

*Supplementary information*

## Kraft Lignin Ethanolysis over Zeolites with Different Acidity and Pore Structures for Aromatics Production

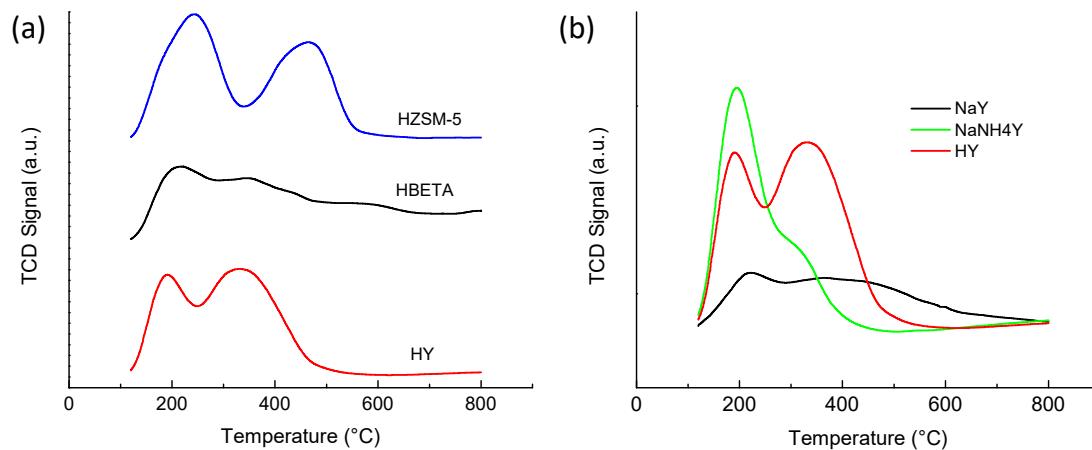
Nathan Cody Baxter<sup>1</sup>, Yuxin Wang<sup>1</sup>, Huijiang Huang<sup>2</sup>, Yixin Liao<sup>1</sup>, Heath Barnett<sup>3</sup>, Yujun Zhao<sup>2,\*</sup> and Shengnian Wang<sup>1,\*</sup>

<sup>1</sup> Chemical Engineering, Institute for Micromanufacturing, Louisiana Tech University, 911 Hergot Avenue, Ruston, LA, 71272, USA; nbaxt000@hotmail.com (N.C. B.); w-yuxin@hotmail.com (Y.W.); yli029@latech.edu (Y.L.)

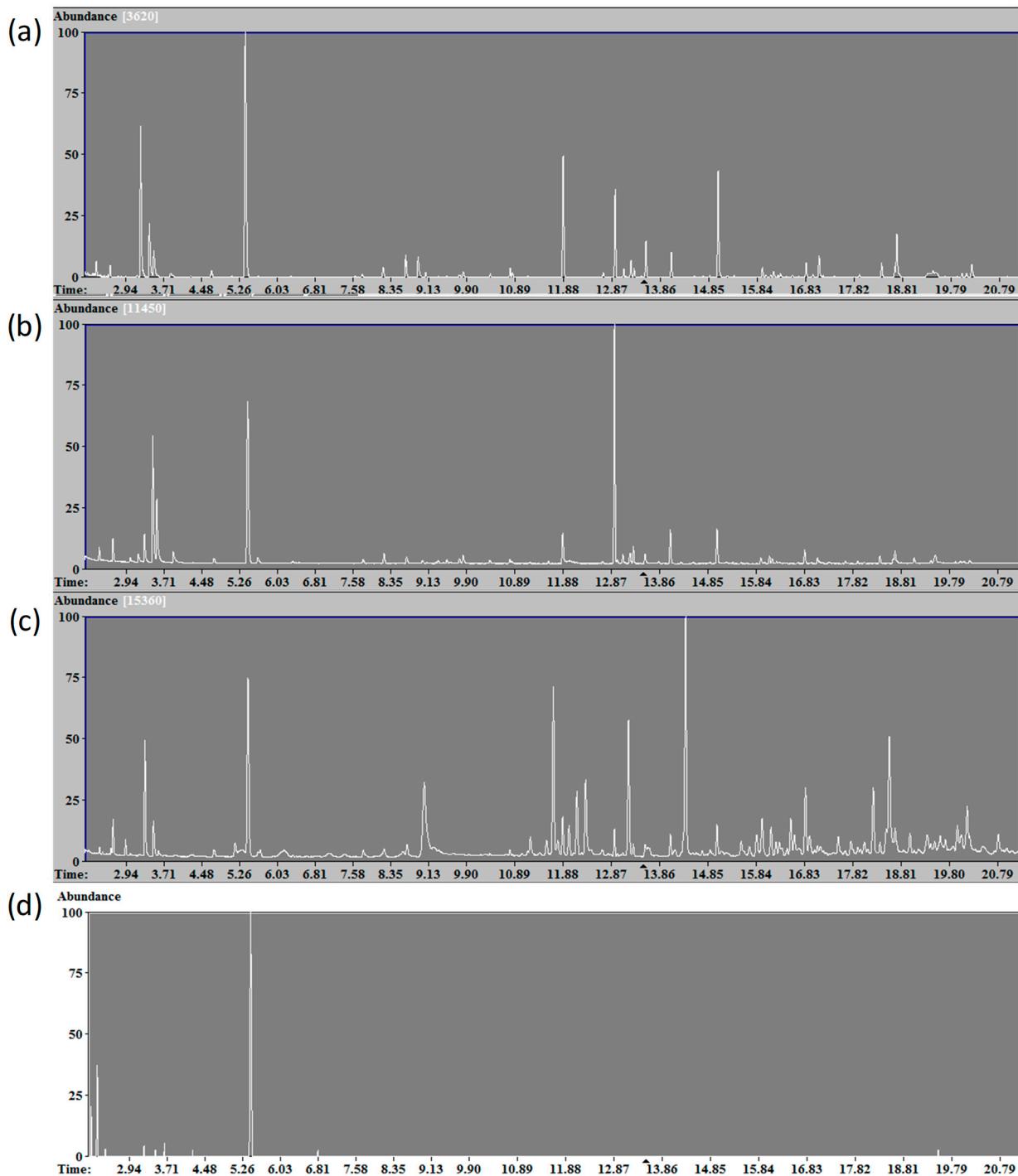
<sup>2</sup> School of Chemical Engineering and Technology, Tianjin University, Tianjin 300072, China; wang.646@hotmail.com

