

A Guide to the Study of Electrode Kinetics

H. R. Thirsk and J. A. Harrison, xiii+174, Academic Press, London and New York, (1972) £3.25.

This is a timely survey of present interests and attitudes in electrode kinetics. It is based on the coming-of-age of the numerous analytical solutions to problems of relating current, voltage and time in well defined, albeit complex situations. It is therefore the culmination and combination of the mathematical approach of Delahay with the chemical kinetics approach of Vetter and all of this extensive material is condensed into a single chapter of some 90 pages. The book assumes some familiarity with basic ideas, which is just as well since the introductory chapter is not particularly clear or helpful. The book as a whole is not concerned with real systems, with double layer effects or with instrumental performance but with the model relationships for describing steady state and non-steady state electrode kinetics as might be observed with all but the most complex reactions. There are subsidiary chapters on

electrocrystallization and on optical methods of studying metallic surfaces. The former is a terse but useful summary and the latter a pictorial introduction.

The core of the book remains Chapter 2. This covers considerable ground and will help many a lecturer to present this subject concisely. It will remind others of the wide range of techniques now available and of the advanced state of their theoretical description. It is, as its title suggests, *a* guide rather than *the* guide and in these terms it is recommended.

Some final comments need to be made concerning the presentation of the material. The book unfortunately contains many misprints and some errors. The labelling of the figures and their relation to the text are not strong points. If, as the foreword suggests, the text was complete in January 1972 then its publication in July is a triumph of speed. The price of the haste is, however, clear and hopefully a second edition will allow these defects to be removed.

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