1. Record Nr. UNINA9910132192503321 Developments in electrochemistry: science inspired by Martin **Titolo** Fleischmann / / editors, Derek Pletcher, Zhong-Qun Tian, David E. Williams Chichester, England:,: Wiley,, 2014 Pubbl/distr/stampa ©2014 **ISBN** 1-118-69440-6 1-118-69434-1 1-118-69438-4 Descrizione fisica 1 online resource (393 p.) Disciplina 541/.37 Soggetti Electrochemistry Spectrum analysis Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Includes index. Includes bibliographical references at the end of each chapters and Nota di bibliografia index. Developments in Electrochemistry; Contents; List of Contributors; 1 Nota di contenuto Martin Fleischmann - The Scientist and the Person; The Publications of Martin Fleischmann: 2 A Critical Review of the Methods Available for Quantitative Evaluation of Electrode Kinetics at Stationary Macrodisk Electrodes; 2.1 DC Cyclic Voltammetry; 2.1.1 Principles; 2.1.2 Processing DC Cyclic Voltammetric Data; 2.1.3 Semiintegration; 2.2 AC Voltammetry; 2.2.1 Advanced Methods of Theory-Experiment Comparison; 2.3 Experimental Studies; 2.3.1 Reduction of [Ru(NH3)6] 3+ in an Aqueous Medium 4.2 Electrochemical Nucleation with Diffusion-Controlled Growth4.3 Mathematical Modeling of Nucleation and Growth Processes: 4.4 The Nature of Active Sites: 4.5 Induction Times and the Onset of Electrochemical Phase Formation Processes; 4.6 Conclusion; References: 5 Organic Electrosynthesis: 5.1 Indirect Electrolysis: 5.2 Intermediates for Families of Reactions; 5.3 Selective Fluorination; 5.4 Two-Phase Electrolysis; 5.5 Electrode Materials; 5.6 Towards Pharmaceutical Products: 5.7 Future Prospects: References: 6 Electrochemical Engineering and Cell Design

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Sommario/riassunto

Martin Fleischmann was truly one of the 'fathers' of modern electrochemistry having made major contributions to diverse topics within electrochemical science and technology. These include the theory and practice of voltammetry and in situ spectroscopic techniques, instrumentation, electrochemical phase formation, corrosion, electrochemical engineering, electrosynthesis and cold fusion. While intended to honour the memory of Martin Fleischmann, Developments in Electrochemistry is neither a biography nor a history of his contributions. Rather, the book is a series of crit