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Chapter 6 Determination of Mechanism of Electrochemical Processes Involving Metal Complexes6.1 Determination of the Mechanism by Reaction Orders; 6.2 Method of Isopotential Solutions; References; Chapter 7 Adsorption; 7.1 Thermodynamic Aspects; 7.2 Model Aspects; References; Chapter 8 Electrochemical Processes in Real Systems; 8.1 Experimental Details; 8.2 Cyanide Systems; 8.2.1 System Cu|Cu(I), CN-; 8.2.2 System Ag|Ag(I), CN-; 8.2.3 System Au|Au(I), CN-; 8.3 Ecological Systems Containing Hydroxy Acids; 8.3.1 Electroreduction of Cu(II) Complexes; 8.3.2 Electroreduction of Sn(II) Complexes
8.3.3 Electroreduction of Zn(II) ComplexesAppendix; References; Chapter 9 Electrochemical Deposition of Alloys; 9.1 Mass Transport during the Codeposition of Metals; 9.2 Codeposition of Cobalt and Tin; 9.3 Deposition of Brass Coatings; 9.4 Deposition of Bronze Coatings; 9.4.1 Surface Activity of Polyethers on Copper and Tin Substrates; 9.4.2 Effect of Halides. Formation of Surface Complexes; 9.4.3 Effect of Length of the Hydrocarbon Chain; 9.4.4 Codeposition of Copper and Tin; 9.4.5 Related Phenomena: Current Oscillations; 9.5 Codeposition of Cobalt and Molybdenum; References
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Sommario/riassunto

This book aims to sequentially cover all the major stages of electrochemical processes (mass transport, adsorption, charge transfer), with a special emphasis on their deep interrelation. Starting with general considerations on equilibria in solutions and at interfaces as well as on mass transport, the text acquaints readers with the theory and common experimental practice for studying electrochemical reactions of metals complexes. The core part of the book deals with all important aspects of electroplating, including a systematic discussion of co-deposition of metals and formation of alloys.