

Download Process Design Strategies For Biomass Conversion Systems

This review describes the recent results in hydrothermal liquefaction (HTL) of biomass in continuous-flow processing systems. Although much has been published about batch reactor tests of biomass HTL, there is only limited information yet available on continuous-flow tests, which can provide a more reasonable basis for process design and scale-up for commercialization. The composition of hot reducing gases differs in relation to the share of H₂ and CO in the gas mix. However, the total share of (H₂ +CO) should be in the range of 90% of the gas mix volume. High hydrogen content of hot reducing gases would be beneficial for the process. In Table 2, the composition and heating values of HRGs, evaluated as possible reducing agents in the blast furnace, are ... A biofuel is a fuel that is produced through contemporary biological processes, such as agriculture and anaerobic digestion, rather than a fuel produced by geological processes such as those involved in the formation of fossil fuels, such as coal and petroleum, from prehistoric biological matter. If the source biomatter can regrow quickly, the resulting fuel is said to be a form of renewable ... This funding opportunity announcement (FOA) supports federal investment in innovative, early-stage advanced manufacturing applied research and development (R&D) projects that focus on specific high-impact manufacturing technology, materials, and process challenges.