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Sommario/riassunto	This book focuses on Atomic Layer Deposition (ALD) and its applications in the field of green hydrogen energy. It covers the fundamental understanding of how new functional materials can be synthesized by ALD, and provides insights into its use in advanced nanopatterning for microelectronics, energy storage systems, desalination, catalysis, and medical fields. The book also highlights the advancements in computational and experimental methodologies for optimizing ALD processes in the context of green hydrogen energy. The book addresses aspects that might affect deposition and green hydrogen energy, and presents analysis and characterization

techniques in the field. With specific examples illustrating the progress in green hydrogen ALD processes and their impact on other technologies, this book aims to enable the reduction of cost, energy waste, and adverse environmental impacts associated with hydrogen energy. It provides a comprehensive overview of ALD technology, hydrogen production, purification, and storage methods, modeling and simulation techniques, analysis and characterization approaches, and future perspectives on green hydrogen energy.