

Book review

Introduction to Organic Electrochemistry: Techniques and Applications in Organic Synthesis; by M.R. Rifi and F.H. Covitz, Marcel Dekker, Inc., New York, 1974, viii + 417 pages, \$26.50.

The present volume adds to a growing list of recent texts dealing with the subject of organic electrochemistry, a field of endeavor which is currently experiencing a Renaissance. Precisely how much has been added, however, is subject to certain conjecture. Although the authors are published practicing organic electrochemists, the present effort to successfully communicate their experience to aspirants must be regarded as less than completely successful.

The chapter titles are conventional and appropriate to the objective of the text, which is to acquaint practicing organic chemists with a powerful new technique. A substantial number of practical suggestions and illustrative recipes are surely the strong features of this volume. The various major topics—principles, apparatus, reductions, oxidation, etc., are afforded reasonably balanced treatment. Nevertheless, the writing suffers from some defects, several of which seriously impair the effectiveness of the effort.

This reader was constantly distracted by the breezy style and homely language of the writers, e.g. “. . . authors highly recommend hard work, perseverance, ingenuity. . . (plus electricity!) . . . Amen” (p. 162). Loosely constructed narrative and a lack of critical evaluation of controversial topics leave the novice confused and occasionally misinformed. Most recent definitive work on the mechanism of the Kolbe reaction has not been evaluated. Similarly, the authors continue to promote their favorite mechanism for the reduction of 1, ω -dibromides, despite the fact that at least three different laboratories have shown that mechanism to be in error in recent years. The literature coverage is adequate, though not thorough. A distinct time lag in literature citations is obvious. There are only a few references later than 1970, and none past 1971. Many of the references date 1925-1940 and have been extensively cited elsewhere. A relative deemphasis of the foreign literature, particularly the important Russian literature on organometallic electrochemistry, is unfortunate. Indeed, virtually no mention of that important topic is made.

In an effort to spare the practicing chemist the anxiety of diffusion layer kinetics and the worst of Nernst, the presentation has been purged of much of its quantitative aspect. Those quantitative aspects which are presented to the reader (Chapter 2) are often asserted, defined, and abandoned, so that the reader leaves with little added comprehension of the topic.

The index is very spare and less useful than it should be in a reference work. The offset photoprinting is unattractive, and together with modest artwork gives an unpolished appearance to the book.

The electronic schematics are clear and informative, the discussion of supporting electrolytes and solvents useful, and the exposé on cell construction informative. However, in spite of these features, the present work lacks the concise articulate expostulations characteristic of several other competitive texts which have recently appeared.

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Errata

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Page C5, line 38 should read:

-1.37 ppm (d), $^4J(\text{PH})$ 1.8 Hz. $^{31}\text{P-NMR}$: δ - 330 ppm. Massenspektrum

J. Organometal. Chem., Vol. 87, No. 3 (March 25th, 1975)

Page 390, Table 1, the third line of the footnote should read:

calculate ΔG^\ddagger , $^1\Delta G^\ddagger$ of activation in $\text{C}_6\text{H}_5\text{Cl}$