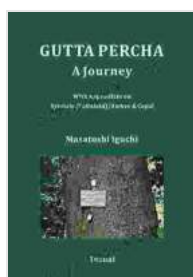


The Chemistry of Ivory, Bone, and Dentine: With Appendices On Xylonite Celluloid Amber Copal

Ivory, bone, and dentine are all calcified tissues that are found in the bodies of animals. Ivory is found in the tusks of elephants and walruses, while bone is found in the skeletons of all vertebrates. Dentine is found in the teeth of all vertebrates.



GUTTA PERCHA - A Journey: With Appendices on Xylonite (Celluloid)/Amber & Copal by Steve Tendon

★★★★★ 5 out of 5

Language : English
File size : 25508 KB
Text-to-Speech : Enabled
Enhanced typesetting : Enabled
Print length : 147 pages
Lending : Enabled
Screen Reader : Supported



These three tissues are all composed of a mineral matrix that is made up of hydroxyapatite, which is a calcium phosphate mineral. The mineral matrix is responsible for the hardness and strength of these tissues. The organic matrix is made up of collagen, which is a protein that provides flexibility and toughness to these tissues.

The chemistry of ivory, bone, and dentine is complex and has been the subject of much research. This book provides a comprehensive overview of

the chemistry of these tissues, including the latest research findings.

The Mineral Matrix

The mineral matrix of ivory, bone, and dentine is made up of hydroxyapatite, which is a calcium phosphate mineral. Hydroxyapatite is a crystal that is composed of calcium, phosphorus, and oxygen atoms. The crystals are arranged in a hexagonal lattice structure.

The mineral matrix is responsible for the hardness and strength of ivory, bone, and dentine. The hardness of these tissues is due to the strong bonds between the calcium and phosphorus atoms in the hydroxyapatite crystals. The strength of these tissues is due to the interlocking of the hydroxyapatite crystals.

The Organic Matrix

The organic matrix of ivory, bone, and dentine is made up of collagen, which is a protein that provides flexibility and toughness to these tissues. Collagen is a fibrous protein that is composed of three polypeptide chains that are twisted together into a triple helix.

The collagen fibers are arranged in a parallel fashion in the mineral matrix. This arrangement gives ivory, bone, and dentine their strength and flexibility. The collagen fibers also provide a scaffold for the mineral matrix to grow on.

The Chemistry of Ivory

Ivory is a calcified tissue that is found in the tusks of elephants and walruses. Ivory is composed of a mineral matrix that is made up of hydroxyapatite, and an organic matrix that is made up of collagen.

The mineral matrix of ivory is responsible for the hardness and strength of this tissue. The organic matrix of ivory provides flexibility and toughness to this tissue.

Ivory is a valuable material that has been used for centuries to make a variety of objects, including jewelry, furniture, and religious artifacts. The demand for ivory has led to the poaching of elephants and walruses, which has threatened these species with extinction.

The Chemistry of Bone

Bone is a calcified tissue that is found in the skeletons of all vertebrates. Bone is composed of a mineral matrix that is made up of hydroxyapatite, and an organic matrix that is made up of collagen.

The mineral matrix of bone is responsible for the hardness and strength of this tissue. The organic matrix of bone provides flexibility and toughness to this tissue.

Bone is a vital tissue that provides support and protection for the body. Bone also stores calcium and phosphorus, which are essential minerals for the body.

The Chemistry of Dentine

Dentine is a calcified tissue that is found in the teeth of all vertebrates. Dentine is composed of a mineral matrix that is made up of hydroxyapatite, and an organic matrix that is made up of collagen.

The mineral matrix of dentine is responsible for the hardness and strength of this tissue. The organic matrix of dentine provides flexibility and

toughness to this tissue.

Dentine is a vital tissue that protects the pulp of the tooth from damage. Dentine also helps to anchor the tooth in the jawbone.

Appendices

This book includes appendices on xylonite, celluloid, amber, and copal. These appendices provide a brief overview of the chemistry of these materials.

* Xylonite is a synthetic material that is made from cellulose nitrate. Xylonite is used to make a variety of products, including billiard balls, combs, and toys. * Celluloid is a synthetic material that is made from cellulose nitrate and camphor. Celluloid is used to make a variety of products, including film, toys, and jewelry. * Amber is a natural material that is formed from the resin of trees. Amber is used to make a variety of jewelry and ornaments. * Copal is a natural material that is formed from the resin of trees. Copal is used to make a variety of varnishes and lacquers.

This book provides a comprehensive overview of the chemistry of ivory, bone, and dentine. The book includes appendices on xylonite, celluloid, amber, and copal. This book is a valuable resource for anyone who is interested in the chemistry of these materials.



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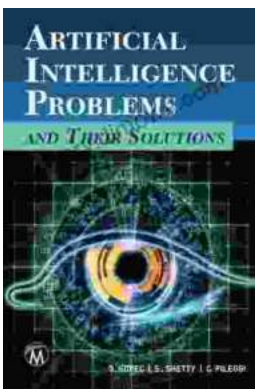
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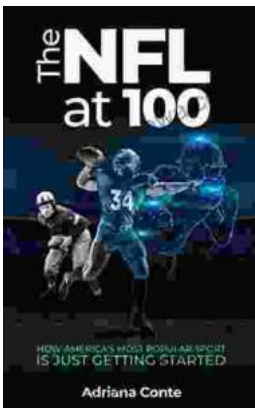
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