Selective catalytic transfer hydrogenolysis of glycerol to 2-isopropoxy-propan-1-ol over noble metal ion-exchanged mordenite

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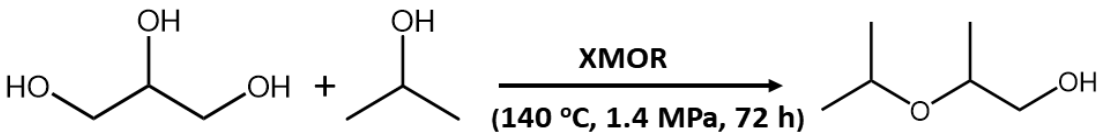

Figure S1. Schematic representation of catalytic transfer hydrogenolysis (CTH) conversion of glycerol to 2-isopropoxy-propan-1-ol in the presence of propan-2-ol over noble metal ion-exchanged mordenite (XMOR, where X denotes noble metals; Ru, Rh, and Pd).

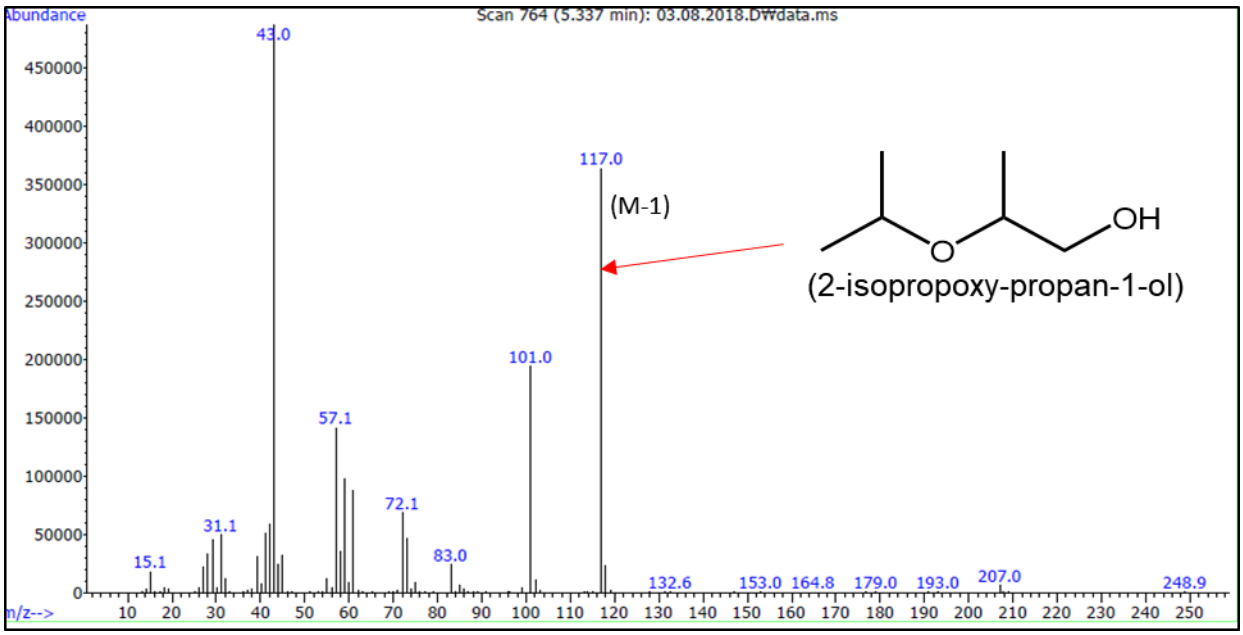

Figure S2. GCMS spectrum of 2-isopropoxy-propan-1-ol (M_W = 118.17) obtained after CTH conversion of glycerol in the presence of propan-2-ol over XMOR (X= Ru, Pd, and Rh). The strong peak present at *m*/*z* 117 (M-1 peak) firmly corroborates the synthesis of 2-isopropoxy-propan-1-ol.

