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growth areas that can serve as inspirations for future research. All articles from this EIBC book will be published online as part of the Encyclopedia of Inorganic and Bioinorganic Chemistry: <http://onlinelibrary.wiley.com/book/10.1002/9781119951438> Chemistry determines how a battery works. Understanding the chemistry of a battery technology and its materials will reveal its potential as well as the obstacles that hamper the potential from being realized. In the context of renewable energy utilization and transportation electrification, battery technologies and their related research have been under more extensive and intensive development than ever. Focusing on inorganic chemistry of battery materials associated with both current and future battery technologies, this book will be a unique reference in the field. In a single volume, this book is designed to inform the reader of the basic chemistry and recent advances of battery materials and of the challenges and opportunities associated with their present and emerging technological uses. The book contains chapters on fundamental features of battery materials, including discussions on material synthesis, structural characterizations, and electrochemical reactions, making it accessible to students and others who have limited familiarity with their chemistry. Both mature and emerging battery technologies are discussed, and new applications are highlighted, pointing out potential growth areas that can serve as inspirations for future research. All articles from this EIBC book will be published online as part of the Encyclopedia of Inorganic and Bioinorganic Chemistry: www.wileyonlinelibrary.com/ref/eibc--
