Handbook on Electroplating with Manufacture of Electrochemicals (2nd Edition)

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About the Book

Electroplating and Electrochemicals, industries shimmering with growth and profitability potential, are truly riveting. Electroplating, an intricate process, involves the electrodeposition of a svelte metallic stratum onto diverse substrates utilizing electric currents. This technique entails submerging the intended object, the substrate, into an electrolytic bath brimming with metal ions and, through the application of an electric current, achieves a homogeneous metallic veneer.

Conversely, Electrochemicals are birthed from electrochemical reactions. These intricate reactions are characterized by the transference of electrons among distinct compounds within an electrolytic milieu. Through the deliberate orchestration of electron flow, a plethora of chemical reactions are catalyzed, culminating in the synthesis of targeted chemicals. This methodology finds its application across a spectrum of industries, encompassing pharmaceuticals, agriculture, and energy storage sectors.

The global electroplating market is expected to grow at a CAGR of 5.5%. The growth in the market can be attributed to the increasing demand for electroplated products from various end-use industries, such as automotive, electrical & electronics, aerospace & defense, Jewellery and machinery parts & components. In addition, the growing awareness about corrosion protection and decorative finishes is also propelling the growth of this market.

This book contains in-depth information about Electrochemical Processing, Metal Surface Treatment, Electroless Plating, Electroplating, Electroplating of Aluminium, Cadmium, Chromium, Cobalt, Copper, Gold, Iron, Lead, Nickel, Bright Nickel, Silver, Alloy, Platinum, Palladium, Rhodium, Bright Zinc, Tin, Plastics, Barrel, Zinc Electroplating Brightener, Metal Treatments, Electrodeposition of Precious Metals, Electropolishing of Stainless Steel, Case Hardening, Electroless Coating of (Gold, Silver), Buffing and Industrial Metal Polishing Compounds, Aluminium, Gold and Its Compounds, Complex Salts of (Copper, Silver and Gold), Hydrides of Silicon, Chemical and Electrochemical Conversion Treatments, Electrostatic Sealing.

This book is an invaluable resource that comprehensively addresses all the essential topics in Electroplating and Electrochemicals. It is poised to become a standard reference for professionals and entrepreneurs interested in this field, offering a comprehensive understanding of Electroplating. Additionally, it will prove

highly beneficial to consultants, new entrepreneurs, technocrats, research scholars, libraries, and existing businesses. The book offers a detailed roadmap that guides readers from the initial concept to the machinery acquisition phase.

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