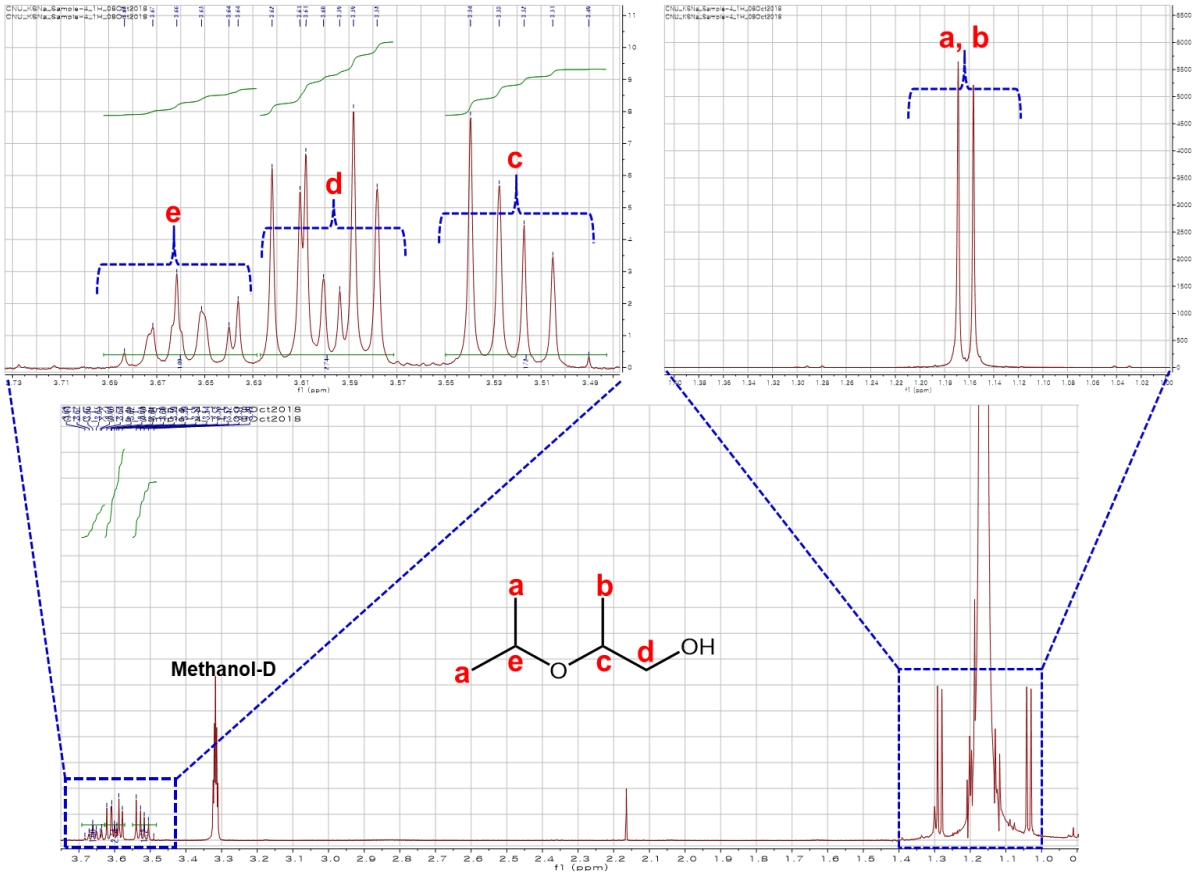

Figure S3. ^{1}H NMR spectra of resultant solution after CTH reaction of glycerol in the presence of propan-2-ol. The spectra were obtained in deuterated methanol. Synthesis of the product (2-isopropoxy-propan-1-ol) is confirmed by the peak pattern and corresponding chemical shifts. The analyzed compound also contains unreacted glycerol and propan-2-ol after the reaction; therefore, the signature peaks of propan-2-ol are merged with the product peaks (peaks **a** and **b**), and the peaks of unreacted glycerol may overlap with peaks **c**, **d**, and **e**. In order to confirm product formation, we also analyzed the ^{1}H NMR spectra of the reactants (glycerol and propan-2-ol in deuterated methanol; Figure S4). The results clearly show differences in the intensity of the proton peaks at the corresponding chemical shifts.

