

## Sedimentary Rocks

Discusses sedimentary rocks, how they are formed, their characteristics, and their uses.

This comprehensive, one-volume encyclopedia covers the sedimentological aspects of sediments and sedimentary rocks. It features more than 250 entries by some 180 eminent contributors from all over the world, excellent indices, cross references, and extensive bibliographies.

" A third volume to accompany the successful Atlas of Rock-forming Minerals in Thin Section and Atlas of Igneous Rocks and Their Textures, this full - colour handbook presents over 200 colour illustrations of the common constituents and textures of sedimentary rocks as seen using thin sections or acetate peels." -- Cover.

Diagenesis in sediments and sedimentary rocks

This textbook outlines the physical, chemical, and biologic properties of the major sedimentary rocks, as revealed by petrographic microscopy, geochemical techniques, and field study. It covers the mineralogy, chemistry, textures, and sedimentary structures that characterise sedimentary rocks, and relates these features to the depositional origin of the rocks and their subsequent alteration by diagenetic processes during burial. In addition to detailed sections on siliciclastic and carbonate rocks, it also discusses evaporites, cherts, iron-rich sedimentary rocks, phosphorites, and carbonaceous sedimentary rocks such as oil shales. This second edition maintains the comprehensive treatment of sedimentary petrography and petrology provided in the first edition, and has been updated with new concepts and cutting-edge techniques like cathodoluminescence imaging of sedimentary rocks and backscattered electron microscopy. It is ideal for advanced undergraduate and graduate courses in sedimentary petrology, and is a key reference for researchers and professional petroleum geoscientists.

Sedimentary rocks form from built-up layers of eroded rock and plant matter pressed together over time. At-level text and graphic organizers explore how the makeup of sediment, rock formation, and identifying different kinds of sedimentary rocks. Readers will also learn how fossils form in sedimentary rocks, and the role sedimentary rocks play in the rock cycle. The interactive eBook version features videos, graphic organizers, and photographs that further illustrate subjects explored in the print version.

Sedimentary rocks are the only type of rocks that contain fossils! But that's not the only reason sedimentary rocks are important. Scientists study the rocks to learn about Earth's history, while other people collect the rocks for use in construction, farming, and even art. This title introduces readers to these useful rocks, including information about how to identify them, how they form, and how people use them. Special features, including a profile, an activity, and formation diagrams, help highlight the key features of sedimentary rocks in this title for curious readers.

This title covers what a sedimentary rock is and how and where it forms. It also briefly explains the incredible rock cycle. Aligned to Common Core Standards and correlated to state standards. Abdo Kids Jumbo is an imprint of Abdo Kids, a division of ABDO.

Describes the location, formation, and use of sedimentary rock.

The present work. Authigenic Minerals in Sedimentary Rocks, is designed for the broad circle of lithologists, and also for the geologists and geochemists who are studying sedimentary rocks and ores. Its specific purpose is to stir up interest among lithologists and geologists in the geochemical environment associated with the formation of authigenic minerals in sedimentary rocks, to encourage work in tracing the sequence of formation of these minerals, and to direct attention to other genetic problems. The book by no means pretends to be a determinative atlas of the authigenic minerals in sedimentary rocks; its task is to draw the reader's attention to questions of origin and, at the same time, to equip him with systematic knowledge about the physical and, especially, the optical properties of these minerals. In addition, the simplified chemical reactions indicated in the book will permit one to distinguish similar minerals, and will also allow him to detect various mineral deposits in the field. Another purpose of the book is to acquaint chemists and geochemists with the properties of the minerals they study in making chemical analyses, minerals that commonly occur as polymineralic aggregates in the samples that are examined.

Originally published in 1929, this book contains an overview of the conditions that have controlled the distribution of various sedimentary deposits. Marr covers topics such as marine deposits and the use of fossils for purposes of correlation. This book will be of value to anyone with an interest in physical geography and the history of geology.

Backscattered scanning electron microscopy (BSE) reveals the minerals, textures, and fabrics of sediments and rocks in much greater detail than is possible with conventional optical microscopy.

Backscattered Scanning Electron Microscopy provides a concise summary of the BSE technique. This comprehensive guide uses abundant images to illustrate the type of information BSE yields and the application of the technique to the study of sediments and sedimentary rocks. The authors review the use of this petrographic technique on all the major sedimentary rock types, including sediment grains, sandstones, shales, carbonate rocks, rock varnish, and glauconite. They also describe image analysis techniques that allow quantification of backscattered scanning electron microscope images. Heavily illustrated and lucidly written, this book will provide researchers and graduate students with the most current research on this important geological tool.

