

BOOK NOTES

Essays in Chemical History, W. A. E. McBryde, Peter Chung Chieh and Elisabeth A. Dixon (Editors), Canadian Society for Chemistry, Ottawa, Ontario, Canada, 1988. i + 79 pp. Paper (Typeset). \$10.00 (US), \$12.50 (Canadian).

This small volume of essays is based on papers delivered at a symposium on the history of chemistry held in 1983 at Calgary by the Chemical Education Division of the Canadian Society for Chemistry. All but three of the eight essays in the book are relatively straightforward biographical accounts of Canadian chemists, ranging from W. A. E. McBryde's carefully documented account of the career of Henry Croft, the first Professor of Chemistry at the University of Toronto, to N. T. Gridgeman's delightfully entertaining tale of the somewhat eccentric career of Donald F. Stedman of the Canadian National Research Council.

The remaining essays treat the careers of Otto Maass, Osmand J. Walker and Thorberger Thorvaldsen; the origins of the Chemical Institute of Canada; the teaching of history of chemistry at the University of Toronto; and the development of temperature-dependency equations in chemical kinetics. Only the last named essay, by K. J. Laidler, is truly disappointing, being little more than an abstract of a previously published (but otherwise excellent) paper in the *Journal of Chemical Education*. Ultimately, however, it is probably the biographical accounts which will prove to be of lasting value and which point to what one hopes will be a growing interest in the history and development of the Canadian chemical community.

Copies of the above book may be ordered from the Publications Department, Chemical Institute of Canada, 1785 Alta Vista Drive, Suite 300, Ottawa, Ontario, Canada, K1G 346 or from Chem 13 News, University of Waterloo, Waterloo, Ontario, Canada, N2L 3G1. Also include \$1.00 for postage.

Chemistry in America 1876-1976: Historical Indicators, Arnold Thackray, Jeffrey L. Sturchio, P. Thomas Carroll, and Robert Bud, Reidel, Dordrecht, 1985. xxiii + 564 pp. Cloth (Typeset) \$111.50, Paper \$24.00.

By now this well-known book is (or should be) on the shelves of virtually every university library in the country. The good news, however, is that Kluwer has just released a paper edition with a purchase price which should also place it on the shelves of every chemist and historian of science - or certainly on the shelves of those who are working on departmental histories or are otherwise seriously interested in either the history of

chemical education in the United States or the development of the American chemical community in general.

As the book's subtitle indicates, it attempts to provide statistical indices (usually in the form of graphs) of various trends which can be used to characterize (or otherwise act as indicators of) the growth and development of the American chemical profession in the century spanning the founding of the American Chemical Society (1876) and the near present (1976). Typical data sets and graphs range from trends in the total number of chemists in the U.S., through trends in the number of undergraduate and graduate-level degrees given in chemistry, the annual high school chemistry enrollment, and the total number of industrial research laboratories, to data on the citation rate of American papers in the chemical literature. More importantly, each data set is plotted in several alternative ways, in order to highlight various subtleties in the trends, and is also plotted relative to larger data sets which help to place the purely chemical information within its proper social context. Thus, for example, not only does one have a plot of the number of doctorates given in chemistry, but a comparison of this with the number given in all of the natural sciences, as well as in all fields in general - a result which shows that, although the number of degrees given in chemistry has displayed an exponential growth, it has actually declined relative to the total number of doctorates being granted in all fields.

Each data set is accompanied by a detailed historical analysis of the trends indicated by the graphs, and the volume is completed by detailed appendices on the data sources, the assumptions used in compiling and analyzing the data, and by an excellent bibliography and index.

A special discount coupon for members of the division wishing to order this volume can be found on the back cover.

TRANSLATIONS

The following experiment is again taken from Tiberius Cavello's "A Treatise on the Nature and Properties of Air," London, 1781. Readers wishing to submit their interpretations of the chemistry involved, complete with balanced equations, should send their answers to the editor by the copy due date listed inside the front cover. Answers will appear in the next issue along with a fresh puzzle.

To make Homberg's Pyrophorus: Mix together one part of sugar and three parts of alum; and let this mixture be melted and dried in an iron shovel over the fire, till it becomes a dark brown or blackish powder. In this operation it must be often stirred with an iron spatula. Any large pieces of this coaly matter must be bruised into a powder, and then must be put into a glass matrass or vial, having a long neck, and rather narrow than