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5.4 High-Temperature URFCs5.5 General Conclusion and Perspectives; References; Chapter 6: High-Temperature Steam Electrolysis; 6.1 Introduction; 6.2 Overview of the Technology; 6.3 Fundamentals of Solid-State Electrochemistry in SOEC; 6.4 Performances and Durability; 6.5 Limitations and Challenges; 6.6 Specific Operation Modes; References; Chapter 7: Hydrogen Storage Options Including Constraints and Challenges; 7.1 Introduction; 7.2 Liquid Hydrogen; 7.3 Compressed Hydrogen; 7.4 Cryo-Compressed Hydrogen; 7.5 Solid-State Hydrogen Storage Including Materials and System-Related Problems
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Sommario/riassunto

Covering the various aspects of this fast-evolving field, this comprehensive book includes the fundamentals and a comparison of current applications, while focusing on the latest, novel achievements and future directions. The introductory chapters explore the thermodynamic and electrochemical processes to better understand how electrolysis cells work, and how these can be combined to build large electrolysis modules. The book then goes on to discuss the electrolysis process and the characteristics, advantages, drawbacks, and challenges of the main existing electrolysis technologies. Current ma