<sup>3</sup> Chemistry, School of Science, University of Louisiana at Monroe, 700 University Ave, Monroe, LA, 71209, LA, USA; hbarnett@ulm.edu

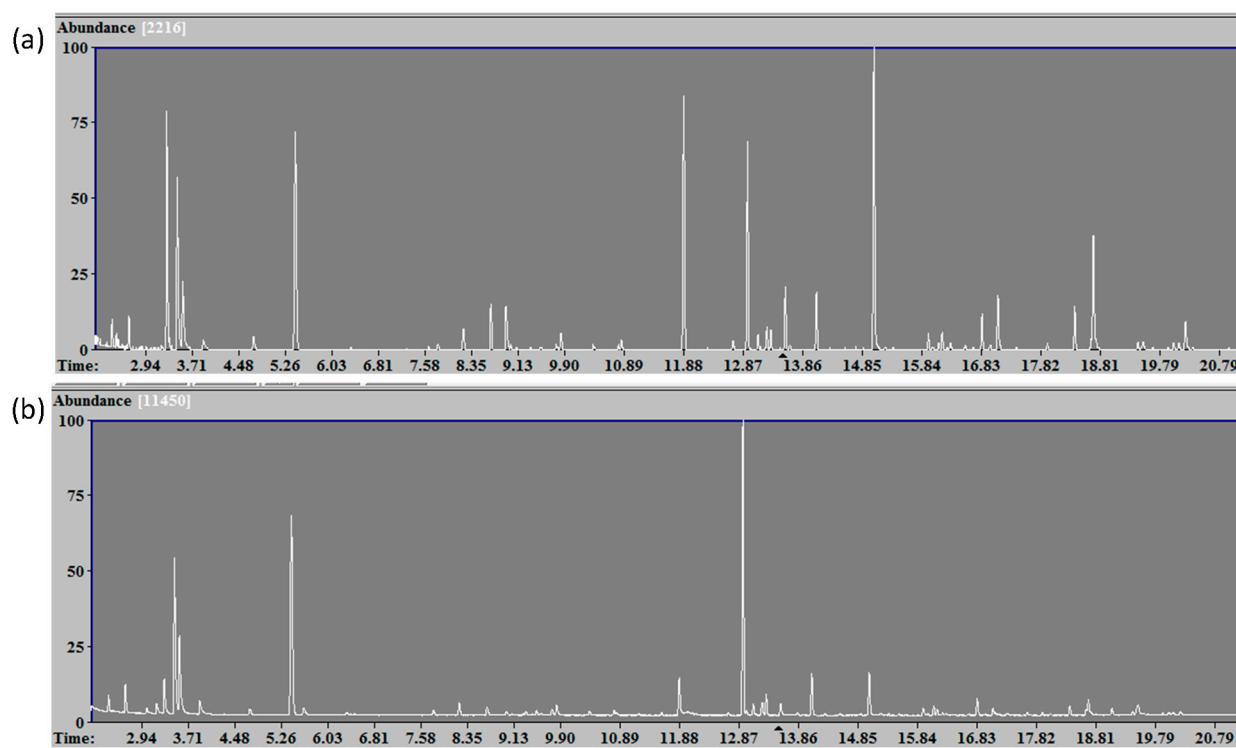
\* Correspondence: yujunzhao@tju.edu.cn (Y.Z.); swang@latech.edu (S.W.); Tel.: 86-022-87401818 (Y.Z.); 1-318-257-5125, (S.W.)



