 1953. 96 pp. Illus. \$2.75.

Measurements of Double Stars. Pubs. of the Yerkes Observatory, vol. 8, Part 6. G. Van Biesbroeck. Univ. of Chicago Press, Chicago 37, 1954. 223 pp. \$10.

Proceedings of the Kjeller Conference on Heavy Water Reactors. Aug. 11-13, 1953. Pub. No. 7. J. A. Goedkoop and G. Jenssen, Eds. Joint Establishment for Nuclear Energy Research, Kjeller per Lillestrom, Norway, 1953. 238 pp. Illus. 35 Kr.

Inter-American Tropical Tuna Commission Annual Report for the Year 1952 (In English and Spanish). The Commission, La Jolla, Calif., 1953. 61 pp. Illus.

Scale Insects and Their Control. Bull. 578. J. C. Schread. 23 pp. Illus. **Report on Inspection and Analysis of Commercial Fertilizers, 1953.** Bull. 579. H. J. Fisher. 64 pp. Connecticut Agricultural Expt. Sta. New Haven, 1954.

Early Devonian Fishes from Utah. Pt. II: *Heterostraci*. Fieldiana: Geology, vol. 11, No. 7. Robert H. Denison. Chicago Natural History Museum, Chicago, 1953. 64 pp. Illus. \$1.25.

Scientific Instruments Made in Germany. Otto K. Krauskopf, Ed. Verlag fuer Wirtschaftsschrifttum, Wiesbaden, Germany, 1953 (Order from German-American Trade Promotion Office, Cologne). 86 pp. Illus.

Asexual Reproduction in the Colonial Ascidian Metandrocarpa taylori Huntsman. Pubs. in Zoology, vol. 61, No. 1. Donald P. Abbott. Univ. of California Press, Berkeley, 1953. 77 pp. Illus. + plates. \$1.25.

(Continued on page 12A)

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Meetings & Conferences

July

- 26-31. International Cong. of Gynecology and Obstetrics, Geneva, Switzerland. (W. Geisendorf, Maternité, Hôpital Cantonal, Geneva.)
- 27-28. International Union of Theoretical and Applied Mechanics, 4th, Brussels, Belgium. (H. L. Dryden, 1724 F St. NW, Washington 25, D.C.)
- 28-2. International Union for the Protection of Nature, 4th, Copenhagen, Denmark. (H. J. Coolidge, National Research Council, Washington 25, D.C.)
- 28-2. Symposium on Photoelasticity and Photoplasticity, Brussels, Belgium. (H. L. Dryden, 1724 F St., NW, Washington 25, D.C.)

August

- 1-2. Linguistic Soc. of America, Chicago, Ill. (A. A. Hill, 1719 Massachusetts Ave., NW, Washington 6, D.C.)
- 3-13. Pan American Federation of Engineering Societies, 3rd, São Paulo, Brazil. (H. Pegado, Edificio Maua, Viaduto Dona Paulina, São Paulo.)
- 9-15. International Cong. of Philosophy, São Paulo, Brazil. (M. Reale, Rua 24 de Maio 104-8, São Paulo.)
- 9-27. Summer Seminar in Statistics, 5th, Storrs, Conn. (G. Beall, Dept. of Statistics, Univ. of Connecticut, Storrs.)
- 10-14. Canadian Teachers' Federation, annual, Vancouver, Canada. (G. G. Croskery, 444 Mac Laren St., Ottawa.)
- 12-14. International Cong. on Group Psychotherapy, 1st, Toronto, Can. (J. L. Moreno, 101 Park Ave., New York 17.)
- 13-14. International Cong. on Child Psychiatry, Toronto, Can. (A. Z. Barhash, 186 Clinton Ave., Newark 5, N.J.)
- 13-21. World Poultry Cong., 10th, Edinburgh, Scotland. (Cong. Sec., Dept. of Agriculture for Scotland, St. Andrew's House, Edinburgh 1.)
- 14-21. International Cong. on Mental Health, 5th, Toronto, Can. (J. D. Griffin, 111 St. George St., Toronto 6.)
- 15-28. Pan Indian Ocean Science Cong., Perth, Western Australia. (A. D. Ross, 31 Ventnor Ave., West Perth.)
- 16-18. American Malacological Union, Durham, N.H. (M. Teskey, 144 Harlem Ave., Buffalo 24.)
- 18. Stanford Conf. on Population Problems of Latin America, Stanford, Calif. (R. Hilton, Hispanic American Studies, Stanford Univ., Stanford.)
- 19-20. National Council of Geography Teachers, San Francisco, Calif. (Mrs. I. C. Robertson, State Teachers College, Valley City, N.D.)
- 19-31. International Conf. of Ship Hydrodynamics, 7th, Göteborg, Sweden. (H. F. Nordstrom, Statens Skeppsprovsningsanstalt, Göteborg.)
- 20-26. American Pharmaceutical Assoc., Boston, Mass. (R. P. Fischelis, 2215 Constitution Ave., NW, Washington 7, D.C.)
- 23-26. American Veterinary Medical Assoc., annual, Seattle, Wash. (J. G. Hardenbergh, 600 S. Michigan Ave., Chicago 5, Ill.)
- 23-28. International Cong. for the Philosophy of Science, 2nd, Zurich, Switzerland. (Sec., Internationales Forum Zurich, Room 20d, Eidengensische Hochschule, Zurich 6.)

