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."

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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.

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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."

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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.