عنوان مقاله:
Surfactant-assisted [EMIM]OAc pretreatment of beech wood for efficient enzymatic hydrolysis

محل انتشار:
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خلاصه مقاله:
Bioethanol is a promising green energy alternative that can utilize lignocellulosic feedstock from plant materials. However, the rigid and recalcitrant structure of lignocelluloses is a major obstacle to their efficient bioconversion. The present study investigated the pretreatment of beech wood with ۱-ethyl-۳-methylimidazolium acetate to improve its enzymatic digestibility. Moreover, the effect of pre-soaking in ۴% Tween ۲۰ solution prior to the ionic liquid pretreatment was assessed. The ionic liquid pretreatment significantly enhanced the substrate enzymatic digestibility by over ۱۲-fold. The use of surfactant successfully intensified the impact of ionic liquid pretreatment on beech wood composition and its hydrolysis yield.

کلمات کلیدی:
Beech wood, [EMIM]OAc, Surfactant, Enzymatic hydrolysis

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