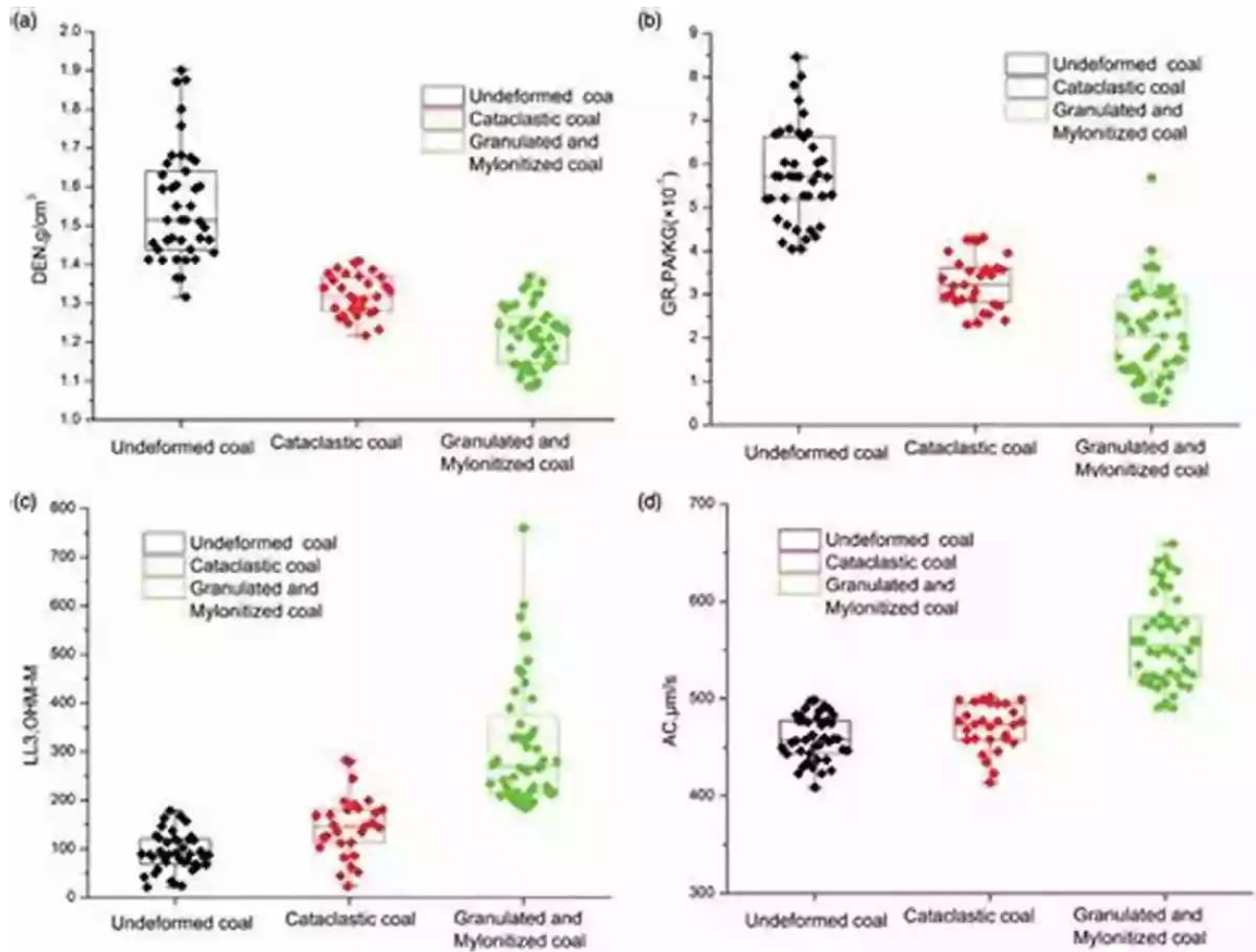


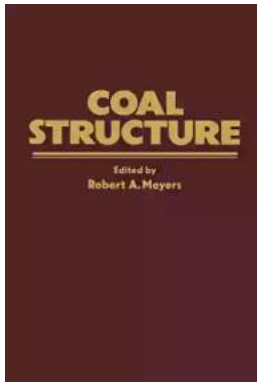
# The Intricate Structure of Coal: A Fascinating Journey into the Depths of Monika Jensen Stevenson



Coal is much more than just a black rock. It represents millions of years of geological processes, survival of ancient flora, and a source of energy that has shaped civilizations. Monika Jensen Stevenson, a renowned geologist and expert in coal structure, has dedicated her career to unraveling the mysteries hidden within this remarkable material.

