# Origin Of Sedimentary Rocks

**This textbook provides an overview of the origin and preservation of carbonate sedimentary rocks. The focus is on limestones and dolostones and the sediments from which they are derived. The approach is general and universal and draws heavily on fundamental discoveries, arresting interpretations, and keystone syntheses that have been developed over the last five decades. The book is designed as a teaching tool for upper level undergraduate classes, a fundamental reference for graduate and research students, and a scholarly source of information for practicing professionals whose expertise lies outside this specialty. The approach is rigorous, with every chapter being designed as a separate lecture on a specific topic that is encased within a larger scheme. The text is profusely illustrated with all colour diagrams and images of rocks, subsurface cores, thin sections, modern sediments, and underwater seascapes. Additional resources for this book can be found at: www.wiley.com/go/james/carbonaterocks**

**Often thought of as a volcanically dominated planet, the last several decades of Mars exploration have revealed with increasing clarity the role of sedimentary processes on the Red Planet. Data from recent orbiters have highlighted the role of sedimentary processes throughout the geologic evolution of Mars by providing evidence that such processes are preserved in a rock record that spans a period of over four billion years.**

**Origin of Carbonate Sedimentary Rocks**

**Igneous and metamorphic**

**The Origin of Clay Minerals in Soils and Weathered Rocks**

**The origin of sediments and sedimentary rocks / by Wolf v. Engelhardt / translated by William D. Johns**

***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.***

***Introduction to Mineralogy and Petrology, second edition, presents the essentials of both disciplines through an approach accessible to industry professionals, academic researchers, and students alike. This new edition emphasizes the relationship between rocks and minerals, right from the structures created during rock formation through the economics of mineral deposits. While petrology is classified on the lines of geological evolution and rock formation, mineralogy speaks to the physical and chemical properties, uses, and global occurrences for each mineral, emphasizing the need for the growth of human development. The primary goal is for the reader to identify minerals in all respects, including host-rocks, and mineral deposits, with additional knowledge of mineral-exploration, resource, extraction, process, and ultimate use. To help provide a comprehensive analysis across ethical and socio-economic dimensions, a separate chapter describes the hazards associated with minerals, rocks, and mineral industries, and the consequences to humanity along with remedies and case studies. New to the second edition: includes coverage of minerals and petrology in extra-terrestrial environments as well as case studies on the hazards of the mining industry. Addresses the full scope of core concepts of mineralogy and petrology, including crystal structure, formation and grouping of minerals and soils, definition, origin, structure and classification of igneous, sedimentary and metamorphic rocks Features more than 250 figures, illustrations and color photographs to vividly explore the fundamental principles of mineralogy and petrology Offers a holistic approach to both subjects, beginning with the formation of geologic structures that is followed by the hosting of mineral deposits and the exploration and extraction of lucrative, usable products that improve the health of global economies Includes new content on minerals and petrology in extraterrestrial environments and case studies on hazards in the mining industry***

***Chemical Analyses of Australian Rocks***

***Delivered at Johns Hopkins University, 1888-89***

***Sedimentary Petrology. Part 3. The Origin of Sediments and Sedimentary Rocks***

***Physical Geology***

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 min erals, 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 com monly occur as polymineralic aggregates in the samples that are examined.

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

Encyclopedia of Sediments and Sedimentary Rocks

Petrology of Sedimentary Rocks

The Origin of Red Sedimentary Rocks

Origin of Sedimentary Rocks

This book is devoted to the mechanisms of sedimentary basin formation on active plate margins, which show enormous diversity reflecting complex tectonic processes. Multidisciplinary approach pursuing basin-forming mechanism is based on geology, sedimentology, geochronology and geophysics. Some chapters are dedicated to the genetic analysis of sedimentary basins in wrench deformation zones in forearc and intra-arc regions. Another block of chapters deals with basin formation in peripheral regions of Eurasia and intra-arc / foreland basins under the influence of the fluctuation of stress regimes. Finally geophysical approaches to basin analyses are shown in some chapters from microscopic to regional scales. Diverse contents of the chapters provide the audience with the present accomplishments of basin researches on active margins by Earth scientists.

This volume addresses the multi-disciplinary topic of engineering geology and the environment, one of the fastest growing, most relevant and applied fields of research and study within the geosciences. It covers the fundamentals of geology and engineering where the two fields overlap and, in addition, highlights specialized topics that address principles, concepts and paradigms of the discipline, including operational terms, materials, tools, techniques and methods as well as processes, procedures and implications. A number of well known and respected international experts contributed to this authoritative volume, thereby ensuring proper geographic representation, professional credibility and reliability. This superb volume provides a dependable and ready source of information on approximately 300 topical entries relevant to all aspects of engineering geology. Extensive illustrations, figures, images, tables and detailed bibliographic citations ensure that the comprehensively defined contributions are broadly and clearly explained. The Encyclopedia of Engineering Geology provides a ready source of reference for several fields of study and practice including civil engineers, geologists, physical geographers, architects, hazards specialists, hydrologists, geotechnicians, geophysicists, geomorphologists, planners, resource explorers, and many others. As a key library reference, this book is an essential technical source for undergraduate and graduate students in their research. Teachers/professors can rely on it as the final authority and the first source of reference on engineering geology related studies as it provides an exceptional resource to train and educate the next generation of practitioners.

