

NEWS

Book reviews

Electro-organic Synthesis Festschrift for Manuel M. Baizer
 Edited by R. Daniel Little and Norman L. Weinberg
 (New York, Marcel Dekker, 1991) ISBN 082 47 85843,
 472 pp, \$150 USA and Canada (\$172.50 other countries).

This book is a compilation of papers (48 in total) dedicated to the memory of the late Manuel M. Baizer. He will be remembered for many contributions to the field of organic electrosynthesis and notably for his work in the discovery, development and commercialization of the adiponitrile process.

The Manuel M. Baizer Memorial Symposium was held on May 6–11, 1990 as part of the 177th meeting of the Electrochemical Society. As a result there are over 120 contributors to this volume. The work is divided into several areas namely mechanism (5 contributions), reduction (12 contributions), oxidation (10 contributions), mediated reduction and oxidation (4 contributions), biochemical, biomass and natural products (9 contributions), modified, sacrificial consumable electrodes (4 contributions), electrogenerated bases (2 contributions), film-forming electropolymerization and ion exchange (1 paper each).

This is a diverse collection of papers covering aspects of many electroorganic mechanisms and direct and indirect electrosynthesis. Exceptions to this are papers on photodetoxification via photoelectrochemical oxidation on irradiated TiO₂ particles and electrochemical ion exchange.

Overall the work is a reasonable collection of scientific work, suitable as a reference volume covering a wide spectrum of organic electrosynthesis. Several of the papers by their nature may not be considered to be totally original in content, although undoubtedly new data is presented. Professor Baizer, I am sure, would have taken some pleasure in the article on Electrohydrodimerization: a comparison of acrylonitrile and formaldehyde.

The work itself would be a worthwhile possession although not comparable to "Organic Electrochemistry" edited by Manuel Baizer and Henning Lund in 1973.

K. SCOTT

Newcastle University

Modern chlor-alkali technology, volume 5 editor T. C. Wellington (Elsevier Applied Science, London and New York, 1992), ISBN 1 85166 778 4, 328 pp, £85.

The series 'Modern chlor-alkali technology' contains the proceedings of the International Chlorine Symposia

held in London at three year intervals. Volume 5 contains the twenty-six lectures presented during the conference held in June 1991.

Each of the volumes reflects closely the state of health of the chlor-alkali industry, as well as its thinking, practice and performance at the time of the symposium. Thus, the earlier volumes report the excitement when membrane cell technology was first made available and the industry successfully met the challenge of reducing energy consumption. The present volume presents a more sombre picture of a less buoyant and confident industry; membrane cells have become a mature technology awaiting the demise of existing mercury and diaphragm facilities while the industry has become beset by doubts about the future of many chlorine products. Certainly the book gives no clear answer as to how the industry should respond to the attack by environmentalists on chlorine or the predictions of an increasing imbalance in the demand for chlorine and sodium hydroxide.

The sessions at the 1991 conference were dedicated to the impact of chlorine on the environment, membranes, electrode materials and safety within the industry. Much of the novel technology described relates to processes to minimize environmental damage (e.g. the catalytic destruction of hypochlorite, the recycling of Cr(VI) in the manufacture of chlorate). A major portion of the book discusses membranes and electrode materials; the impression is of significant but incremental improvements in performance although none of the companies were able to report outstanding developments. There do, however, appear to be considerable advances in the understanding of the physical chemistry of membranes and, in particular, the failure modes due to the presence in solution of various types of impurities.

For the first time, this volume was produced from camera ready text. Unfortunately, the editor has allowed a great variety of fonts, labelling of figures, styles in the presentation of references, minor errors, etc. and some of the authors could have been assisted more with their presentation. Hence, volume 5 suffers in appearance when compared with the high standards of the earlier ones in the series, even though the price is significantly greater than that for volume 4 (£67). However, I am sure that the latest in the series will join the others in the libraries of all individuals and organizations with an interest in the chlor-alkali industry.

D. PLETCHER

University of Southampton