Principles and Applications of Lithium Secondary Batteries

Description: Lithium secondary batteries have been key to mobile electronics since 1990. Large-format batteries typically for electric vehicles and energy storage systems are attracting much attention due to current energy and environmental issues. Lithium batteries are expected to play a central role in boosting green technologies. Therefore, a large number of scientists and engineers are carrying out research and development on lithium secondary batteries.

The book is written in a straightforward fashion suitable for undergraduate and graduate students, as well as scientists, and engineers starting out in the field. The chapters in this book have been thoroughly edited by a collective of experts to achieve a cohesive book with a consistent style, level, and philosophy. They cover a wide range of topics, including principles and technologies of key materials such as the cathode, anode, electrolyte, and separator. Battery technologies such as design, manufacturing processes, and evaluation methods as well as applications are addressed. In addition, analytical methods for determining electrochemical and other properties of batteries are also included. Hence, this book is a must-have for everyone interested in obtaining all the basic information on lithium secondary batteries.

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