

Industrial Chemistry Library, Volume 5

Lithium Batteries

New Materials, Developments and Perspectives

Edited by

G. Pistoia

*Centro di Studio per la Elettrochimica e la Chimica Fisica delle Interfasi
Consiglio Nazionale delle Ricerche, Rome, Italy*



Fachbereich Materialwissenschaft
der Techn. Hochschule Darmstadt

Inv.-Nr.: 1274/2

ELSEVIER Amsterdam — London — New York — Tokyo 1994

Table of contents

Preface	v
List of Contributors	viii
Chapter 1. Carbons and Graphites as Substitutes for the Lithium Anode 1 J. R. Dahn, A.K. Sleigh, Hang Shi, B.M. Way, W.J. Weydanz, J.N. Reimers, Q. Zhong and U. von Sacken	
Chapter 2. Electrode Materials Based on Carbon and Graphite Intercalation Compounds in Liquid and Polymeric Electrolytes	49
R. Yazami	
Chapter 3. Room Temperature Polymer Electrolytes	93
M. Alamgir and K.M. Abraham	
Chapter 4. Current State of the Art on Lithium Battery Electrolytes ...	137
L.A. Dominey	
Chapter 5. Thin Film Technology and Microbatteries	167
C. Julien	
Chapter 6. Four-Volt Cathodes for Lithium Accumulators and the Li- Ion Battery Concept	239
T. Ohzuku	
Chapter 7. Cathode Materials Synthesized by Low Temperature Techniques	281
J.P. Pereira-Ramos, N. Baffier and G. Pistoia	
Chapter 8. Solid-State Sodium Batteries	323
K. West	
Chapter 9. Comparison of High-Power Ambient Temperature Cells ..	347
P. Chenebault	
Chapter 10. Implantable Lithium Power Sources	377
C.F. Holmes	
Chapter 11. Commercial Cells Based on MnO₂ and MnO₂-related Cathodes	417
T. Nohma, S. Yoshimura, K. Nishio and T. Saito	

Chapter 12. Intercalation in Layered and Three-Dimensional Oxides . .	457
C. Delmas	
Subject Index	479