

Base catalyzed depolymerization of kenaf organosolv lignin under ethanol-water co-solvent

임성래<sup>1</sup>, 윤희선<sup>1</sup>, 김가희<sup>2</sup>, 엄병환<sup>1,2,†</sup>

<sup>1</sup>한경대학교; <sup>2</sup>한경대학교 산학협력단

(bhum11@hknu.ac.kr<sup>†</sup>)

Lignin is one of a major constituent of a biomass along with cellulose and hemicellulose. Lignin is composed of phenolic monomers, which is a unique property that is not easily found in other components in biomass. Due to such advantage, lignin derived monomers are considered as a potential substitute for high value chemicals which are currently acquired from fossil fuels. However, a robust intermolecular linkage between lignin monomers leads to a fact that proper depolymerization method should be applied. In this work, base catalyzed depolymerization was introduced to break the linkages of lignin units. The reaction was proceeded by differing temperature (280–320 °C; NaOH 5 wt.%) and base loading (300 °C; NaOH 0–7 wt.%).