Record Nr. UNINA9910299624103321 The Lithium Air Battery [[electronic resource]]: Fundamentals // **Titolo** edited by Nobuyuki Imanishi, Alan C. Luntz, Peter Bruce Pubbl/distr/stampa New York, NY:,: Springer New York:,: Imprint: Springer,, 2014 **ISBN** 1-4899-8062-8 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (327 p.) Disciplina 541.37 620.11 621.042 621.31/2424 Soggetti Energy storage Electrochemistry Automotive engineering Materials science **Energy Storage** Automotive Engineering Characterization and Evaluation of Materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto Introduction -- Non-aqueous Electrolytes -- Cathode Electrochemistry in Non-aqueous Li-air Batteries -- The Kinetics and Product Characteristics of Oxygen Reduction and Evolution in Li-O2 Batteries.-Atomistic and First Principles -Computational Studies of Li-O2 Batteries -- Lithium-air Batteries Based on Protected Lithium Electrodes -- Air Electrodes for Aqueous Li-air Batteries -- Solid Electrolytes for Aqueous Lithium-air Batteries -- A Solid State, Rechargeable Lithium-Oxygen Battery -- Primary Lithium-Air Batteries -- Overview of Li-O2 Battery Systems, with a Focus on Oxygen Handling Requirements and Technologies. Sommario/riassunto Lithium/air rechargeable batteries are the best candidates for a power source for electric vehicles, because of their high specific energy

density. In this book, the history, scientific background, status and

prospects of the lithium/air system are introduced by specialists in the field. This book contains the basics, current status, and prospects for this new technology. This book is ideal for those interested in electrochemistry, energy storage, and materials science.