1. Record Nr. UNINA9910254139503321

Titolo	Encyclopedia of marine geosciences / / edited by Jan Harff, Martin Meschede, Sven Petersen, Jörn Thiede
Pubbl/distr/stampa	Dordrecht : , : Springer, , 2016
ISBN	9789400762381 9400762380 9789400762374 9400762372
Descrizione fisica	1 online resource (xxix, 961 pages) : illustrations (chiefly color), maps (chiefly color)
Collana	Encyclopedia of Earth sciences series, , 1871-756X
Disciplina	551.46803
Soggetti	Oceanography Geology Geophysics Ecology Physical geography Ocean Sciences Physical Geography
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Abyssal plain -- Accretionary wedge -- Acidification -- Active continental margin -- Anoxic oceans -- Asphalt volcanism -- Axial magma chamber -- Axial summit graben, axial summit trough -- Backarc basins and backarc spreading center -- Beach -- Beach nourishment -- Beach processes -- Biochronology -- Biogenic barium -- Biostratigraphy -- Bioturbation -- Black and white smoker -- Boninites -- Bottom simulating seismic reflector (BSR) -- Bottom-boundary layer -- Bouma sequence -- Break waters -- Carbon dioxide and climate (carbon cycle) -- Carbon isotopes/-stratigraphy -- Carbon pump -- Carbonate dissolution -- Carbonate factory -- CCD -- Chemosynthetic life -- Clay minerals -- Coastal bio-geochemical cycles -- Coastal engineering -- Coasts -- Cold seeps -- Continental margin sediments -- Continental rift system, graben -- Continental

rise -- Continental slope -- Contour currents -- Convergence texture of seismic reflectors -- Core-complex formation -- Crustal accretion (incl. gabbro glacier model) -- Cumulate -- Curie temperature -- Currents -- Data banks (Pangaea) -- Decollement -- Deep biosphere -- Deep Sea Fans -- Deep sea sediments -- Delta -- Depleted mantle -- Detachment fault -- Diatoms -- Dinoflagellates -- Driving forces (slab pull, ridge push) -- Dunes -- Dust in the ocean -- Dykes -- Earthquake -- El Nino -- Energy resources -- Epicenter, hypocenter -- Erosion and hiatusses -- Estuary, estuarine/anti-estuarine current system -- Eustasy -- Events in ocean history -- Explosive volcanism in the deep sea -- Export production -- Fault-plane solution -- Fjord -- Foraminifers (benthic) -- Foraminifers (planktonic) -- Forebulge (lithospheric) -- Fracture zone -- Fresh water in the oceans -- Gabbro -- Gas hydrates -- GEBCO -- Geochronology -- Geohazards (coastal disasters) -- Geological effects of ocean circulation -- Geomagnetic field -- Glacial marine sedimentation -- Glacio-isostatic adjustment -- Gravity field -- Grounding line -- Groynes -- Guyot, atoll -- Heat flow -- High-pressure/low temperature metamorphism -- History of Marine Geology -- Hot spots and mantle plumes -- Hurricanes/ Typhoons -- Hydrocarbons (natural oil and gas) -- Hydrothermalism -- Hydrothermal plumes -- Hydrothermal vent fluids -- IBCAO -- Ice rafted debris (IRD) -- Impacts and their products -- Integrated Coastal Zone Management -- Intracontinental rifting -- Intraoceanic subduction zone -- Intraplate volcanism -- Island arc volcanism, volcanic arcs -- Lagoon -- Laminated sediments -- Large igneous provinces (LIP) -- Lava types (pillow lava, sheet flows, lobate, etc) -- Layering of oceanic crust -- Lithosphere -- Lithospheric mantle -- Lithostratigraphy -- Magmatism at convergent plate boundaries -- Magnetostratigraphy -- Magnetism and paleomagnetism -- Manganese crusts, Co-rich manganese crusts -- Manganese nodules -- Mangrove coast -- Mantle plume -- Marginal seas -- Marine evaporites -- Marine microfossils -- Marine mineral resources -- Marine sedimentary basins -- Mass wasting (slides) -- Methane in sediments -- Mid-ocean ridges -- Mid-ocean ridge magmatism -- Milankovitch frequencies/-cyclicities -- Modelling past oceans -- Modern analog technique -- Mohorovicic-discontinuity (Moho) -- Morain -- Morphology of a subuction zone (forearc, backarc, deep sea trench) -- Mud volcano -- Nannoplankton/ coccolithophorids -- Nitrogene (stable) isotopes -- North Atlantic Oscillation (NAO) -- Oceanic crust -- Ocean drilling -- Ocean margin systems -- Oceanic rift system, Mid-Oceanic Ridge -- Oil spill -- Ophiolite -- Organic matter -- Orogeny -- Overlapping spreading center -- Oxygen isotopes and –stratigraphy -- Paired metamorphic belt -- Paleoceanographic proxies -- Paleoceanography -- Paleophysiography of ocean basins -- Paleoproductivity -- Passive plate margin -- Peridotite -- Petroleum, natural gas -- phosphorites -- Placer deposits -- Plate motion -- Plate stratigraphy -- Pollen/spores -- Precambrian ocean basins -- Propagating rift -- Pteropods -- Pull-apart basin -- Push-up block -- Radiocarbon dating -- Radiogenic tracers -- Radiolarians -- Reef coast -- Reefs -- Regional marine geology -- Regional oceanography and sediments -- Reflection/refraction seismology -- Regression -- Relative sea level (RSL) cycle -- Ridge-plume interaction -- Salt domes in the ocean -- Sapropel -- Sclerochronology -- Sea floor spreading -- Sea level dynamics -- Sea walls / revetments -- Seamounts -- Sediment dynamic -- Sediment transport models -- Sedimentary Sequence / parasequence -- Seismic layers -- Seismogenic zone -- Sequence stratigraphy -- Serpentinization -- Shelf -- Silica -- Source rocks, reservoirs -- Spreading axis -- Spreading rates and ridge morphology

-- Stratigraphy (table) -- Subduction -- Subduction erosion -- Submarine canyon -- Subsidence -- Systems tracts (highstand, lowstand, transgressive, shelf margin) -- Technology in marine geosciences -- Terrane -- Tidal coast -- Transform fault -- Transgression -- Triple junction -- Tsunamis -- Turbidite / contourite -- Underwater archaeology -- Upwelling in the ocean and its geological effects -- Volcanic eruptions as hazards -- Volcanism and climate -- Volcanogenic massive sulfides -- Wadati- Benioff-zone -- Wadden Sea -- Waves -- Wilson cycle. .

Sommario/riassunto

This Encyclopedia comprises the current knowledge in marine geosciences whereby not only basic but also applied and technical sciences are covered. 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. Globally growing demand of energy and mineral resources, reliable future projection of climate processes and the protection of coasts to mitigate the threats of disasters and hazards require a comprehensive understanding of the structure, ongoing processes and genesis of the marine geosphere. Beyond the “classical” research fields in marine geology in current time more general concepts have been evolved integrating marine geophysics, hydrography, marine biology, climatology and ecology. As an umbrella the term “marine geosciences” has been broadly accepted for this new complex field of research and the solutions of practical tasks in the marine realm. .