1. Record Nr. UNINA9910140470703321 Titolo Electrochemical engineering across scales: from molecules to processes / / edited by Richard C. Alkire, Philip N. Bartlett and Jacek Lipkowski Weinheim, Germany:,: Wiley-VCH Verlag GmbH & Co.,, 2015 Pubbl/distr/stampa ©2015 **ISBN** 3-527-69212-6 3-527-69063-8 3-527-69214-2 Descrizione fisica 1 online resource (351 p.) Advances in Electrochemical Science and Engineering;; Volume 15 Collana Disciplina 541.3702854 Soggetti Electrochemistry - Data processing Electrochemistry - Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Cover; Contents; Series Preface; Preface; List of Contributors; Chapter 1 The Role of Electrochemical Engineering in Our Energy Future; References; Chapter 2 The Path from Invention to Product for the Magnetic Thin Film Head; 2.1 Introduction; 2.2 The State of the Art in the 1960's; 2.2.1 The Processor; 2.2.2 Memory; 2.2.3 Data Storage; 2.2.4 Electroplating Technology; 2.3 Finding the Right Path to Production; 2.3.1 First Demonstrations of a Thin Film Head; 2.3.2 Interdisciplinary Design of a Functional Head; 2.3.3 Early Tie-in to Manufacturing; 2.3.4 The Integration of Many Inventions 2.4 Key Inventions for Thin Film Head Production 2.4.1 Device Structures; 2.4.2 The Plating Process; 2.4.2.1 The Paddle Cell; 2.4.2.2 The Electroplating Bath, Deposition Parameters, and Controls: 2.4.3 Patterning; 2.4.3.1 Through-mask Plating; 2.4.3.2 Frame Plating; 2.4.3.3 Ancillary Issues in Pattern Plating; 2.4.4 Materials; 2.4.4.1 Magnetic Materials Studies; 2.4.4.2 Hard-Baked Resist as Insulation; 2.5 Concluding Thoughts; 2.5.1 Fabrication Technology - the Key to a

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In Volume XV in the series ""Advances in Electrochemical Science and Engineering"" various leading experts from the field of electrochemical engineering share their insights into how different experimental and computational methods are used in transferring molecular-scale discoveries into processes and products. Throughout, the focus is on the engineering problem and method of solution, rather than on the specific application, such that scientists from different backgrounds will benefit from the flow of ideas between the various subdisciplines. A must-read for anyone developing engineering tools for...