
Supporting Information

Enhanced enzymatic hydrolysis of corncob by synthesized enzyme-mimetic magnetic solid acid pretreatment in an aqueous phase

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Table S1. Ion concentrations of Fe^{3+} and Cl^- in pretreatment hydrolysate during the catalyst cycles

| Used cycle | 1 st | 2 nd | 3 rd | 4 th | 5 th | C350 | No cat |
|-------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|--------|
| $\text{Fe}^{3+}(\text{mg/L})$ | 440.5 | 21.69 | 23.52 | 18.36 | 17.17 | 0 | 0 |
| $\text{Cl}^-(\text{mg/L})$ | 1077.6 | 121.35 | 75.09 | 92.98 | 84.46 | 0 | 0 |

C350: Pretreatment of corncob by C350 as the catalyst;

No cat: Pretreatment of corncob without any catalyst (i.e., liquid hot water).

Pretreatment conditions: 150 °C, 2 h, 2 g of C350-Cl, 2 g of corncob and 50 mL of deionized water.

Table S2. Total acid amount in different usage cycles

| Usage count | 1 st | 2 nd | 5 th |
|---|-----------------|-----------------|-----------------|
| Total acid amount(mmol H ⁺ g ⁻¹) | 0.159 | 0.156 | 0.153 |

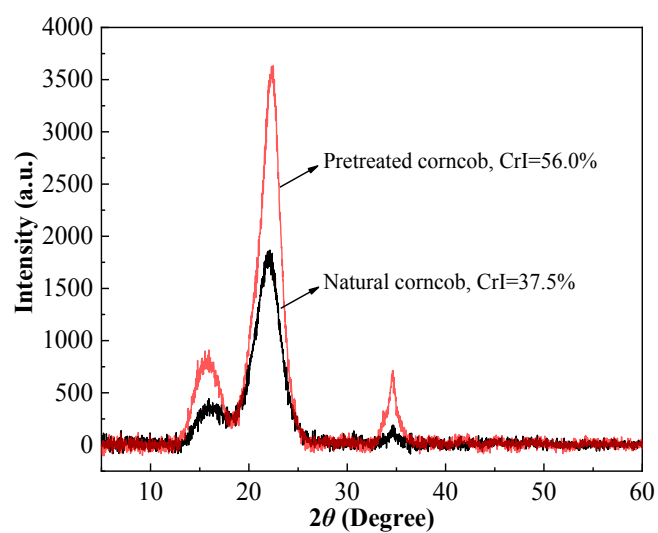


Figure S1. XRD patterns of the natural and pretreated corn cob.

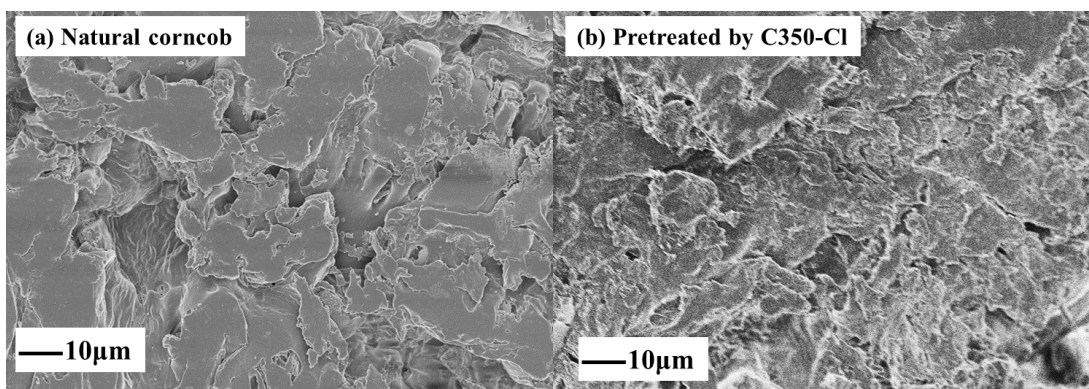


Figure S2. SEM images of natural and pretreated corncob: (a) Natural corncob, (b)
Corncob of pretreated by C350-Cl.