

**A water-tolerant heteropolyacid $C_{16}H_3CrPW_{11}O_{39}$ catalyst for the efficient
conversion of monosaccharides into 5-hydroxymethylfurfural**

Hongwei Zheng^a, Zhong Sun^a, Xiaohu Yi^a, Qian Zhao^a, Chunyan Fan^a, Shengtian

Wang^a, Jianxin Li, Xiaohong Wang^{a,*}, Zijiang Jiang^{b,*}

^a Key Lab of Polyoxometalate Science of Ministry of Education, Faculty of Chemistry,

Northeast Normal University, Changchun 130024, P. R. China. Fax:

0086-431-85099759; Tel.: 0086-431-88930042; E-mail address:

wangxh665@nenu.edu.cn

^b Changchun Institute of Applied Chemistry, Chinese Academy of Sciences,

Changchun 130022, P. R. China. Tel.: 0086-431- 85262452; E-mail

address: jzj2002@sohu.com

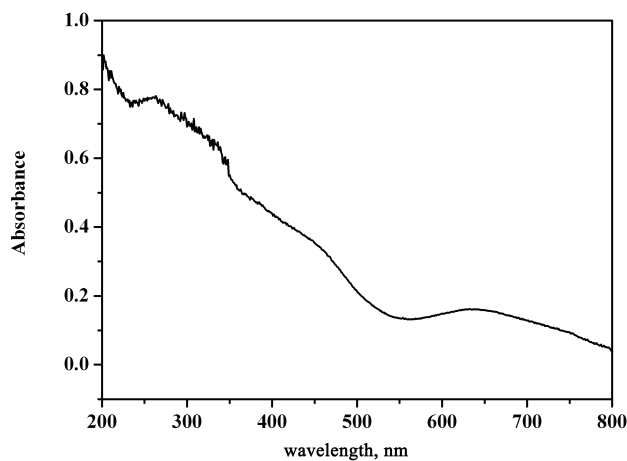


Fig. S1 The UV-vis pattern of $C_{16}H_3CrPW_{11}$

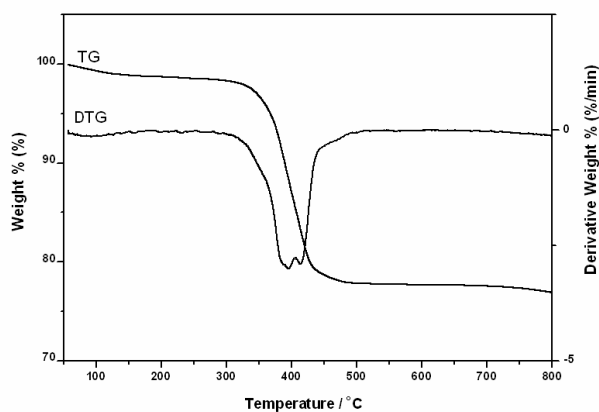


Fig. S2. TG-DTG analysis of C₁₆H₃PW₁₁Cr

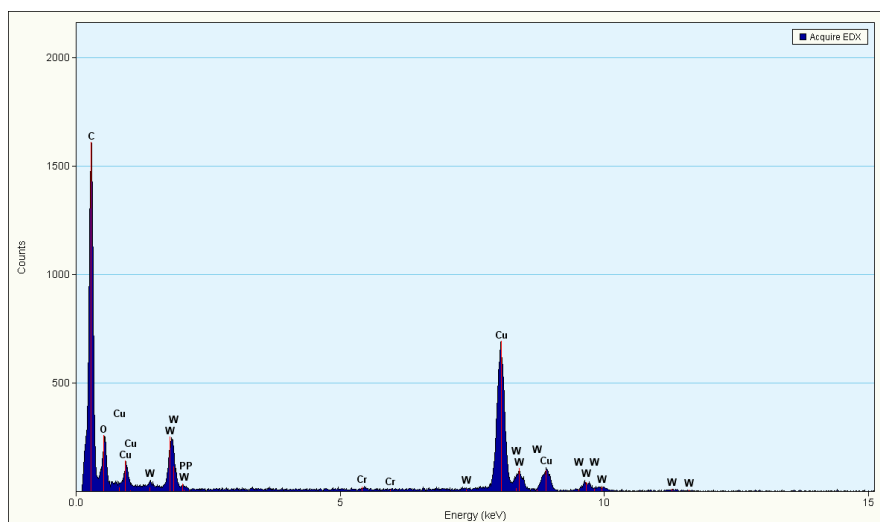


Fig. S3. EDAX spectra of C₁₆H₃PW₁₁Cr

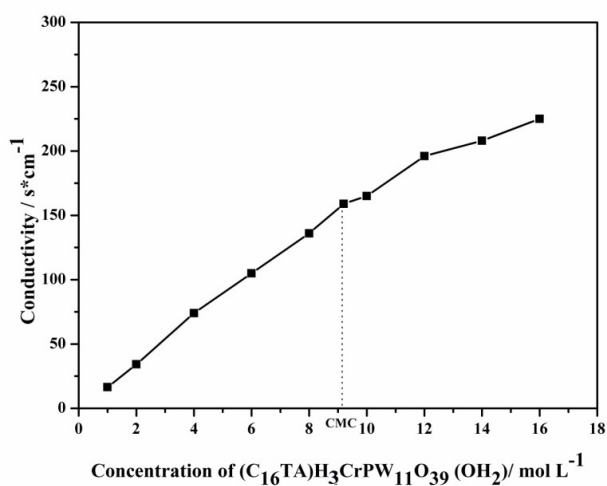


Fig. S4. The conductivity of C₁₆H₃PW₁₁Cr at the room temperature.

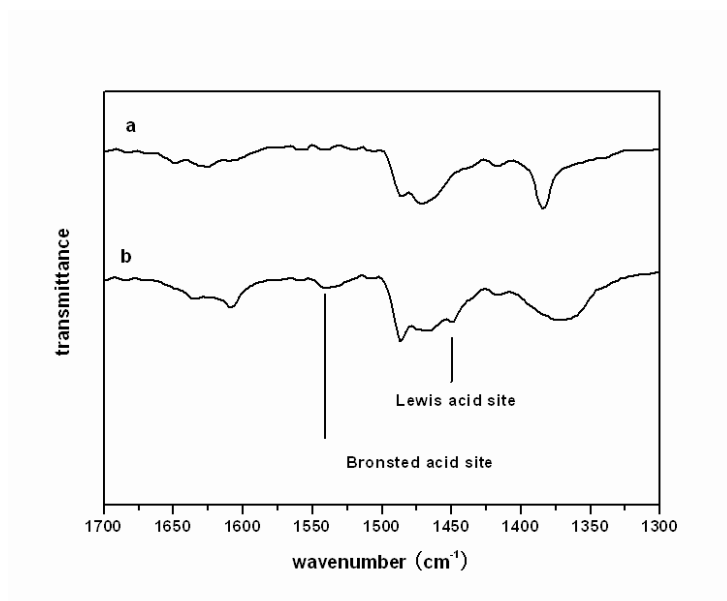


Fig. S5. C₁₆H₃CrPW₁₁O₃₉ (a) and adsorbed pyridine of C₁₆H₃CrPW₁₁O₃₉ (OH₂) (b)

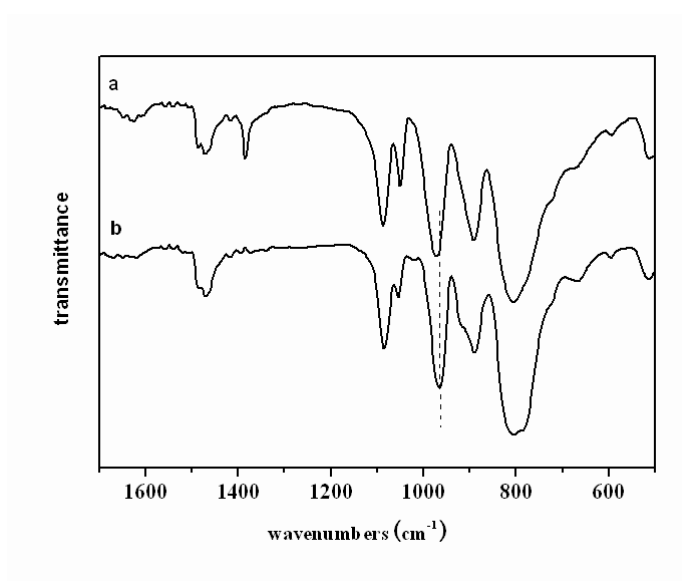


Fig. S6 The IR spectra of C₁₆H₃CrPW₁₁ (a) and C₁₆H₃CrPW₁₁ adsorption of fructose (b).