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| Titolo | Ammonia and Hydrogen for Green Energy Transition / / edited by Sudarshan Kumar, Avinash K. Agarwal, Bhupendra Khandelwal, Paramvir Singh |
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| Descrizione fisica | 1 online resource (399 pages) |
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| Soggetti | Energy storage<br>Solar energy<br>Mechanical engineering<br>Green chemistry<br>Mechanical and Thermal Energy Storage<br>Solar Thermal Energy<br>Mechanical Engineering<br>Green Chemistry |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Chapter 1: MILD combustion of ammonia from kinetics to applications -- Chapter 2: Ammonia as Green Fuel for Dual-fuel Spark-Ignition Engines for future transportation -- Chapter 3: Pre-chamber Assisted Ammonia Internal Combustion Engine Review -- Chapter 4: Review on NOx Mitigation Techniques for Ammonia Combustion -- Chapter 5: Ammonia decomposition using catalytic membrane reactor for hydrogen production -- Chapter 6: Nitrogen Oxide Emissions in Ammonia Combustion -- Chapter 7: Green Ammonia An Alternative Sustainable Energy Source for Clean Combustion -- Chapter 8: Chemical kinetics of hydrogen combustion -- Chapter 9: Prospects and Challenges of Green Ammonia as an alternate fuel for Internal Combustion Engines -- Chapter 10: Hydrogen as an alternative aviation fuel - A Review -- Chapter 11: Effect of Ammonia Blends on the Laminar Burning Velocity at elevated temperature and pressure -- Chapter 12: Net Zero Carbon Emission Assessing the Role of Ammonia |

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| | -- Chapter 13: Ammonia Combustion Enhancement -- Chapter 14: NOx Emissions from Hydrogen-Based SI Engines and Design Modifications for Control. |
| Sommario/riassunto | The subject of this book pertains to the applicability of zero-carbon vector fuels, such as ammonia or hydrogen, in a practical scenario. This monograph extensively discusses the applicability or challenges associated with ammonia fuels for both IC-engine and gas turbine applications. It provides insights into ammonia cracking through catalytic membrane reactors for hydrogen production. This book also discusses NOx mitigation techniques for ammonia combustion, such as MILD combustion, two-stage combustion, porous assisted combustion, plasma combustion, and high-pressure combustion. This book also provides details on the chemical kinetics of ammonia and hydrogen combustion. The book can be a valuable reference for researchers and professionals interested in green energy and allied fields. |