

1. Record Nr.	UNINA9910456490603321
Titolo	Pulp and paper chemistry and technology . Volume 1 Wood chemistry and wood biotechnology [[electronic resource] /] / edited by Monica Ek, Goran Gellerstedt, Gunnar Henriksson
Pubbl/distr/stampa	Berlin, : De Gruyter, c2009
ISBN	1-5231-1653-6 1-282-45691-1 9786612456916 3-11-021340-0
Descrizione fisica	1 online resource (320 p.)
Collana	Pulp and Paper Chemistry and Technology ; ; Volume 1
Classificazione	VN 5490
Altri autori (Persone)	EkMonica GellerstedtGoran HenrikssonGunnar
Disciplina	676/.2
Soggetti	Wood - Chemistry Wood - Biotechnology Wood-pulp Papermaking - Chemistry Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
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.
