

Pulping Processes

Introductory Survey - Mechanical Pulping (Stone Grinding, Refiner Mechanical Pulping)
Semichemical Pulping (The Neutral Sulfite Semichemical Process [NSSC], The Cold Soda Process, Other Semichemical Processes and High-Yield Chemical Pulping) - Alkaline Chemical Pulping (General Aspects, Process Conditions and Variables, The Recovery of Pulping Chemicals, Properties of Alkaline Pulps, Additives in Alkaline Pulping, Nonsulfur Alkaline Pulping) - Sulfite Chemical Pulping (The Sulfite Systems, Sulfite Processes, Influencing Factors in Sulfite Pulping, Properties of Sulfite Pulps) - Unconventional Pulping - Bleaching of Pulps (Bleaching Principles and Chemicals, Bleaching of Mechanical Pulps, Bleaching of Chemical Pulps)

Derivatives of Cellulose

The Various Kinds of Cellulose Derivatives - Cellulosates and Alkali-Celluloses - Cellulose Esters (Fundamentals of Esterification, Cellulose Nitrate, Esters with Other Inorganic Acids, Cellulose Xanthate, Cellulose Acetate, Esters with Other Organic Acids) - Cellulose Ethers (Fundamentals of Etherification, Solution Properties and Application, Alkyl-cellulose, Carboxymethylcellulose, Hydroxyalkylcellulose, Other Cellulose Ethers) - Graft Copolymers of Cellulose

Utilization of Wood and Wood Components for Chemicals and Energy

Introductory Remarks - Thermal Degradation (Combustion, Carbonization [Pyrolysis], Gasification, Liquefaction) - Wood Saccharification - Chemical Products from Cellulose Utilization of Polyoses - Utilization of Technical Lignins (Polymeric Products, Low-Molecular-Weight Chemicals) - Utilization of Extractives
Subject Index - Species Index (Wood, Plants)

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www.forestrybooks.com

All german titles can be seen at:

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Dietrich Fengel - Gerd Wegener

Wood

Chemistry - Ultrastructure - Reactions

Reprint (Edition of 1989). 17 cm x 24 cm. XII, 613 pages. 351 illustrations. Paperback. ISBN 3935638-39-6

The paperback edition is identical to the hard-cover edition published in 1984.

Wood is an ancient raw material, but in many respects it is also very modern. As the world supply of raw materials continues to dwindle, interest in renewable natural resources has increased remarkably, including the utilization of wood and its chemical components. This book aims to give a detailed state-of-the-art survey of the chemistry and ultrastructure of wood, covering such topics as the fundamentals of wood and bark, special reactions under various environmental conditions as well as the principles of pulping, cellulose derivation, and the conversion of wood into chemicals and energy.

The text is accompanied by numerous graphs and light and electron micrographs, many of them published for the first time. In addition to about 2,800 references there is an index compiling all species treated.

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