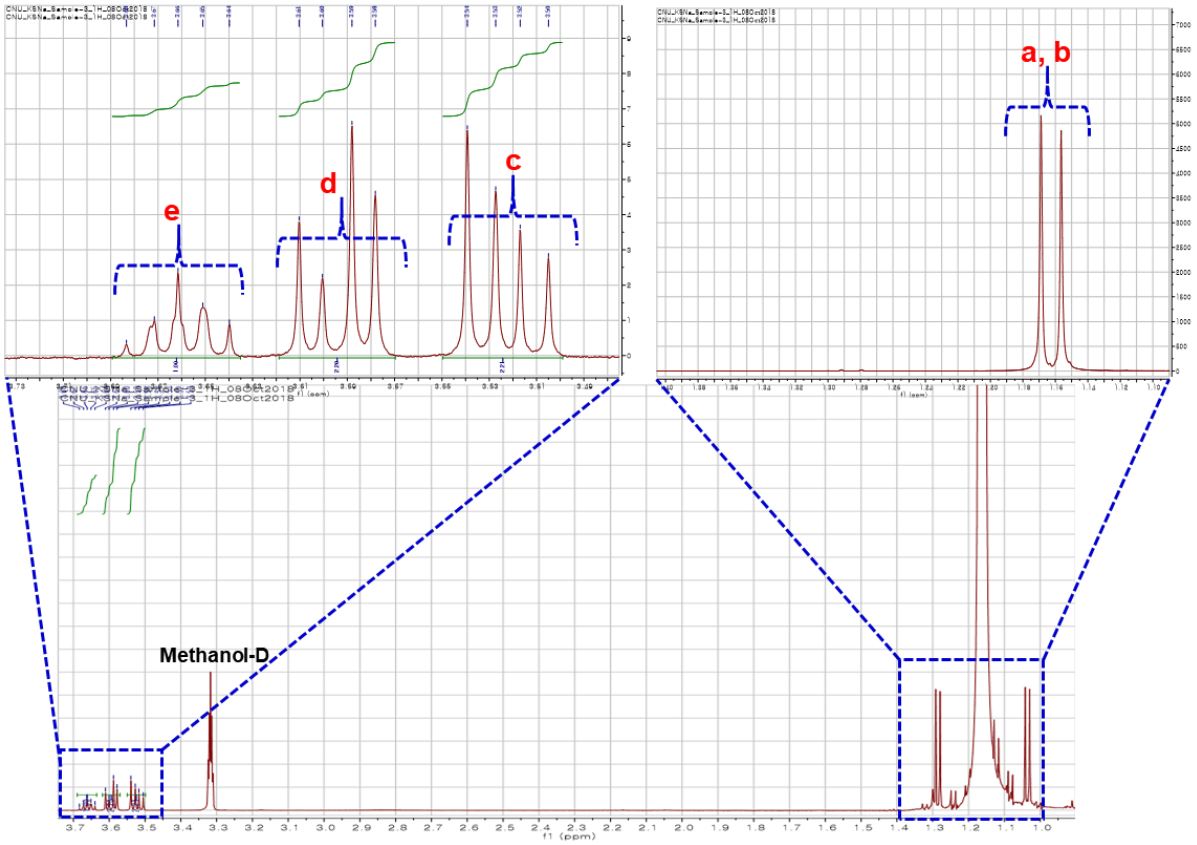

Figure S4. ^{1}H NMR spectra of the starting reaction mixture (glycerol, propan-2-ol). The spectrum was obtained in deuterated methanol. The peaks **a** and **b** represent the signature peaks of propan-2-ol. Whereas, the peaks **c**, **d**, and **e** correspond to the signature peaks of glycerol.

Table S1. Properties of NaMOR(cal), RuMOR(cal), RhMOR(cal) and PdMOR(cal) catalysts.

S. No.	Catalyst type	BET surface area (m^2/g)	Chemical compostion (ICP-OES)	
			Si/Al	Noble metal content (mg/kg)
1	NaMOR(cal)	138.29	6.87	--
2	RuMOR(cal)	358.4	6.82	0.10
3	RhMOR(cal)	36.74	6.75	0.21
4	PdMOR(cal)	20.09	6.53	0.37