Supporting information

Hydrogenation of 5-hydroxymethylfurfural in supercritical carbon dioxide/water: A tunable approach to dimethylfuran selectivity

Figure 1s: Phase observation of DMF at various CO_2 pressures. at 80 °C and the fixed hydrogen pressure of 1 MPa: (a) initial, (b) 7 MPa, (c) 10 MPa and (d) 12 MPa and (e) 16 MPa

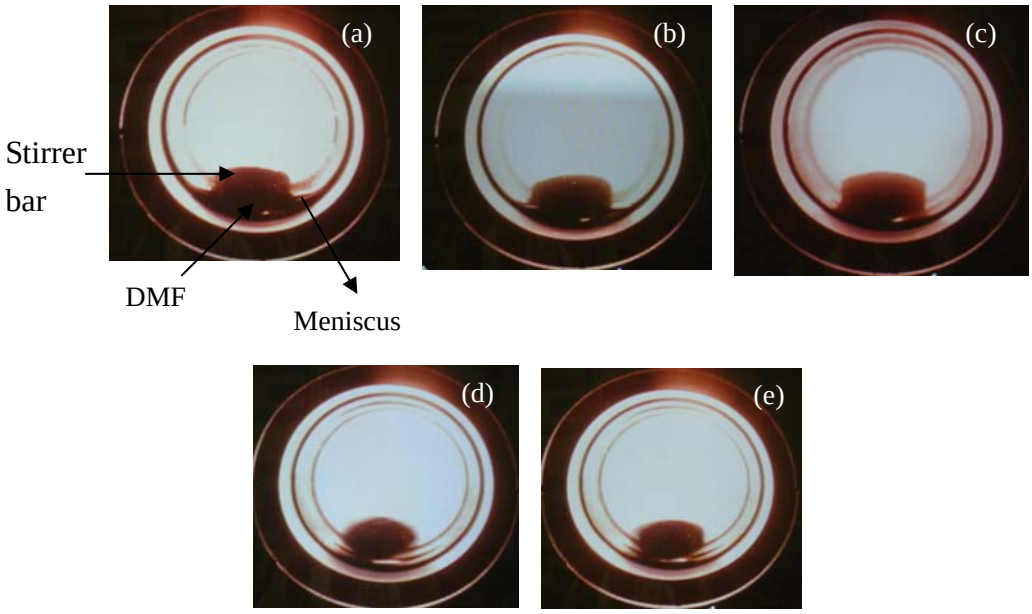

Figure 2s: Phase observation of aqueous solution of HMF in $scCO_2$ at 80 °C, P_{CO2}= 10 MPa and the fixed hydrogen pressure of 1 MPa.

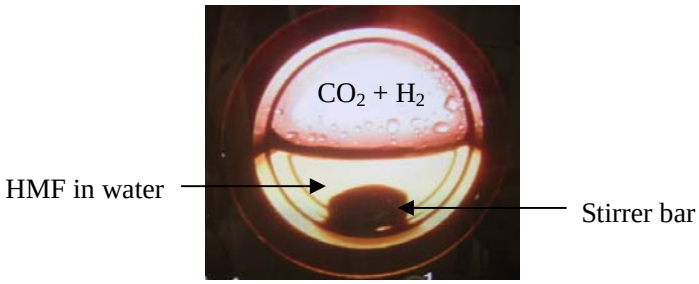

Figure 3s: TEM image of the catalyst (a) before reaction and (b) after 4th recycling

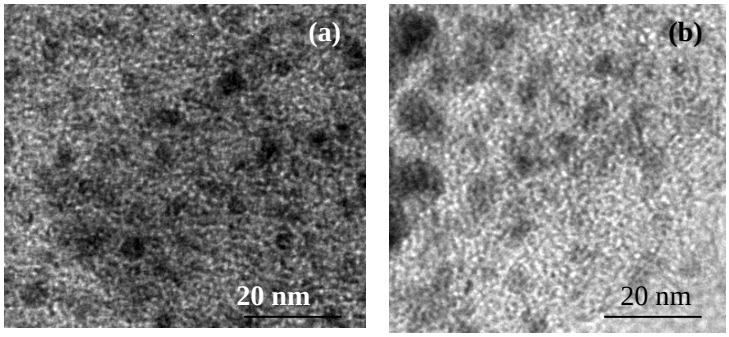

Table 1s: GCMS analysis of the reaction product obtained after 5 min. of reaction using 0.1 MPa of H_2

Time (min.)	P_{H2} (MPa)	Conv. (%)	**1** (%)	**2** (%)	**3** (%)	**4**(%)
5	0.1	2.1	91.2	6.1	2.2	0.5

Reaction conditions: Catalyst: substrate= 1: 5; temperature= 80 °C, P_{CO2}= 10 MPa, P_{H2}= 0.1 MPa