(See the June 18th issue for more comprehensive lists.)

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New Books (contd. from page 903)

- General Chemistry.** A topical introduction. Eugene G. Rochow and M. Kent Wilson. Wiley, New York; Chapman & Hall, London, 1954. xiii + 602 pp. Illus. \$6.
- Advances in Cancer Research.** Vol. II. Jesse P. Greenstein and Alexander Haddow, Eds. Academic Press, New York, 1954. xi + 530 pp. Illus. \$11.
- Cancer of the Lung: A Symposium.** Johs. Clemmesen, Ed. Council for International Organisations of Medical Sciences, Paris, 1953 (Reprinted from ACTA). 210 pp. Illus. \$6.
- Geometrical Mechanics and De Broglie Waves.** J. L. Synge. Part of Cambridge Monographs on Mechanics and Applied Mathematics, G. K. Batchelor and H. Bondi, Eds. Cambridge Univ. Press, New York, 1954. vi + 167 pp. Illus. \$4.75.
- The Nature of Light and Colour in the Open Air.** Rev. ed. M. Minnaert. Trans. by H. M. Kremer-Priest; rev. by K. E. Brian Jay. Dover, New York, 1954 (Reprint of earlier ed.). xi + 362 pp. Illus. + plates. Cloth, \$3.95; paper, \$1.95.
- The Properties of Glass.** ed. 2. George W. Morey. ACS Monogr. Ser. No. 124, William A. Hamor, Ed. Reinhold, New York, 1954. 591 pp. Illus. \$16.50.
- Home Repairs and Improvements** Emanuele Stieri. Barnes & Noble, New York, 1954 (Reprint of 1950 ed.). vii + 375 pp. Illus. Paper, \$1.50.
- Physics Principles.** Stanley S. Ballard, Edgar P. Slack, and Erich Hausmann. Van Nostrand, New York-London, 1954. vi + 743 pp. Illus. \$7.50.
- Monomolecular Layers.** A symposium presented at the Philadelphia meeting of the AAAS. Harry Sobotka, Ed. AAAS, Washington, D.C., 1954. vii + 207 pp. Illus. \$4.25 (Members, \$3.75).
- The Principles of Physical Optics.** An historical and philosophical treatment. Ernst Mach. Trans. by John S. Anderson and A. F. A. Young. Dover, New York, 1953 (Reprint of 1926 ed.). x + 324 pp. Illus. + plates. Cloth, \$3.50; paper, \$1.75.
- Physical Meteorology.** John C. Johnson. Technology Press, M.I.T., Cambridge; Wiley, New York; Chapman & Hall, London, 1954. xii + 393 pp. Illus. \$7.50.
- The Neolithic Cultures of the British Isles.** Stuart Pigott. Cambridge Univ. Press, New York, 1954. xix + 420 pp. Illus. + plates. \$13.50.
- The Present State of Physics.** A symposium presented on Dec. 30, 1949 at the New York meeting of the AAAS. Arranged by Frederick S. Brackett. AAAS, Washington, D.C., 1954. vi + 265 pp. Illus. \$6.75. (Members, \$5.75).
- Nobel Prize Winners in Physics: 1901-1950.** Niels H. de V. Heathcote. Schuman, New York, 1953. xvi + 473 pp. Illus. + plates. \$8.50.
- Differential Equations with Applications.** Herman Betz, Paul B. Burcham, and George M. Ewing. Harper, New York, 1954. x + 310 pp. \$4.50.
- Organic Peroxides.** Their chemistry, decomposition, and role in polymerization. Arthur V. Tobolsky and Robert B. Mesrobian. Interscience, New York-London, 1954. x + 197 pp. \$5.75.
- Introduction to Opinion and Attitude Measurement.** H. H. Remmers. Harper, New York, 1954. viii + 437 pp. \$5.
- Southern African Mammals: 1758 to 1951.** A reclassification. J. R. Ellerman, T. C. S. Morrison-Scott, and R. W. Hayman. British Museum (Natural History), London, 1953. 363 pp. Maps.

