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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Chapter 1. Introduction to hyrdrogen as a green fuel -- Chapter 2. Concepts in photochemical water splitting -- Chapter 3. Water-splitting technologies for hydrogen generation -- Chapter 4. Electrochemical water splitting -- Chapter 5. Oxide semiconductors (ZnO, TiO2, Fe2O3, WO3, et cetera) as photocatalysts for water splitting -- Chapter 6. Fundamental understanding of the photocatalytic mechanisms -- Chapter 7. Nanostructured semiconducting materials for water splitting.
Sommario/riassunto	This book provides a comprehensive overview of photocatalytic water splitting theory and technology with a focus on advances in photocatalyst materials. It examines how to improve the performance of photocatalysts in terms of both catalytic activity and stability as well as how to reduce material costs. It also discusses material synthesis, focusing on control of the particle size, morphology, orientation, and aspect ratio as related to the cost-effectiveness of large-scale material and device manufacturing for water splitting.