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Altri autori (Persone)	EkMonica GellerstedtGoran HenrikssonGunnar
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Nota di contenuto	Frontmatter -- Contents -- 1. The Worldwide Wood Resource -- 2. The Trees -- 3. Wood and Fibre Morphology -- 4. Cellulose and Carbohydrate Chemistry -- 5. Hemicelluloses and Pectins -- 6. Lignin -- 7. Wood Extractives -- 8. Cellulose Products and Chemicals from Wood -- 9. Analytical Methods -- 10. Biological Wood Degradation -- 11. Enzymes Degrading Wood Components -- 12. Biotechnology in the Forest Industry -- Backmatter
Sommario/riassunto	This four volume set covers the entire spectrum of pulp and paper chemistry and technology from starting material to processes and products including market demands. This work is essential for all students of wood science and a useful reference for those working in the pulp and paper industry or on the chemistry of renewable resources. Volume 1 provides a survey of the biological and chemical

structure of wood as well as an introduction to the chemical reactions used during pulp production processes. The work presents the different raw materials used for pulp production, the macroscopic and morphological construction of wood and related characterization methods, the chemical structure and arrangement of the wood polymers and extractives, biosynthesis of wood polymers, carbohydrate and lignin analysis, reactions of wood polymers in mechanical and chemical pulping and bleaching processes, biotechnical processes of relevance for the pulp and paper industry, different types of microorganisms and their modes of interaction with wood, the impact of chemical and microbiological processes on the hierarchical structure of wood and pulp.