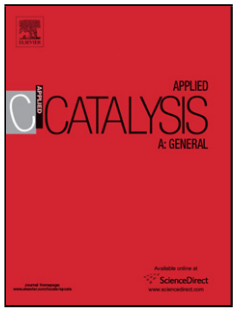

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Liquid phase *in situ* hydrodeoxygenation of biomass-derived phenolic compounds to hydrocarbons over bifunctional catalysts

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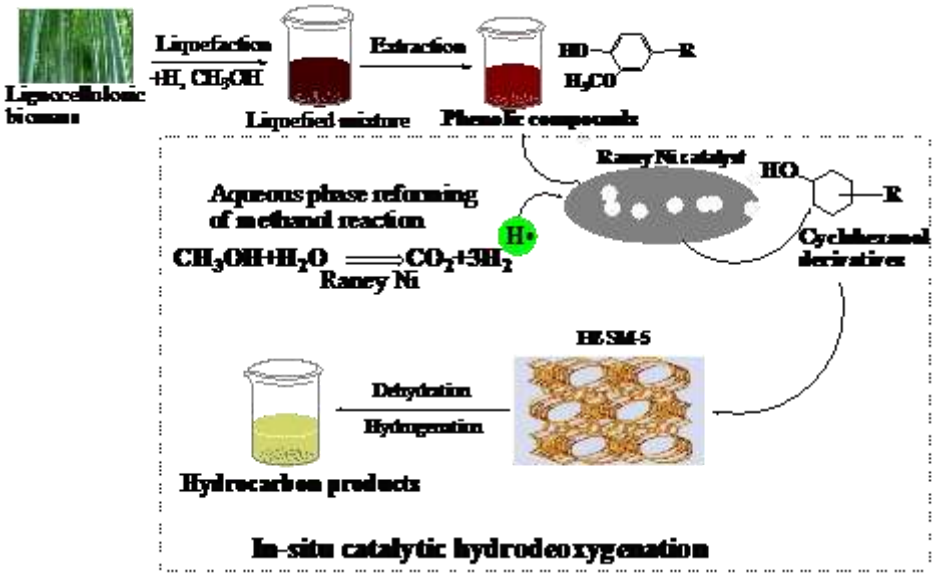
GRAPHICAL ABSTRACT



HIGHLIGHTS:

◆The biomass-derived phenolic compounds were converted into cyclohexanes biofuel over bifunctional catalysts via *in situ* hydrodeoxygenation.

◆*In situ* hydrodeoxygenation of phenols using methanol as hydrogen-donor was superior to common hydrodeoxygenation.

◆The reaction pathway for *in situ* hydrodeoxygenation of phenolic monomers has been described.

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