

Dissolution and Acetylation of poplar Wood Using Ionic Liquids

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The interesting in Ionic Liquids with dissolving wood ability might open a new developing trend in wood utilization. We study on the dissolution and acetylation of poplar wood sample with different types of ionic liquids. In the studies, commercial 1-butyl-3-methylimidazole chloride ([C4mim]Cl) and 1-butyl-3-methylimidazole acetate ([C4mim]OAc) were used to dissolve wood in ionic liquids with different ranges of reaction temperature, and also reaction time. The results showed that [C4mim]OAc has stronger solvating power to dissolve wood up to 10wt% of wood being completely soluble compound. Acetylation of wood-IL solution was directly taken out by acetylating reagents at 80oC, for 2 hours. At here we used acetyl chloride and acetic anhydride; both cases gave fully forming of cellulose acetate evident and partially delignification.