





Special Issue Reprint

New Advances in Oil, Gas and Geothermal Reservoirs

www.mdpi.com/books/reprint/11552

Edited by Daoyi Zhu

ISBN 978-3-7258-5251-2 (Hardback) ISBN 978-3-7258-5252-9 (PDF)



The exploration and exploitation of geo-energy resources, including oil, gas, and geo-thermal reservoirs, is experiencing a profound transformation, driven by the implementation of innovative technologies and advanced approaches. This Special Issue assembles cutting-edge research focusing on three major areas: the development of mature and unconventional reservoirs (especially heavy oil), the application of big data and artificial intelligence (AI) in oil and gas fields, and advancements in gas storage technologies. The selected studies combine state-of-the-art numerical modeling, experimental methods, and big data with AI technologies to tackle challenges including optimizing resource extraction from difficult reservoirs, improving operational efficiency through data analysis, and enhancing gas storage safety. This Special Issue provides a comprehensive foundation for future progress in the sustainable and efficient management of geo-energy resources.





MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



Open Access

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



Author Focus

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



High Quality & Rapid Publication

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



High Visibility

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



Print on Demand and Multiple Formats

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

MDPI AG Grosspeteranlage 5 4052 Basel Switzerland Tel: +41 61 683 77 34 www.mdpi.com/books books@mdpi.com

