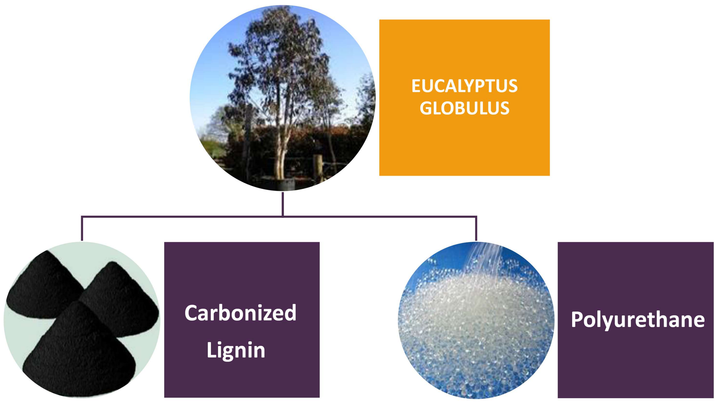
GA745789 funded by

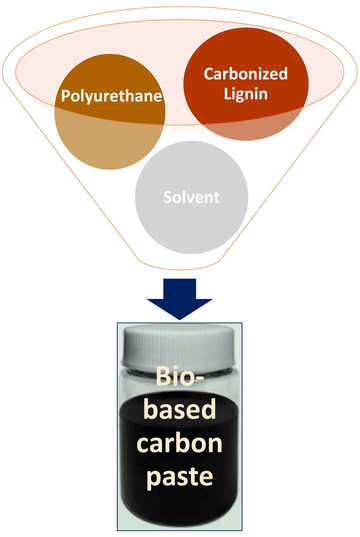
EUCAlyptus LIgnin VAlorisation for Advanced Materials and Carbon Fibres

Biomass is one of the potential alternative resource to replace petroleum-derived materials, as it is carbon neutral and sustainable. Using biomass for the production of bio-base materials such as carbonized lignin, polyurethane would perhaps impact the conductive ink engineering hence the stretchable electronic industry.



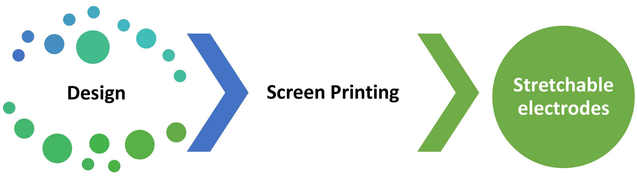
Black liquor (one of the biomass resources), which contains10–50 % lignin as the main organic matter, is one of the major byproducts of pulp and paper manufacturing. EUCALIVA project focus on black liquor as a platform for the production of many renewable materials for industrial applications that can be environmentally friendly with the potential to be used substitute for fuel and commercial materials. Therefore, the aim of this project is to demonstrate potential applications of black liquor and its derived lignin for high-added value products.

Biomaterials production from black liquor from the pulp and paper industry are cheap and can add value to the waste stream. Using green bio-base materials and bio-chemicals will effectively contribute in reducing environmental issues.



Exploited resources can attract more attention by pre-treating or converting them to high quality and reliable biomaterials for stretchable sensing and biosensing purposes, such as carbonized lignin and polyurethane that can be used for conductive ink formulation for printing of the stretchable electronics.

Black liquor and its derived lignin have been used for bio-base material production such as, carbonized lignin, carbon fibers and polyurethane for an efficient biomass conversion. BIOSENSOR is already utilizing these bio-base materials for the production of stretchable screen-printed electrodes for wearable sensor development.



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