

# **Biomass Feedstock-based Technology**

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## **ABSTRACT**

The use of non-food crop in which all the available carbon can be utilized to liquid fuels is the way forward to develop sustainable energy technologies. The “Thermochemical” pathway to process abundant cellulosic biomass affords an opportunity to develop atom economical processes. Pyrolysis is one option being pursued. This two-step approach requires further upgrading to transportation fuels. Another option is thermal depolymerization that produces one-carbon product that can be reengineered to a variety of transportation biofuels such as ethanol, butanol, gasoline, diesel and jet fuel. Approaches to achieve the next-generation synthesis of these desirable biofuels will be discussed.