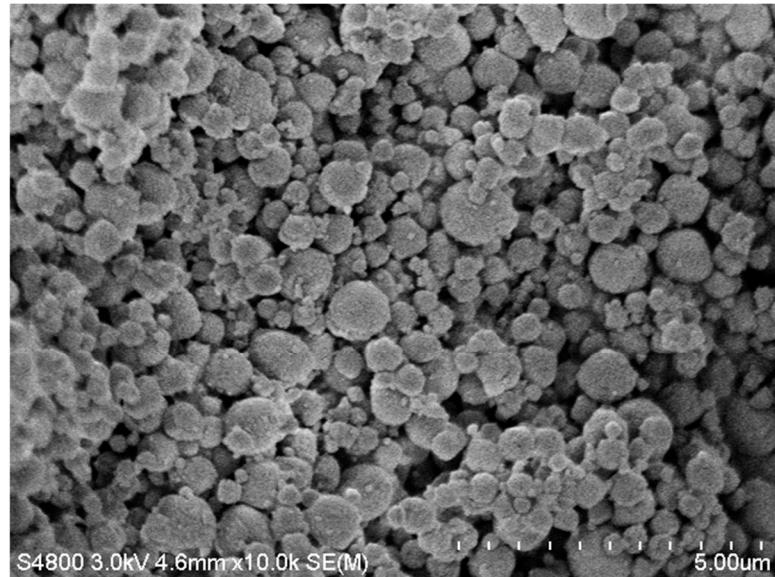
**Figure S1.** NH<sub>3</sub>-TPD profiles of various types of zeolites (a) and different ion-exchange degrees of microporous Y zeolites (b).



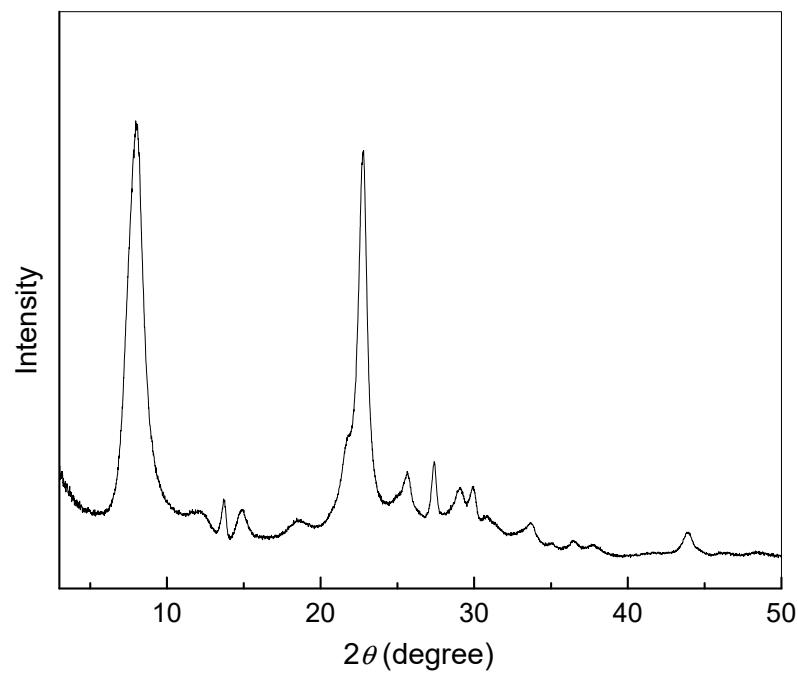
**Figure S2.** GC-MS spectra of lignin depolymerisation in supercritical ethanol with microporous HBeta (a), HZSM-5 (b), HY (c), and a blank test (with only ethanol and HZSM-5, no lignin).



**Figure S3.** GC-MS spectra of lignin depolymerisation in supercritical ethanol with mesoporous FM-HZSM-5 (a) and microporous HZSM-5 zeolites.



(a)



(b)

**Figure S4.** SEM images (a) and XRD spectrum (b) of microporous HBeta zeolites.