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A Review of: "ELECTROANALYSIS. THEORY AND APPLICATIONS IN AQUEOUS AND NON-AQUEOUS MEDIA AND IN AUTOMATED CHEMICAL CONTROL (TECHNIQUES AND INSTRUMENTATION IN ANALYTICAL CHEMISTRY, Vol. 7) by E. A. M. F. Dahmen, Elsevier Science Publishers, Amsterdam (for USA/Canada: Elsevier Science Publishing Co. Inc., P.O. Box 1663, Grand Central Station, New York, NY 10163), 1986, 384 pages. Price US\$139.00*/Dfl 375.00 (excl. VAT). ISBN 0-444-42534-9."

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Book Review

ELECTROANALYSIS. THEORY AND APPLICATIONS IN AQUEOUS AND NON-AQUEOUS MEDIA AND IN AUTOMATED CHEMICAL CONTROL (TECHNIQUES AND INSTRUMENTATION IN ANALYTICAL CHEMISTRY, Vol. 7) by E. A. M. F. Dahmen, Elsevier Science Publishers, Amsterdam (for USA/Canada: Elsevier Science Publishing Co. Inc., P.O. Box 1663, Grand Central Station, New York, NY 10163), 1986, 384 pages. Price US\$ 139.00*/Dfl 375.00 (excl. VAT). ISBN 0-444-42534-9.

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Electroanalysis has many advantages. It has an ample choice of adjustable parameters and it is directly accessible to electronic measurement and control. By that means electroanalysis is both selective and sensitive and it needs little sample preparation. However, there is a principal condition to be fulfilled: The substance in question has to be electroactive, directly or indirectly (oxidizable or reducible by another electroactive substance) in a well defined way.

The book is divided into three parts: A systematic treatment of electroanalysis (faradaic and non-faradaic), electroanalysis in non-aqueous media and electroanalysis in automated chemical control. The last part includes a survey of electroanalytical systems in laboratory and plant control on the market today.

The book has some shortcomings. The list of references, except that of the last chapter, is not up-to-date; e.g. in the treatment of the theory of the electric double layer the most recent citation is from Stern (1924), neglecting the work of Grahame and more recent relevant work. The list of abbreviations given in the introduction does not cover the abbreviations in the last chapter. Treatment of some elementary electrochemical principles is not adequate; e.g. the use of the words "polarizable and non-polarizable" is not according to IUPAC conventions.

The author has tried to make the book self-contained. This means that, if necessary, fundamentals of electrochemistry are treated. In doing so, the book seems, more or less, to be a textbook. On the other hand the book is a review of literature in the field since the appearance of the well known textbooks of Kolthoff, Lingane and Delahay in the early fifties. So it is, despite the shortcomings mentioned above, worthwhile to have the book on your shelf.

H. Vos

Amsterdam, January 15, 1987