Miscellaneous Publications (contd. from page 903)

- Marine Tropicals.** Ed L. Fisher. Sub-Marine Studios, Miami 32, 1954. 55 pp. Illus. \$1.50.
- Diet and Mastication: Their Effects on Diffusion and on the Inception of Dental Caries.** Ronald B. Nevin. 43 pp. Illus. *Experimental Observations on the Diet and Oral Hygiene in Relation to Dental Caries.* Ronald B. Nevin. 15 pp. Illus. Progress Printing Co., Dunedin, New Zealand, 1954.
- Professional Opportunities in Mathematics.** ed. 2. Mathematical Assoc. of America, Univ. of Buffalo, Buffalo 14, 1954. 24 p. 25¢.
- Contribution of Atomic Energy to Agriculture.** Hearings before Subcommittee on Research and Development. Joint Committee on Atomic Energy, U.S. Senate, Washington 25, 1954. 87 pp. Illus.
- Inter-relations between the Terrestrial Atmosphere and Cosmic Radiation.** Prabhat K. Bhattacharya. Indian Physical Soc., Calcutta 32. 50 pp. Illus.
- Frontiers of Man-controlled Flight.** Proceedings of symposium presented at Los Angeles on Apr. 3, 1953. Heinz Haber, Ed. Inst. of Transportation and Traffic Engineering, Univ. of California, Berkeley 4, 1953. 109 pp. Illus. \$2.
- On the Dynamics of Hurricanes.** Pt. I: *The Eye of the Hurricane*; Pt. II: *The Vibrations of a Hurricane*. Meteorological Papers, vol. 2, No. 2. Abdul Jabbar Adbullah. N.Y. Univ. Press, New York 3, 1953. 43 pp. Illus. \$2.
- Race Mixture.** Harry L. Shapiro. UNESCO, Paris, 1953 (Order from Columbia Univ. Press, New York 27). 56 pp. 25¢.
- Evaluation of C-band (5.5 cm) Airborne Weather Radar.** H. T. Harrison and E. A. Post. United Air Lines, Denver, 1954. 108 pp. Illus.
- Ninth Report of the Biological Bureau.** (Nov. 1950-Apr. 1952). Game and Fisheries Dept., Prov. of Quebec, Montreal 2, 1953. 521 pp. Illus.
- Bibliography of Canadian Biological Publications for 1949.** J. Murray Speirs, Ruth Kingsmill, and George W. North. Quebec Biol. Bur. and Univ. of Toronto. 122 pp.
- French Bibliographical Digest** (Biology, botany, zoology). Ser. II, No. 9. Cultural Div. of the French Embassy, New York 21, 1953. 100 pp.
- Building Research in Canada.** vol. I, No. 6. Div. of Bldg. Res., National Res. Council, Ottawa, 1953. 31 pp. Illus.
- Seventh Annual Report to American Cancer Society** (July 1951-June 1952). Comm. on Growth, National Res. Council, Washington 25. 299 pp.
- Symposium on Light Microscopy.** Pub. No. 143. American Soc. for Testing Materials, Philadelphia 3, 1953. 126 pp. Illus.
- Mécanismes Biochimiques de l'Activité des Antibiotiques** (Penicilline, Streptomycine, Tyrothricine). Maurice-Marie Janot and Jean Keufer. Masson et Cie, Editeurs, Paris, 1953. 74 pp. 670 fr.
- Diamond Pyramidal Hardness Testing of Spherical Specimens.** Div. of Metrology Tech. Paper No. 1. J. A. Macinante and N. J. C. Peres. 11 pp. Illus.
- Design and Operation of an Electronic Temperature Controller.** Div. of Metrology Tech. Paper No. 2. H. A. Ross and G. W. Gore. 32 pp. Illus.
- Some Overseas Developments in Surface Finish.** Div. of Metrology Tech. Paper No. 3. C. A. Gladman. 34 pp. Illus. Commonwealth Scientific and Industrial Res. Organization, Melbourne, Australia, 1953.