Catalytic Hydrogenation Reactions of Lignin and Lignin Surrogates

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Developing chemical methods for the direct catalytic conversion of the biomass lignin to high value aromatic chemicals (HVAs) and biofuels has become a focus for providing an alternate method of obtaining materials normally derived solely from petroleum. Reactions of both small molecule lignin surrogates as well as organosolv oak lignin were studied under a variety of high pressure and temperature conditions using a Parr reactor. APCI Mass Spectroscopy characterization suggests that catalytic degradation of lignin and its surrogates can be achieved while maintaining aromaticity in the product.