

Modern Aspects of Electrochemistry No. 35. B. E. Conway, R. E. White; Kluwer Academic/Plenum Publishers: New York, 2002; hardback, € 162, ISBN: 0-306-46776-3, pp 340.

The retirement of the inaugural editor, Professor John Bockris, marks a historic point in this series but it has done nothing to change the key features that have made 'Modern Aspects of Electrochemistry' stand the test of time. This 35th volume is ably co-edited by the two other long serving editors Professors Brian E. Conway and Ralph E. White, who have maintained the style of the series, which is to provide comprehensive review articles on key aspects of modern electrochemistry written in a way that will provide articles of reference for generations of electrochemists. The style of the book is traditional, not providing a modern look that is easily obtained using today's publication methods. However, a book of this type is not one that people just pick-up to read, they search it out as a resource for information and background on a particular topic. For this reason, substance is the critical feature, and the editors have attracted qualified and respected individuals to contribute to this volume. I am an electrochemist, but would not classify myself as an expert on any of the topics presented. I found the text easy to read and informative.

The present volume has four comprehensive chapters on a variety of topics that cover broadly the three sub-disciplines of electrochemistry identified in the first volume, namely interfacial and electrolyte solution processes, as well as electrode kinetics. A fifth chapter, contributed by co-editor Brian Conway is more of an essay providing a critical review of the Born equation; the chapter will give even seasoned electrochemists reason to pause and think before using Born-type models. The chapter only suffers from the lack of a summarizing or concluding section. Chapter 1 by Andrzej Lasia is an excellent continuation of his chapter in an earlier volume in this series covering fundamental aspects of electrochemical impedance spectroscopy provided. Lasia is a world expert in the use of electrochemical impedance spectroscopy and in the present chapter he sum-

marizes its application, with an emphasis on metal electrode processes involving hydrogen. In the second Chapter Stojan Djokić provides a thorough review of the technological advances and applications of electroless deposition of metals and alloys. It is written very much from the context of someone involved in its technological application, but he also provides the current state of the understanding of the mechanisms. I found this chapter particularly educational. Chapter 3 is timely given the high profile of computational chemistry. The use of computers for the simulation of electrode, electrochemical processes and electrochemical mechanisms is reviewed by Leslaw Bienasz. In my opinion, computational electrochemistry is an area that will develop rapidly in the years to come, and chapters like this will become a more regular feature. This chapter provides a strong foundation from which future articles can build. Chapter 4, co-authored by the Abrahams, is an excellent review of the properties of high concentration electrolyte solutions. Because of the physical nature of the topic and the necessity to present the theory and relevant equations, the chapter was a bit hard going for this organic electrochemist. However, it is clear that this is a thorough review of a topic that I don't believe has been well covered.

The chapters provided in the series are meant to be comprehensive. This leads me to my biggest criticism of this volume. The majority of the references end in 1998, with only a few of more recent vintage; those were usually articles written by the chapter authors. In this sense, these critical reviews are already four years out of date. Regardless, the chapters will still be a key resource for their respective areas and I can easily recommend that all institutional libraries maintain their subscription to this series. After 48 years, this series still present aspects of modern electrochemistry that are invaluable to those working in the area.

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