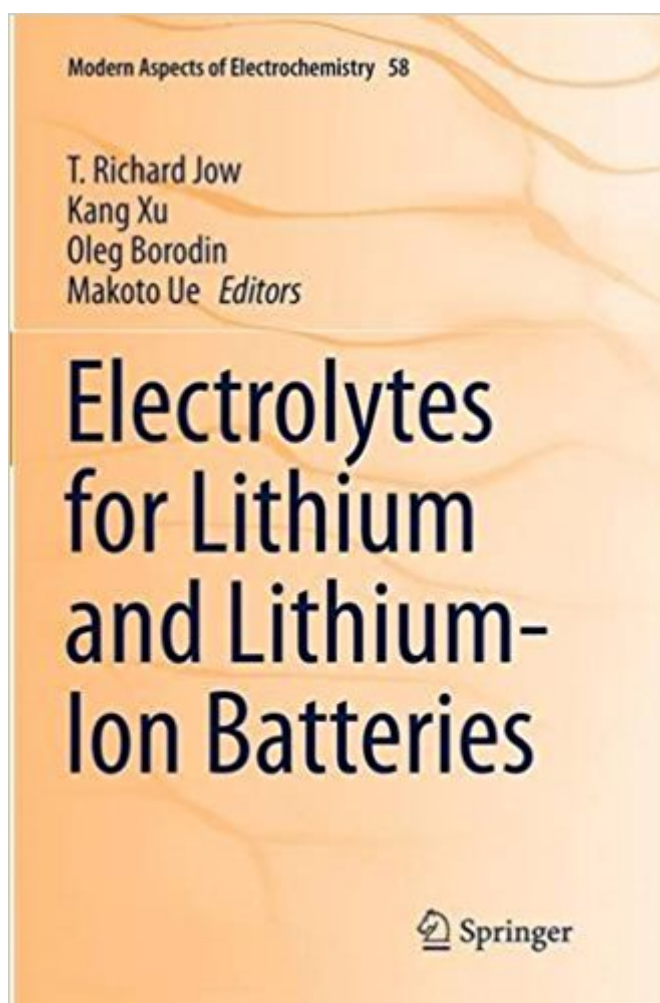




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Electrolytes For Lithium And Lithium-Ion Batteries (Modern Aspects Of Electrochemistry)



Synopsis

This book covers not only the key electrolytes for lithium and lithium-ion batteries, such as LiPF₆ salt in mixed-carbonate solvents with additives, but also recently developed electrolyte materials that have the potential for future advances.

Book Information

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Customer Reviews

From the book reviews: "This book provides an excellent guide to the plethora of salt, electrolyte and additive options and their functionalities and properties; the historical overview is also particularly helpful to those who are new to the field. | this book will be useful to battery researchers in academia and industry, providing historical context, reference information on a wide range of electrolyte components and their functionality and highlighting directions for further work and the challenges that lie ahead." • (Sarah Ball, Johnson Matthey Technology Review, Vol. 59 (1), 2015)

Electrolytes for Lithium and Lithium-ion Batteries provides a comprehensive overview of the scientific understanding and technological development of electrolyte materials in the last several years. This book covers key electrolytes such as LiPF₆ salt in mixed-carbonate solvents with additives for the state-of-the-art Li-ion batteries as well as new electrolyte materials developed recently that lay the foundation for future advances. This book also reviews the characterization of electrolyte materials for their transport properties, structures, phase

relationships, stabilities, and impurities. The book discusses in-depth the electrode-electrolyte interactions and interphasial chemistries that are key for the successful use of the electrolyte in practical devices. The Quantum Mechanical and Molecular Dynamical calculations that has proved to be so powerful in understanding and predicating behavior and properties of materials is also reviewed in this book. Electrolytes for Lithium and Lithium-ion Batteries is ideal for electrochemists, engineers, researchers interested in energy science and technology, material scientists, and physicists working on energy.

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