

Derek Pletcher, First Course in Electrode Processes

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Hardly could an inspection copy have arrived at a more suitable time: The book turned up just a few days before the reviewer started a lab course combining theory and application of electrochemical methods in organic synthesis. Because electrochemistry apparently is not a natural topic in bachelor (and even master) courses any more a textbook suitable at this level and prepared in a way easily accessible for readers with only some limited background in Physical Chemistry is highly welcome. This book named aptly “A First Course in Electrode Processes” is offered in a second edition—almost a guarantee of a work well done already at first try. On closer inspection, it turns out that title and content agree: there is not much about thermodynamic aspects of electrochemistry except for some simple considerations of cell voltages and Gibbs energy. Thus, the present book will presumably not be a complete text for bachelor courses—whether they start in the most traditional fashion with “electrolytics” (as named by Bockris and Khan years ago) and the Born–Haber cycle in a certainly justified attempt to explain the dissolution of a solid crystal of, e.g., rock salt in water or discuss concentration effects and Walden rule in electrolytic conductance. The book is more of a second part—without telling the reader where to look for the first part. Admittedly—beyond the observation of

dissolution and solvation—things in electrochemistry of solutions tend to be somewhat dry, but to do completely without it is somewhat risky—this is certainly a practical limitation of this book. And apparently, this aspect has escaped the back cover artist: There it is frankly claimed, that the present book provides a basis for an introductory course on electrochemistry. Well—sort of half a basis. And even this is not exactly the truth because selection of topics appears to be based on a rather personal view. No other reason comes into mind after searching without result for corrosion—applied electrochemistry with certainly a quite substantial scientific, technological, and economic importance—or spectroelectrochemistry.

The book is generously illustrated, and only in some details of axis labeling the author seems to be a fan of some old fashions (providing a somewhat dated example in a textbook for students). A final chapter provides problems enabling the interested student to find out whether he or she has digested the offered selection of topics and aspects successfully. Answers are provided just a few pages later. The book is a nice and helpful addition to every library associated with a place where master courses in experimental electrochemistry are offered; it will support every lecture dealing with experimental and applied electrochemistry. Its rather steep price will most likely keep it away from the students’ bookshelf.

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