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Soggetti	Cogeneration of electric power and heat Fossil fuels Petrology Renewable energy sources Geology Chemical engineering Fossil Fuel Renewable Energy Chemical Engineering
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Fundamentals of unconventional hydrocarbon reservoirs -- Recent advances in laboratory studies -- Upscaling for natural gas estimates in coal and shale -- Potential for CO2 sequestration in coal and shale -- Perspectives, Challenges and Opportunities.
Sommario/riassunto	This informative book offers a comprehensive exploration of critical reservoir parameters, including quantification techniques and interpretations for evaluating these reservoirs. Readers will also gain insight into the fundamental principles of simulating gas production from coal and shale reservoirs, as well as the key input parameters for building the best-fit reservoir model. Additionally, the book explores various aspects of storing captured CO2 in these reservoirs and their potential role in preventing global temperature increases beyond pre-industrial levels. Energy from conventional petroleum reservoirs and coal has been the backbone of global energy needs for a long time.

However, depletion of these fossil fuel reserves, as well as their contribution to rising greenhouse emissions, has prompted a shift to renewable energy sources. Natural gas found in unconventional coal and shale reservoirs is increasingly seen as a greener energy option, emitting approximately 45% less CO<sub>2</sub> than conventional sources. Furthermore, due to their vast availability and capacity to sequester atmospheric CO<sub>2</sub>, unconventional coal and shale reservoirs can facilitate the transition to renewable energy resources. With a focus on achieving temperature stabilization at 1.5°C, this book offers a valuable resource for those interested in renewable energy and mitigating climate change. .

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