

The book will be useful to practicing electrochemists and environmentalists considering electrochemistry as a solution to pollution, waste and water treatment problems. The level of the electrochemical science is of a suitable depth to support the description of the applications. The book has the attraction

of providing a quick snapshot of electrochemical solutions to specific pollution problems and is recommended.

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### **Corrosion Inhibitors. Principles and Applications**

V. S. Sastri (Wiley, 1998; 903 pages; ISBN 0-471-97608; price £160)

As my research students know only too well, there are thousands of scientific papers on corrosion inhibitors scattered around the literature – but relatively few concerted treatments in the form of reviews and books. Hence this text is welcome as an attempt to bring together the principles and practise of modern corrosion inhibitors.

The 18 chapter text has several strong points. It provides an extensive coverage of diverse inhibitors for ferrous, copper, aluminium and other metals and considers fundamental techniques (electrochemical and surface science) for the characterisation of inhibitor action and efficiency. Both near-neutral and acid environments are considered and there is an emphasis on practical, commercially important compounds. The wide coverage in the book is illustrated by the treatment of topics as diverse as hard and soft acids and bases, expert systems, electrochemical impedance spectroscopy and discounted cash flow economics.

It is, perhaps, inevitable that some analytical techniques will be missing. I would have preferred X-ray absorption spectroscopy to feature as a powerful technique capable of providing local coordination information on metal-adsorbate bonding.

While microbial corrosion is considered, the treatment of biocides and bactericides is slight. Phosphonium species, for the inhibition of ferrous metals in acidic environments, did not receive a mention and some of the photographs of electrochemical instrumentation have not reproduced well. These are minor comments; the strength of this book lies in its extensive coverage of a continuously developing subject within the confines of a large text book. The author has made a bold attempt to cover all aspects of corrosion inhibitors from their fundamental structure and electrochemistry through to the economics of their application. A final chapter on environmentally safe inhibitors serves as a reminder that many industrial organisations have increasingly focused on the synthesis of such compounds over the last decade.

This book should provide the single best source of information on corrosion inhibitors for both development chemists and engineers in industry and for R D workers in universities and research institutes. Due to its extensive coverage, it deserves to be read by the majority of scientists in corrosion and associated electrochemical fields. I currently have two post-graduates working on corrosion inhibitors who have welcomed the text; it has disappeared into the research laboratory for dissemination.

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