

Supporting Information for

**Efficient and continuous furfural hydrogenation to furfural
alcohol in a micropacked bed reactor**

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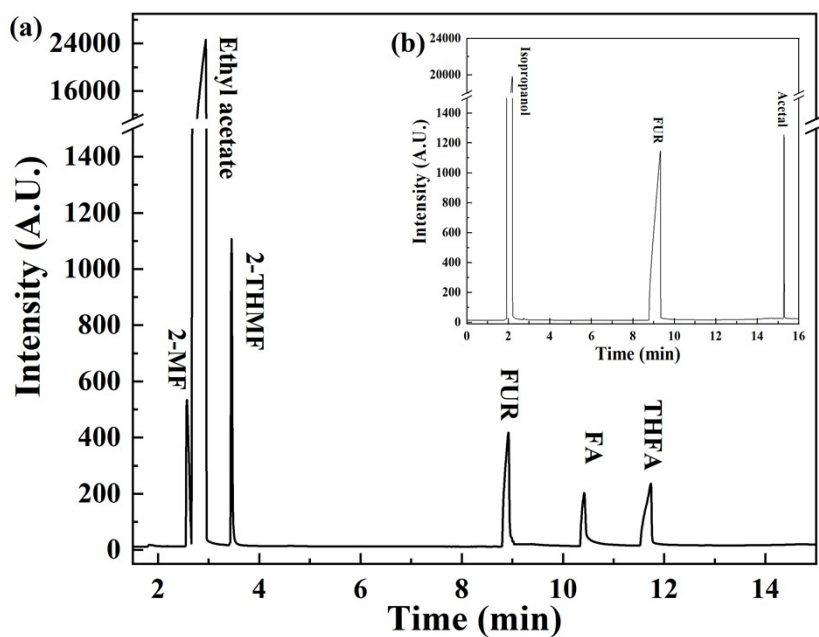


Fig. S1. (a) GC chromatogram of FUR hydrogenation product, (b) GC chromatogram of 1.0 mol/L FUR in isopropanol.

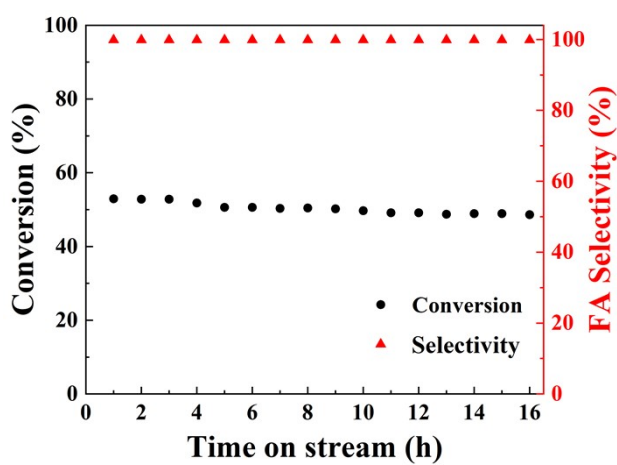


Fig. S2. Stability test of the Cu/SiO₂ catalyst in micropacked bed reactor. Reaction conditions: 0.2 mol/L FUR in ethyl acetate, 80 °C, 0.1 MPa, 0.2 mL/min, 20 sccm.

Table S1. Effect of operating conditions on FA, THFA, and 2-THMF yield in μ PBR with Ni/SiO₂

T (°C)	P (MPa)	Q (mL/min)	Conversion (%)	Yield of FA (%)	Yield of THFA (%)	Yield of 2-THMF (%)
40	0.6	0.2	65.5	13.3	6.2	0
60	0.3	0.2	93	21	67.4	0
60	0.6	0.2	100	0	75.3	2
60	3.1	0.2	100	0	64.2	15.4
60	0.3	0.1	100	3	77.9	4.1
60	0.6	0.1	100	0	73.1	4.6
100	3.1	0.2	100	0	50.8	23.3
140	3.1	0.2	100	0	45.3	30.6
180	3.1	0.2	100	0	21.4	64.1
180	3.1	0.1	100	0	18.5	67.8

Reaction conditions: 0.2 mol/L FUR in isopropanol, 20 scem.

Table S2. Effect of temperature in μ PBR with Pd/C and Pt/C catalysts

Catalyst	T (°C)	Conversion (%)	Yield of FA (%)	Yield of 2-MF (%)	Yield of THFA (%)	Yield of 2-THMF (%)
Pt/C	60	71	30.1	1.9	6.7	0
	100	87	10.3	15.7	14.5	1.1
	140	100	0	31.2	20.9	10.1
	180	100	0	1.5	23.6	27.5
Pd/C	60	100	0	0	51.8	23.8
	100	100	0	0	45.3	30.6
	140	100	0	0	21.4	64.1
	180	100	0	0	18.5	67.8

Reaction conditions: 0.2 mol/L FUR in isopropanol, 3.1 MPa, 20 scem.

