

## Book review

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*Wood Chemistry, Fundamentals and Applications*, 2nd edn., by Eero Sjöström, Academic Press, NY, 1993, 250 pages of text and 42 pages of Bibliography and Index (ISBN 0-12-647481-8).

This is a second edition of a small encyclopedic textbook with improved coverage of the subject compared to the first edition, especially with respect to extractives and bleaching. It is written in a fashion that makes for good teaching especially to engineers and applied chemists who are seeking a thorough overview of wood chemistry. It covers the classical aspects of wood chemistry in relation to current industrial usage.

Starting with a chapter on wood morphology and another on carbohydrate chemistry, the reader is introduced to the chemistry of cellulose and wood polysaccharides including notions about biosynthesis. Lignin and extractive chemistry receive a thorough and modern treatment in the next two chapters. However the overall treatment of pulping is disappointing since new developments such as organic solvent pulping, biopulping, and steam explosion are treated in single paragraphs.

The focus of the book is on kraft and sulfite pulping in the context of the various wood components: extractives, polysaccharides, and lignin. Bleaching is the chapter which focuses on environmental problems. Wood-based Chemicals and Pulping By-Products is brief but sends a good energy and resource utilization message to the readers. An excellent bibliography, arranged in chapter order at the end of the book is an important new addition.

The book fails to capture the excitement of the research renaissance in terms of high-tech properties of cellulose and its derivatives. Developments in the molecular biology of biodegradation by cellulases and new in vitro synthesis studies on cellulose using degradation enzymes in organic solvents are missing. The revolutionary new solvents for cellulose which are the basis for a new generation of continuous filament and staple manmade cellulose fibers are completely left out.

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