## The Origins of Coal

Coal formation can be traced back to the Carboniferous period, approximately 360-300 million years ago. During this time, vast forests covered the earth, containing a rich diversity of plant life. Over millions of years, these plants accumulated and underwent a remarkable transformation under immense pressure and heat.



## Coal Structure

by Monika Jensen-Stevenson([Print Replica] Kindle Edition)

★★★★☆ 4.6 out of 5

Language : English

File size : 45192 KB

Screen Reader : Supported

Print length : 340 pages



Monika Jensen Stevenson has extensively studied the fossilization process that turns plants into coal. Through her research and fieldwork, she has uncovered the intricate details of coal structure and the intriguing journey it takes from ancient forests to our modern-day energy resource.

### The Layers Within: Examining Coal Structure

Coal consists primarily of carbon, along with varying amounts of other elements such as hydrogen, sulfur, and nitrogen. Monika Jensen Stevenson's expertise lies in understanding the distinct layers within coal and the composition of these layers.

The first layer, known as peat, represents the initial stage of coal formation. It is composed of partially decayed plant matter and has low carbon content. Under

increasing pressure and heat, peat transforms into lignite - a soft, brownish coal with higher carbon content.

Continued geological changes result in the formation of sub-bituminous coal, bituminous coal, and finally, anthracite - the highest rank of coal with the highest carbon content. Each layer is characterized by its specific physical properties and energy content.

## **Unlocking the Secrets: Analyzing Coal Microstructure**

Monika Jensen Stevenson has dedicated extensive research to studying the microstructure of coal. By utilizing advanced imaging techniques and electron microscopy, she has revealed the intricate network of pores, mineral matter, and organic components that make up coal.

This microscopic analysis has shed light on the storage and release of various gases within coal, such as methane. Understanding these properties is crucial for safe mining operations and utilizing coal as a valuable energy source.

## **Coal's Importance to Civilization**

Coal has played a significant role in the development and progress of human civilization. Its abundance and energy content fueled the Industrial Revolution, powering machinery and providing heat for countless homes.

Today, despite growing concerns regarding climate change and the shift towards renewable energy sources, coal still plays a vital role in global energy production. Monika Jensen Stevenson's research not only contributes to a better understanding of coal structure but also helps develop cleaner and more efficient technologies for coal utilization.

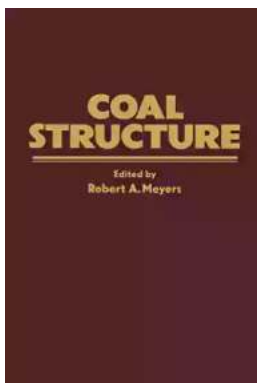
## **The Future of Coal Research**

Monika Jensen Stevenson's work is paving the way for advancements in coal research and its sustainable usage. As the world seeks to reduce greenhouse gas emissions, the exploration of cleaner coal technologies, carbon capture, and utilization will become increasingly important.

Through her continued dedication and passion for understanding coal structure, Monika Jensen Stevenson is at the forefront of driving innovation and progress in this field. The insights gained from her work will undoubtedly shape the future of coal exploration, extraction, and utilization.

Monika Jensen Stevenson's expertise in coal structure has brought about a deeper understanding of this vital natural resource. From its humble beginnings as ancient vegetation to its role in powering civilizations, coal carries a wealth of information and potential.

As the world continues its quest for sustainable energy alternatives, the lessons learned from coal and the research conducted by experts like Monika Jensen Stevenson will guide us towards a cleaner and more efficient future.



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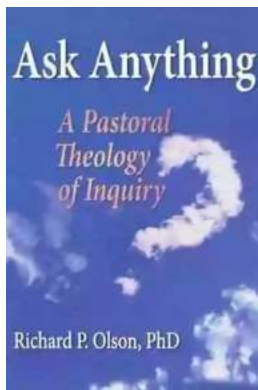
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Coal Structure deals with the structure, mineral and organic components, and the physical and chemical properties of coal.

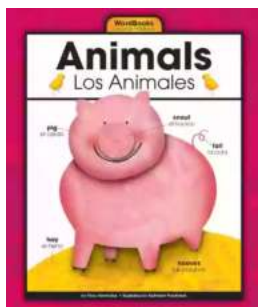
The book is composed of papers that present a detailed and coherent description of both the physical and chemical structure of coal and the effect of coal structural features on coal processing. The contributions in the text discuss such topics as coal macerals, coal porosity, aromaticity, functional groups and heteroatoms in coal, polymer structure of coal, and mineral matter in coal.

Engineers, researchers, scientists, and management personnel who are directly involved in the study and processing of coal will find the book a well-rounded reference source.



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