"One of the primary areas in the Earth science curriculum is learning about the rocks that make up Earth's crust. However, remembering each type and how it forms may be a challenge for some. This volume presents readers with a simple but full overview of the formation of sedimentary rock. Full-color photographs display common types of sedimentary rock, including sandstone, shale, and breccia. Including explanations of key terms such as sediment and stratification, the main content and fact boxes will greatly complement classroom learning for readers of all levels."

Sedimentary rocks are like time capsules. Each layer contains clues about what life was like at the time the layers were formed. Readers will uncover the fascinating science behind rock formation through text that's both informative and engaging. Helpful diagrams and charts reinforce the concepts covered in the text, while allowing readers to visualize concepts they encounter in STEM learning. A glossary, index, and reference websites encourage readers to seek out additional information on their own, using the detective skills learned in this book to explore the world around them.

Get ready to get your hands dirty with Sedimentary Rocks. With its reader-friendly and interactive approach, this title covers key curriculum Earth science topics in an engaging way. This title

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explores the natural processes, how geologists study sedimentary rocks, and how sedimentary rocks relate to the reader's daily life. Aligned to Common Core Standards and correlated to state standards. Core Library is an imprint of Abdo Publishing Company.

The earlier editions of this book have been used by successive generations of students for more than 20 years, and it is the standard text on the subject in most British universities and many others throughout the world. The study of sediments and sedimentary rocks continues to be a core topic in the Earth Sciences and this book aims to provide a concise account of their composition, mineralogy, textures, structures, diagenesis and depositional environments. This latest edition is noteworthy for the inclusion of 16 plates with 54 colour photomicrographs of sedimentary rocks in thin-section. These bring sediments to life and show their beauty and colourful appearance down the microscope; they will aid the student enormously in laboratory petrographic work. The text has been revised where necessary and the reference and further reading lists brought up-to-date. New tables have been included to help undergraduates with rock and thin-section description and interpretation. New 16-page colour section will mean students do not need to buy Longman Atlas All illustrations redrawn to higher standard Complete revision of text - new material on sedimentary geochemistry, etc

This book takes a journey inside the layers of sedimentary rock to find out more about the rocks that have covered our planet for millions of years. Read about how these rocks form through compaction and lithification, and how weathering and erosion destroy them. The text supports the KS2 and KS3 science curriculum, covering topics such as the many kinds of sedimentary rock, rock identification, and fossils. The text also explores how people use sedimentary rocks, and where on Earth the most beautiful examples are found. Stunning photographs, sidebars, and fact boxes further enhance the learning experience.

"Ideas and concepts in sedimentology are changing rapidly, but field work and data collection remain the basis of the science. This book is intended as a guide to the recognition and description of sedimentary rocks in the field. It aims to help students and professional geologists know what to observe and record, and how best to interpret this data. The emphasis is on illustrating the principal types of sedimentary rocks, which is accomplished through more than 450 color photos and explanatory drawings. The introductory chapter defines the main types of sedimentary rocks, their classification, and their economic significance. The author then goes on to describe standard field techniques and provides a comprehensive summary of the principal characteristics of sedimentary rocks. Additional chapters cover each of the main rock types and describe how to interpret rocks and their features in terms of depositional environments." "This book is an ideal field companion for undergraduate and graduate students of geology, environmental sciences, hydrogeology, oceanography, and more. Professionals in petroleum geology and resource management, as well as budding geologists, will also find this to be an indispensable reference."--BOOK JACKET.

Discusses what sedimentary rocks are and explains how they are formed.

Sedimentary Rocks in the Field A Practical Guide John Wiley & Sons

The Treatise on Geochemistry is the first work providing a comprehensive, integrated summary of the present state of geochemistry. It deals with all the major subjects in the field, ranging from the chemistry of the solar system to environmental geochemistry. The Treatise on Geochemistry has drawn on the expertise of outstanding scientists throughout the world, creating the reference work in geochemistry for the next decade. Each volume consists of fifteen to twenty-five chapters written by recognized authorities in their fields, and chosen by the Volume Editors in consultation with the Executive Editors. Particular emphasis has been placed on integrating the subject matter of the individual chapters and volumes. Elsevier also offers the Treatise on Geochemistry in electronic format via the online platform ScienceDirect®, the most comprehensive database of academic research on the Internet today, enhanced by a suite of sophisticated linking, searching and retrieval tools.

