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Titolo	Enriched Methane [[electronic resource]] : The First Step Towards the Hydrogen Economy / / edited by Marcello De Falco, Angelo Basile
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	From the Contents: Enriched Methane: a sustainable solution -- Enriched Methane production through solar energy: METISOL project -- Bio-hythane production from food waste by dark fermentation coupled with anaerobic digestion process -- Biological hydrogen production via anaerobic fermentation.
Sommario/riassunto	This book brings together recent research from across the world on enriched methane, and examines the production, distribution and use of this resource in internal combustion engines and gas turbines. It aims to provide readers with an extensive account of potential technological breakthroughs which have the capacity to revolutionize energy systems. Enriched methane, a gas mixture composed by methane and hydrogen (10-30%vol), constitutes the first realistic step towards the application of hydrogen as an energy vector. It provides strong benefits in terms of emissions reduction, that is -11% of CO2, eq emission with the combustion of a 30%vol H2 mixture, if hydrogen is produced from renewable energy sources. Enriched methane offers the following advantages: • it can be produced at competitive costs; •

it can be distributed by means of the medium pressure natural gas grid; • it can be stored in traditional natural gas storage systems; <• it can feed natural gas internal combustion engine, improving conversion efficiency. This book is intended for academics in chemical engineering and energy production, distribution and storage. It is also intended for energy producers, engineering companies and R&D organizations.