## CONTENTS

## FEATURE

4 Wood Adhesives: Vital for Producing Most Wood Products by Charles R. Frihart

Adhesives are essential for the continued growth in wood products because they allow optimized use of our wood resources. Although many adhesives continue to be used because of their good performance, adhesive formulations need to evolve to meet new product requirements, to deal with changes in regulatory and consumer preferences, and to make wood products as economical as possible.

## REVIEWED ARTICLES

- **Learning through Service: Wood in Design and Engineering** by T. Eric McConnell, William B. Stuart, and Laura A. Grace
- 20 Improvement of Photoprotection of Wood Coatings by Using Inorganic Nanoparticles as Ultraviolet Absorbers by Nicolas Auclair, Bernard Riedl, Vincent Blanchard, and Pierre Blanchet
- **28** Effect of Initial Preservative Treatment on Electrical Conductivity in Douglas-Fir Pole Sections by Jeffrey J. Morrell, Milo Clauson, and Connie S. Love
- 31 Effect of Hemicellulose Extraction on Physical and Mechanical Properties and Mold Susceptibility of Flakeboard by Omid Hosseinaei, Siqun Wang, Timothy G. Rials, Cheng Xing, Adam M. Taylor, and Stephen S. Kelley
- Recycling of Pentachlorophenol-Treated Southern Pine Utility Poles. Part I: Preservative Retention and Mechanical Properties by Cheng Piao, Charles J. Monlezun, Jim J. Wang, and Leslie H. Groom
- 46 [Technical Note] Evaluation of a Heat Treatment Schedule for the Asian Longhorned Beetle, Anoplophora glabripennis (Coleoptera: Cerambycidae) by Scott W. Myers and Sian M. Bailey
- Maritime Pine Stress-Laminated Timber Bridges: Losses of Prestress Forces and Flexural Behavior by L. Jorge, S. Lopes, and H. Cruz
- 56 Bending Properties of Medium-Density Fiberboard and Plywood Obtained by Compression Bending Test by Hiroshi Yoshihara
- **Cost and Productivity of Harvesting High-Value Hybrid Poplar Plantations in Italy** by Raffaele Spinelli, Natascia Magagnotti, Giulio Sperandio, Paolo Cielo, Stefano Verani, and Roberto Zanuttini
- 71 Seasonal Impacts of Bark Loss on Simulated Payloads, Bark Delivery, and Transport Costs for Freshly Harvested Logs by Glen E. Murphy and Stephen J. Pilkerton
- 77 Status of Michigan's Forest Products Industry in the Changing Market Environment by Shivan G.C. and Karen Potter-Witter
- **Drivers and Barriers for Implementing Advanced Manufacturing Technology in China's Furniture Industry: An Exploratory Study** by Na Yu, Liming Shen, and Siegfried Lewark