The Historical Background of Chemistry. By Henry M. Leicester. 260 pp. John Wiley & Sons, Inc., New York, 1956. $6.00. *Reviewed by Cyril S. Smith, Institute for the Study of Metals.*

This is a fine though relatively brief chemical history. Chapters on Greek, Chinese, and Arabic chemistry, on technological chemistry, and on various topics in organic, physical, and biological chemistry succeed in presenting the changing character of chemistry with culture in excellent perspective. The author shows how the interaction between different streams of knowledge that would have accelerated the advance of all was frequently very late in coming.

The fine beginning of the mechanical philosophy of matter with its roots in both physical and chemical theory and observation had remarkably little specific effect on 18th century chemistry with its fondness for phlogiston, and even when the chemical atom reasserted itself, physicists for many decades were quite uninterested. The author points out that the great period of growth of chemical theory in the 19th century was based on a close connection with technology. "Intense preoccupation with organic chemistry during the nineteenth century tended to widen the breach between chemists and physicists. . . . A certain antagonism existed between those who followed the logic of mathematics and those who pursued the logic of organic chemistry. It has been the task of the twentieth century to bring these two essentially inseparable branches together once more."

Physicists concerned with the effect of nuclear energy on world politics will be interested in Leicester's suggestion that its chemical equivalent in the 7th and 8th centuries played a most important part in preventing the loss of Greek scholarship, for the secret of gunpowder perhaps enabled Constantinople to withstand attacks at a time when western Europe was as yet unprepared to welcome displaced scholars. The book would make an excellent introductory text for physicists desiring some perspective on their sister science.

Books Received

FEDERAL SUPPORT FOR SCIENCE STUDENTS IN HIGHER EDUCATION, 1954. Nat'l Science Foundation (NSF 56–18). 33 pp. US Government Printing Office, Washington, D. C., 1956. Paperbound, $.30.

HANDBOOK OF SEMICONDUCTOR ELECTRONICS. Edited by Lloyd P. Hunter. 23 sections. McGraw-Hill Book Co., Inc., New York, 1956. $12.00.

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THE ATOM (5th Edition). By Sir George Thomson. 206 pp. Oxford U. Press, New York, 1956. $1.20.

AN INTRODUCTION TO CYBERNETICS. By W. Ross Ashby. 295 pp. John Wiley & Sons, Inc., New York, 1956. $6.50.

CONFERENCE ON THE PHYSICS OF COSMIC RAYS. Vol. 19, No. 5 of The Bulletin of the Academy of Sciences of the USSR—Physical Series. Translated by Columbia Technical Translations. 109 pp. Columbia Technical Translations, White Plains, N. Y., 1956. Paperbound. Annual Subscription $110; single issue $20.00.

AN ENCYCLOPÆDIA OF THE IRON & STEEL INDUSTRY. Compiled by A. K. Osborne. 558 pp. Philosophical Library, Inc., New York, 1956. $25.00.

TRIGONOMETRY REFRESHER FOR TECHNICAL MEN. By A. Albert Klaf. 629 pp. Dover Publications, Inc., New York, 1956. Paperbound $1.95.

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ANALYSIS OF BISTABLE MULTIVIBRATOR OPERATION: The Eccles-Jordan Flip-Flop Circuit. By P. A. Neeteson. 82 pp. Philips Technical Library, Eindhoven, Holland, 1956.

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