

C. Comninellis and G. Chen (eds): *Electrochemistry for the environment*

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A further book focussing on electrochemical approaches to the protection of the environment is timely and to be welcomed. Worldwide, there are extensive programmes on the development of electrolytic technology for the treatment of effluents, the improvement of water quality and the removal of unwanted gases from the atmosphere. The nineteen chapters in this book are all written by authors with broad experience of their topics and cover subjects as diverse as the total degradation of organics, electrode materials (especially boron doped diamond), electroflotation, electrocoagulation, hydrogen peroxide (formed at a cathode) mediated oxidations, and photoassisted electrolytic approaches. The policy of the Editors is to focus on 'emerging' technologies and older, more established technologies such as electrochlorination, electrodialysis and methods for the removal of heavy and transition metal ions from effluents are not covered. I found particularly interesting the chapters related to the application of boron doped diamond anodes for the complete mineralization of organics in effluents; this is an application that has developed rapidly during the last decade and the generality of

the approach is impressive. All chapters are extensively referenced.

I have no doubt that this book will be valuable to scientists and engineers presently working in the field or seeking to enter it. I would, however, put in a word of caution. A very wide range of chemistry is described and it is very difficult to see how much of it could be applied to the real situations met in effluent and water treatment. Certainly, the book largely lacks description of real world applications and, in general, the chapters do not set out the problems or limitations associated with the technology described; a more critical approach would be a better catalyst for the expansion of the field. In common with most multi-author texts, there is considerable overlap of material between chapters and a lack of uniformity in nomenclature and symbols—for example, one equation appears several times, each time with different symbols!

This book will be very helpful to many readers but it should not be used to disguise the fact that usually the application of electrochemical technology to effluent and water treatment remains a target to be achieved in the future.

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