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## NEW ECOMATERIALS FOR WOOD PRESERVATION

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### **Abstract**

Wood has been used as an engineering material because it is low in cost, renewable and strong and it requires low processing energy. Wood has many excellent properties that result from its exceptional combination of microstructural, ultrastructural and molecular features. The main drawback is its dimensional instability in the presence of moisture, which can affect also the biological stability. Wood is susceptible to degradation in a number of ways, including rot or decay, insect attack, fire and weathering. Each of these forms of degradation can potentially be inhibited by chemical means.

New ecomaterials with biocide activity were synthesized by emulsion copolymerization of acrylic comonomers (ethyl acrylate, butyl acrylate, acrylonitrile, acrylic acid) with lignin derivatives ammonium, aluminium and chromium lignosulfonates, as partial substitutes for acrylic monomers. Having in view the biocide activity both, for acrylic comonomers and lignin derivatives, the obtained copolymers were biologically tested as new wood preservation agents.

*Key words:* acrylic monomers, aluminium, ammonium, chromium lignosulfonates, emulsion copolymerization, wood preservatives.

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