

Development of bio-renewable products for commodity chemicals and acoustic materials



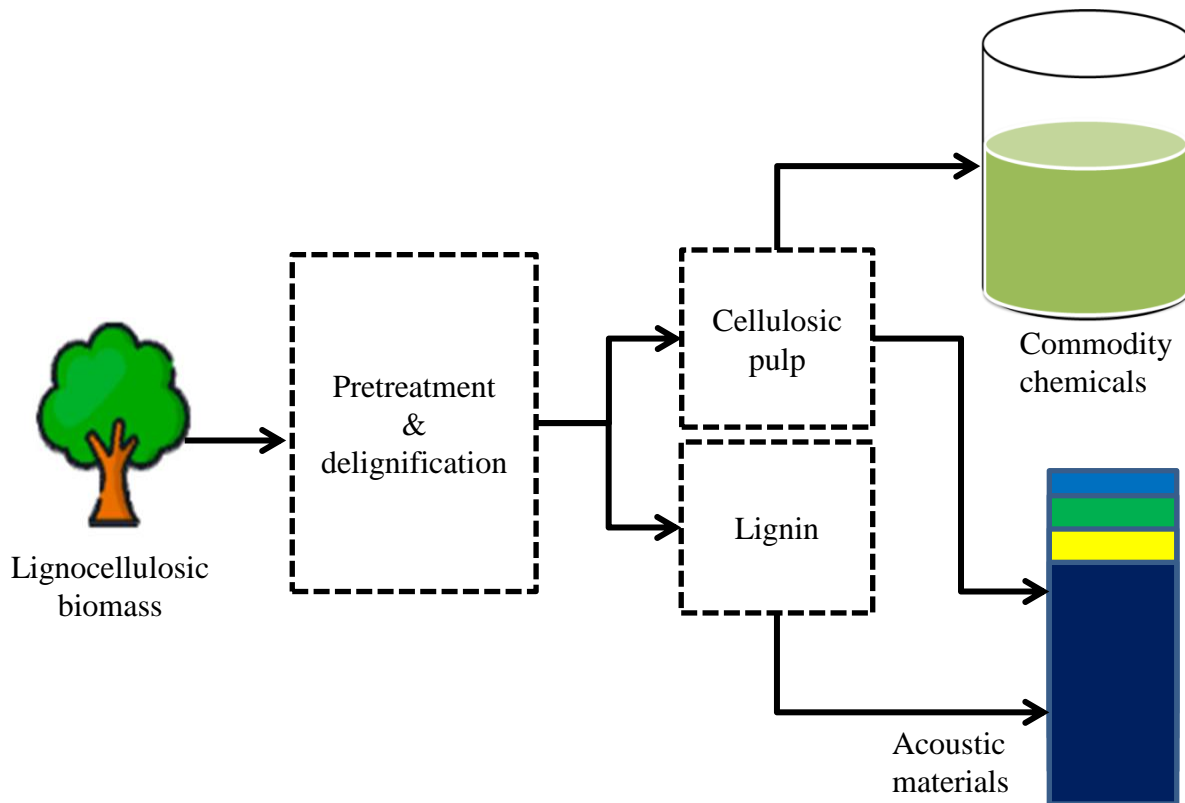
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This project aims to develop an integrated process for utilizing lignocellulosic biomass in the fabrication of acoustic materials and production of commodity chemicals. Natural deep eutectic solvents (NADES) will be used for pretreatment; ultimately separating cellulose (35-50%), hemicellulose (20-35%) and lignin (10-25%) constituents. The cellulosic pulp thus obtained will be primarily utilized in the fabrication of acoustic materials. Lignin derived from this process could be used as a binder/feed material in fabricating acoustic sheets. Further, the leftover pretreatment residues planned to be used as feedstock for the preparation of commodity chemicals to enhance the environmental sustainability and economic viability of the entire process.



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