

# Journal of Agricultural and Food Chemistry

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## SYMPOSIUM ON GENERAL WOOD CHEMISTRY

### Introduction

The 11 papers in this section of *J. Agric. Food Chem.* were selected from a Symposium on General Wood Chemistry held Aug 31 to Sept 2, 1976, at the 172nd National Meeting of the American Chemical Society in San Francisco, Calif. They represent a broad spectrum of research in the field, which ranges from molecular biology to the properties of fibers. We hope that this initial group of papers will stimulate the readers' interest in wood chemistry and encourage authors to submit accounts of their research to this Journal.

These papers fall into three broad categories: (1) Degradation of Wood, (2) Extractives of Wood, and (3) Properties of Wood Products. The structures of enzymes catalyzing degradation of lignin analogues are discussed in detail by J. Wood et al. R. L. Crawford describes the microbial degradation of lignin utilizing  $^{14}\text{C}$  labeled substrates. Chemical degradation of wood by nitrobenzene (D. Brink) reveals an interesting hydrolytic mechanism; H. Bolker illustrates some interesting molecular weight changes in lignin by chlorine dioxide treatment.

Wood extractives have attracted the attention of researchers for many years. These substances have been studied for a variety of reasons, including medicinal value, antifungal activity, insect attraction, toxicity, and interference with wood utilization. Authors L. Jurd, G. Manners, I. A. Pearl, and R. W. Hemingway describe the origins and structures of some of these active compounds.

The most important industrial products of wood are pulp, paper, and fiber. An important by-product of paper making is lignin and its derivatives. The properties of these products are examined by a variety of physical and chemical methods. The application of these methods to three different materials are discussed by R. A. Young, M. O. Bagby, and J. W. Collins.

Not included in the formal Symposium papers were many lively discussions among the participants on conversion of wood to substitutes for fossil fuel and petrochemicals. Like other agricultural crops, wood is a harvestable, renewable natural resource. In addition, its waste products (like agricultural wastes) constitute a potential source of energy and useful products. An increasing number of chemists and microbiologists are devoting their efforts to the conversion of wood and wood wastes to other products. We anticipate that the accounts of this research will also appear in the future issues of this Journal.

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