Explains how sedimentary rocks are formed, describes their common characteristics, and introduces certain types of sedimentary rocks, including flint, chalk, and limestone.

Chemical composition and occurrence of iron-bearing minerals of sedimentary rocks, and composition, distribution, and geochemistry of ironstones and iron-formations.

Advanced textbook outlining the physical, chemical, and biological properties of sedimentary rocks through petrographic microscopy, geochemical techniques, and field study.

Through simple text and intriguing facts, amateur geologists will learn about sedimentary rocks, including what they are, how they're formed, and the different kinds found on earth. Young readers will recognize some of the most famous geological sites in the world through full-page photos and gain a new appreciation for the earth around them.

Minerals in sedimentary rocks emit characteristic visible luminescence called cathodoluminescence (CL) when bombarded by high energy electrons. CL emissions can be displayed as colour images in a cathodoluminescence microscope or as high-resolution monochromatic images in a scanning electron microscope. This provides information not available by other techniques on the provenance of the mineral grains in sedimentary rocks, and insights into diagenetic changes. The book, first published in 2006, begins with an easily understood presentation of the fundamental principles of CL imaging. This is followed by a description and discussion of the instruments used in CL imaging, and a detailed account of its applications to the study of sedimentary rocks. The volume is a comprehensive, easily understood description of the applications of cathodoluminescence imaging to the study of sedimentary rocks. It will be an important resource for academic researchers, industry professionals and advanced graduate students in sedimentary geology.

Sedimentary rocks are all around you. They form from soil, gravel, dust and other sediment. This type of rock is often affected by wind and water erosion. Learn how this can change an area's landscape and how sedimentary rocks are useful.

Explore how rocks form, change, move, evolve, and erode.

The Treatise on Geochemistry is the first work providing a comprehensive, integrated summary of the present state of geochemistry. It deals with all the major subjects in the field, ranging from the chemistry of the solar system to environmental geochemistry. The Treatise on Geochemistry has drawn on the expertise of outstanding scientists throughout the world, creating the reference work in geochemistry for the next decade. Each volume consists of fifteen to twenty-five chapters written by recognized authorities in their fields, and chosen by the Volume Editors in consultation with the Executive Editors. Particular emphasis has been placed on integrating the subject matter of the individual chapters and volumes. Elsevier also offers the Treatise on Geochemistry in electronic format via the online platform ScienceDirect, the most comprehensive database of academic research on the Internet today, enhanced by a suite of sophisticated linking, searching and retrieval tools.

This fourth edition builds on the success of previous editions and for the first time is produced in full colour throughout with improved photos and diagrams. It retains its popular pocket size and is an essential

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buy for all students working in the field. The text shows how sedimentary rocks are tackled in the field and has been written for all those with a geological background. It describes how the features of sedimentary rocks can be recorded in the field particularly through the construction of graphic logs. In succeeding chapters the various sedimentary rock types, textures and structures are discussed and shown how they can be described and measured in the field. There are expanded sections on trace fossils and volcanoclastics along with updated reference list. Finally a concluding section deals briefly with facies identification and points the ways towards facies interpretations, and the identification of sequences and cycles. Key Features: Full colour throughout with improved photos, figures and diagrams in a modern layout. Complete revision and update of best selling textbook which is part of the highly successful Field Guide series. Expanded sections on trace fossils and volcanoclastics along with updated reference list. Handy pocket size with laminated cover. Includes supplementary website with downloadable logging sheets for fieldwork activities.

Describes how sedimentary rocks are formed, where they are found, and their uses.

Sedimentary rock covers almost 75% of Earth's surface, but as it weathers away it reveals clues about Earth's past that help us understand our world. This text takes readers inside the layers of sedimentary rock that have covered our planet for millions of years. Readers will read about how these rocks form through compaction and lithification, and how weathering and erosion destroy them. The standards-based text supports elementary science curricula, covering topics such as the many kinds of sedimentary rock, rock identification, and fossils. The text also explores how people use sedimentary rocks, and where on Earth the most beautiful examples are found. Stunning photographs, sidebars, and fact boxes further enhance the learning experience.

This book serves as an introduction to sedimentary rocks, a physical feature of the environment that tells us a great deal about the Earth's geological history, its current state, and the shape of things to come.

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