



Technology for Scale-up Studies and Demonstration

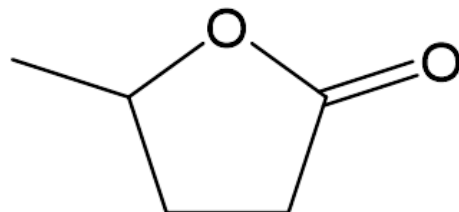
Process for γ -Valerolactone (GVL) production

Background & Existing Challenge

GVL is a biobased lactone with potential application as green solvent, flavoring agent, fuel, additive in fuel and chemical intermediate. It can be produced by the selective hydrogenation of biomass derived levulinic acid (LA). Although abundance of reports can be found for GVL production from LA, two key issues needs to be resolved for commercialization: Catalyst stability (leaching/sintering) and Lack of active/selective catalysts for hydrogenation of aq. LA

Why CSMCRI Process

- Bi-functional solid catalysts
- Ability to work with aq. LA
- Highly stable catalyst (can be used in a fixed-bed reactor, tested upto 300 h)
- Mild process conditions (10-20 bar, 80-100 oC)



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