

Chemical & Environmental Engineering 2009 - 2010 Colloquium Series



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Thermochemical Production of Transportation Fuels from Biomass

Over the past decade, interest in production of biomass-based power and transportation fuels has skyrocketed, driven by concerns over fossil fuel-based CO₂ emissions, instability in the cost of petroleum and a desire to increase domestic production of gasoline and diesel. In the United States, most of the focus on biofuels has centered on corn-based ethanol and, to a lesser extent, production of biodiesel from natural oils. This has generated debate over “food versus fuel,” and whether it is wise to use agricultural crops and cropland for production of automotive fuels. Biological processing (fermentation) uses only part of the plant. Much of the material -- stalks, leaves, husks, etc. -- is not suitable for biological fermentation and is wasted. Thermochemical production of biofuels, which involves gasification of biomass and subsequent catalytic processing of the product gas to transportation fuels, uses the entire plant and is relatively insensitive to feedstock quality. This presentation introduces biomass gasification technology, reviews the state of the art in power and fuel production, describes technical challenges to commercialization of the technology and presents research being performed at the University of Utah.

Friday October 23, 2009

9:30 - 10:30 AM

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Refreshments at 9:15 AM