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The world is currently facing the urgent and demanding challenges of saving and utilizing energy as efficiently as possible. Materials science, where chemistry meets physics, has garnered a great deal of attention because of its versatile techniques for designing and producing new, desired materials enabling energy storage and conversion. This book is a comprehensive survey of the research on such materials. Unlike a monograph or a review book, it covers a wide variety of compounds, details diverse study methodologies, and spans different scientific fields. It contains cutting-edge research in chemistry and physics from the interdisciplinary team of Ehime University (Japan), the members of which are currently broadening the horizon of materials sciences through their own ideas, tailored equipment, and state-of-the-art techniques. Edited by Toshio Naito, a prominent materials scientist, this book will appeal to anyone interested in solid-state chemistry, organic and inorganic semiconductors, low-temperature physics, or the development of functional materials, including advanced undergraduate- and graduate-level students of solid-state properties and researchers in metal-complex science, materials science, chemistry, and physics, especially those with an interest in (semi)conducting and/or magnetic materials for energy storage and conversion.



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