

Weighty contribution to world marine geosciences knowledge: a review

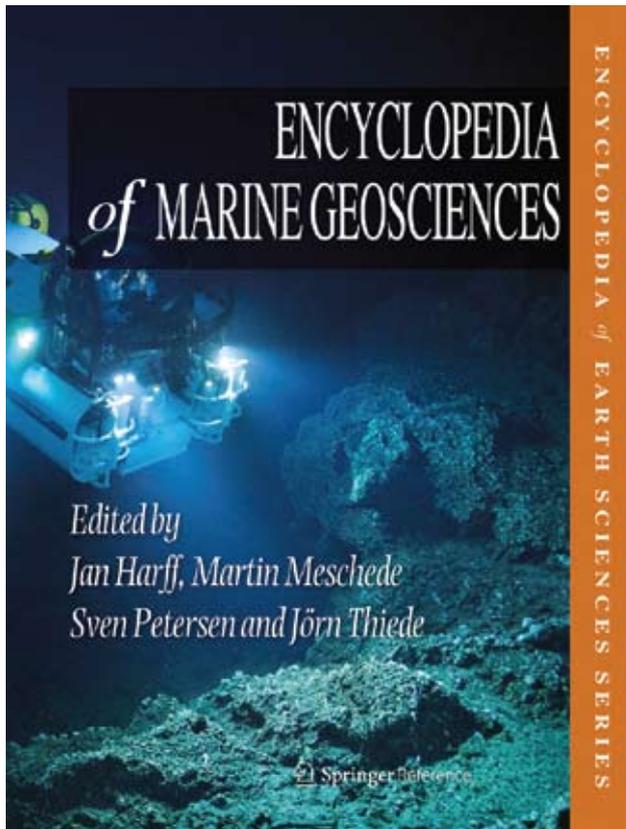
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In 2016, SPRINGER has published in the *Encyclopedia of Earth Sciences Series* a big volume entitled *Encyclopedia of Marine Geosciences* edited by Jan Harff, Martin Meschede, Sven Petersen and Joern Thiede. ISBN 978-94-007-6238-1 (online eReference), 978-94-007-6237-4 (print), 978-94-007-6239-8 (print plus eBook). DOI 10.1007/978-94-007-6238-1.



Cover of book

This Encyclopedia comprises the current knowledge in marine geosciences and offers an overview of the oceans' and marginal seas' geo-resources:

- Presents an interdisciplinary synopsis of the whole scale of marine geosciences;
- Incorporates geology, geophysics, hydrography, biology, climatology, ecology, and economic geology;
- Integrates knowledge in basic and applied sciences, connecting natural and engineering sciences;
- Addresses some 195 topics through the work of international specialists.

'Through this concept a broad scale of users in the field of marine sciences and techniques is addressed, from students and scholars in academia to engineers and decision makers in industry and politics', – is said in the book announcement.

The Encyclopedia of Marine Geosciences is dedicated to two eminent scientists – to Eugen Seibold (†2013) who inspired the editors for marine geosciences, and to Terry Healy (†2010) who initiated the *Encyclopedia of Marine Geosciences project*, both making bridge between the fundamental and applied compartments of the marine geosciences.

The editors, Jan Harff (Professor of Geosciences and Seafloor Geology at the University of Szczecin, Poland), Martin Meschede (Professor of Regional and Structural Geology at the Institute of Geography and Geology, University of Greifswald, Germany), Sven Petersen (Senior researcher at GEOMAR, Helmholtz Centre for Ocean Research Kiel, Germany), and Jörn Thiede (Professor of the KÖPPEN-Laboratory of the Institute of Earth Sciences of Saint Petersburg State University), with their broad knowledge and long-term experience have constituted an universal team, enabling them to cover extensively broad aspects of all the marine geosciences fields.

The Edition is arranged alphabetically as is a rule for encyclopedias taking descriptions from Abyssal Plains to Wilson Cycle, in 195 topics. Short but concise texts, actually in three–four pages, are of high

scientific value, informative, well illustrated and supplied by bibliographies; at the end of texts the cross-reference terms are given, that in general with the detailed author and subject indexes makes easier to search required information.

Except short “encyclopedic” descriptions the book contains a few extended articles devoted to theoretical, basic points of advanced research in marine geology (sea-ocean) that increase the scientific value of this edition. In authors opinion these are the historical accounts of marine geosciences (p. 437–448), oceanic spreading centers (571–587), plate motions (669–686), subduction (793–803), mid-ocean ridge magmatism and volcanism (501–514), transform faults and triple junctions (858–884), hydrothermalism (344–357), reflection/refraction seismology (721–731), technology in marine geosciences (825–835), mangrove coasts (412–423), underwater archaeology (893–900).

Several advanced topics should also be mentioned, such as ancient plate tectonics, coasts, deltas, deep-sea fans, energy resources, hot spots and mantle plums, marine heat flow, marine microfossils, marine sedimentary basins, ocean acidification, paleophysiography of oceanic basins, passive plate margins, plate motions, radiogenic tracers, relative sea-level cycle, sedimentary sequence and sequence stratigraphy,

submarine canyons, Tethys in marine geosciences, Wadati-Benioff zone that are extensively described and exposed.

In conclusion, it should be noted that *the Encyclopedia of Marine Geosciences* presents high-level topics on integrated data of marine geology, marine geophysics, and advanced marine technology tied to present knowledge of oceanography, hydrography, biology, climatology, and economic geology. The marine science community already gave positive opinion on this Springer Edition, and authors wish this book to find straight way to readers.

REFERENCE

J. Harff, M. Meschede, S. Petersen, J. Thiede (eds), *Encyclopedia of Marine Geosciences*. Series: Encyclopedia of Earth Sciences Series. 1st ed. 2016, XXXIII, 961 p., 458 ill., 344 ill. in colour (<http://www.springer.com/gp/book/>).

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