Origin and Formation of Planets

Mechanism of Sedimentary Basin Formation

Sedimentary Petrology. Pt. 3. the Origin of Sediments and Sedimentary Rocks

The Origin of the Colors of Sedimentary Rocks

**Carbonate rocks (limestones and dolomites) constitute a major partof the geological column and contain not only 60% of the world'sknown hydrocarbons but also host extensive mineral deposits. Thisbook represents the first major review of carbonate sedimentologysince the mid 1970's. It is aimed at the advanced undergraduate -postgraduate level and will also be of major interest to geologistsworking in the oil industry. Carbonate Sedimentology is designed to take the readerfrom the basic aspects of limestone recognition and classificationthrough to an appreciation of the most recent developments such aslarge scale facies modelling and isotope geochemistry. Novelaspects of the book include a detailed review of carbonatemineralogy, non-marine carbonate depositional environments and anin-depth look at carbonate deposition and diagenesis throughgeologic time. In addition, the reviews of individual depositionalsystems stress a process-based approach rather than one centered onsimple comparative sedimentology. The unique quality of this bookis that it contains integrated reviews of carbonate sedimentologyand diagenesis, within one volume.**

**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 colorful 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**

**The Origin of Sediments and Sedimentary Rocks**

**A Synopsis of a Course of Lectures on the Origin, Structure and Sequence of the Sedimentary Rocks**

**Sedimentary Geology of Mars**

**Sedimentary Petrology: The origin of sediments and sedimentary rocks. 2d rev. ed**

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Developed by three experts to coincide with geology lab kits, this laboratory manual provides a clear and cohesive introduction to the field of geology. Introductory Geology is designed to ease new students into the often complex topics of physical geology and the study of our planet and its makeup. This text introduces readers to the various uses of the scientific method in geological terms. Readers will encounter a comprehensive yet straightforward style and flow as they journey through this text. They will understand the various spheres of geology and begin to master geological outcomes which derive from a growing knowledge of the tools and subjects which this text covers in great detail.

To Understand Geological Processes

Laboratory Manual for Introductory Geology

The Value of Certain Criteria for the Determination of the Origin of Foliated Crystalline Rocks

Petrology, Stratigraphy, and Origin of the Triassic Sedimentary Rocks of Connecticut

This fully revised and updated edition introduces the reader to sedimentology and stratigraphic principles, and provides tools for the interpretation of sediments and sedimentary rocks. The processes of formation, transport and deposition of sediment are considered and then applied to develop conceptual models for the full range of sedimentary environments, from deserts to deep seas and reefs to rivers. Different approaches to using stratigraphic principles to date and correlate strata are also considered, in order to provide a comprehensive introduction to all aspects of sedimentology and stratigraphy. The text and figures are designed to be accessible to anyone completely new to the subject, and all of the illustrative material is provided in an accompanying CD-ROM. High-resolution versions of these images can also be downloaded from the companion website for this book at: www.wiley.com/go/nicholssedimentology.

Origin of Sedimentary RocksPrentice HallSedimentary PetrologyAn Introduction to the Origin of Sedimentary RocksJohn Wiley & Sons

Sedimentary Petrology

With 134 Fig. and 55 Tables Iin the Text

Sedimentology and Stratigraphy

An Introduction to the Origin of Sedimentary Rocks

"Physical Geology is a comprehensive introductory text on the physical aspects of geology, including rocks and minerals, plate tectonics, earthquakes, volcanoes, glaciation, groundwater, streams, coasts, mass wasting, climate change, planetary geology and much more. It has a strong emphasis on examples from western Canada, especially British Columbia, and also includes a chapter devoted to the geological history of western Canada. The book is a collaboration of faculty from Earth Science departments at Universities and Colleges across British Columbia and elsewhere"--BCcampus website.

Of huge relevance in a number of fields, this is a survey of the different processes of soil clay mineral formation and the consequences of these processes concerning the soil ecosystem, especially plant and mineral. Two independent systems form soil materials. The first is the interaction of rocks and water, unstable minerals adjusting to surface conditions. The second is the interaction of the biosphere with clays in the upper parts of alteration profiles.

Authigenic Minerals in Sedimentary Rocks

The origin of sediments and sedimentary rocks

Introduction to Mineralogy and Petrology

Encyclopedia of Engineering Geology

This textbook is a complete rewrite, and expansion of Hugh Rollinson's highly successful 1993 book Using Geochemical Data: Evaluation, Presentation, Interpretation. Rollinson and Pease's new book covers the explosion in geochemical thinking over the past three decades, as new instruments and techniques have come online. It provides a comprehensive overview of how modern geochemical data are used in the understanding of geological and petrological processes. It covers major element, trace element, and radiogenic and stable isotope geochemistry. It explains the potential of many geochemical techniques, provides examples of their application, and emphasizes how to interpret the resulting data. Additional topics covered include the critical statistical analysis of geochemical data, current geochemical techniques, effective display of geochemical data, and the application of data in problem solving and identifying petrogenetic processes within a geological context. It will be invaluable for all graduate students, researchers, and professionals using geochemical techniques.

Multidisciplinary Approach on Active Plate Margins

Using Geochemical Data

Carbonate Sedimentology