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- TH. BERSIN, *Kurzes Lehrbuch der Enzymologie*, Leipzig, 1951. 113
- J. BONNER AND A. W. GALSTON, *Principles of Plant Physiology*, San Francisco, 1952 342
- Deutsche Gesellschaft für Physiologische Chemie, *Mikroskopische und Chemische Organisation der Zelle*, Berlin etc., 1952 . . . 227
- H. DOLCH, *Theologie und Physik*, Freiburg i. Br., 1951 113
- E. S. GUZMAN BARRON, Editor, *Modern Trends in Physiology and Biochemistry*, New York, 1952 228
- R. S. HARRIS AND K. V. THIMANN, Editors, *Vitamins and Hormones*, Vol. IX. New York, 1951 708
- E. N. HARVEY, *Bioluminescence*, New York, 1952 472
- E. G. RICHARDSON, *Ultrasonic Physics*, Amsterdam etc., 1952 114