



Adhesives for Wood and Lignocellulosic Materials

R. N. Kumar, A. Pizzi

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DESCRIPTION

The book is a comprehensive treatment of the subject covering a wide range of subjects uniquely available in a single source for the first time. A material science approach has been adopted in dealing with wood adhesion and adhesives. The approach of the authors was to bring out hierarchical cellular and porous characteristics of wood with polymeric cell wall structure, along with the associated non-cell wall extractives, which greatly influence the interaction of wood substrate with polymeric adhesives in a very unique manner not existent in the case of other adherends. Environmental aspects, in particular formaldehyde emission from adhesive bonded wood products, has been included. A significant feature of the book is the inclusion of polymeric matrix materials for wood polymer composites.

ABOUT THE AUTHOR

R. N. Kumar obtained his PhD in Chemical Engineering from the Indian Institute of Science, Bangalore, India in 1966. He became Head of Chemistry at the Indian Plywood Industries Research Institute, Bangalore, India (1966-72) and then Head of Research and Development Division at The Western India Plywoods Ltd., Kerala, India (1972-1992). He then moved to the Universiti Sains Malaysia and taught wood technology, polymer technology and wood chemistry. He has more than 80 publications as well as 14 patents on adhesives, UV curable coatings.

A. Pizzi is Professor Emeritus of Industrial Chemistry at the School of Timber Engineering the University of Lorraine, France for the last 25 years and has previously held the *ad hominem* Chair of Polymer Chemistry at the University of the Witwatersrand, Johannesburg, South Africa. Prof. Pizzi who has been Director of three National Institutes in South Africa and has held long-term positions in the timber and adhesives industry. He holds a doctorate in Physical Chemistry of Organic Polymers (University of Rome, Italy), a PhD in Organic Chemistry (University of the Orange Free State, South Africa) and a D.Sc. in Wood Science (University of Stellenbosch, South Africa). He is the holder of a number of prestigious international science prizes such as, among others, the Schweighofer Innovation Prize and the Descartes Science finalist Prize (twice), the highest given by the European Commission. He has more than 700 publications in international science journals of standing and numerous books and patents. He is a leading specialist in wood adhesives and wood panels.

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