

Ionic Liquid Pretreatment Technology: Challenges and Opportunities

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Ionic Liquid (IL) pretreatment technology is overcoming some of the barriers that have historically prevented industrial implementation of biochemical conversion technologies for lignocellulosic biomass utilization for biofuels and bioproducts. IL pretreatment technology is evolving rapidly due to the development of new ILs, process integration, and task specificity of certain ILs. Despite the enormous potential, there are certain challenges that have to be addressed in order to make IL pretreatment an economically viable technology in the biorefinery context. The critical next step for the biorefinery implementation of IL conversion technology is fundamental study and design of new ILs that are cheap, biocompatible and renewable, and development of cost effective approaches for IL recycling and product recovery. In this presentation, we will discuss what makes IL pretreatment unique, why we must continue to examine IL technology and what are the technical challenges and opportunities for IL based technology for lignocellulosic biomass processing

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