

Study on one-step oxidative esterification of glycerol with MOF supported polyoxometalates as catalyst

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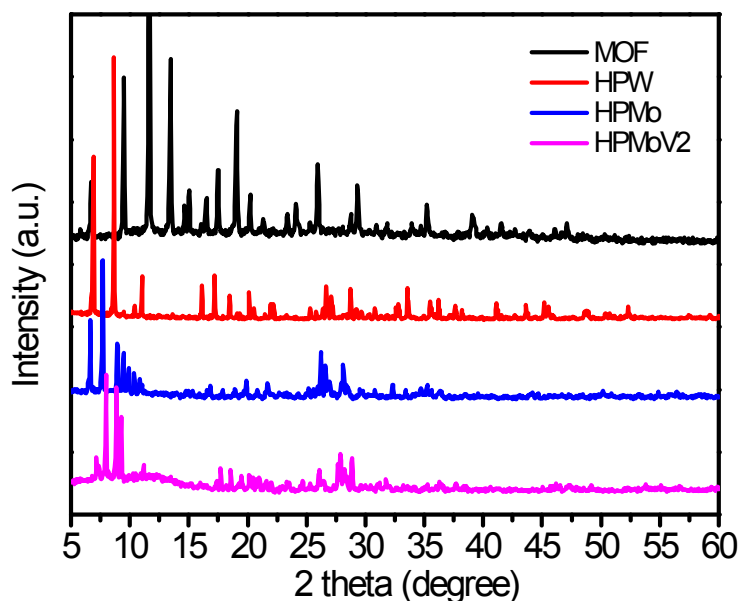
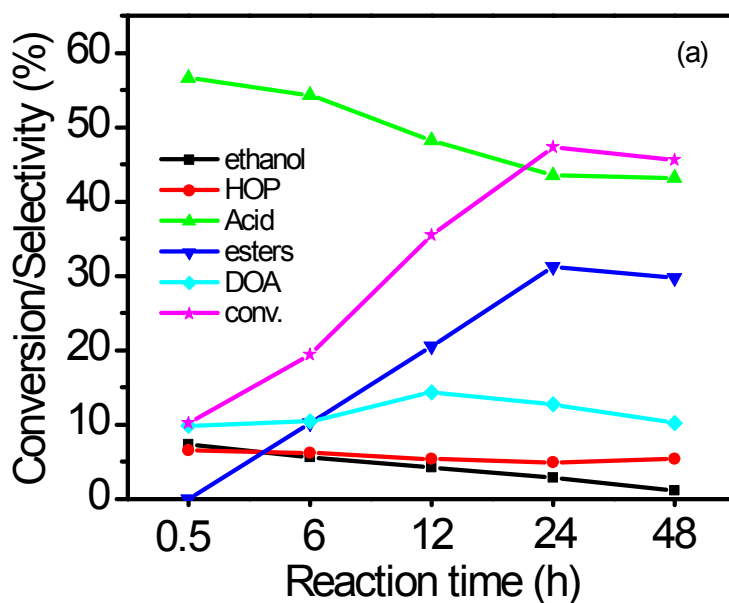
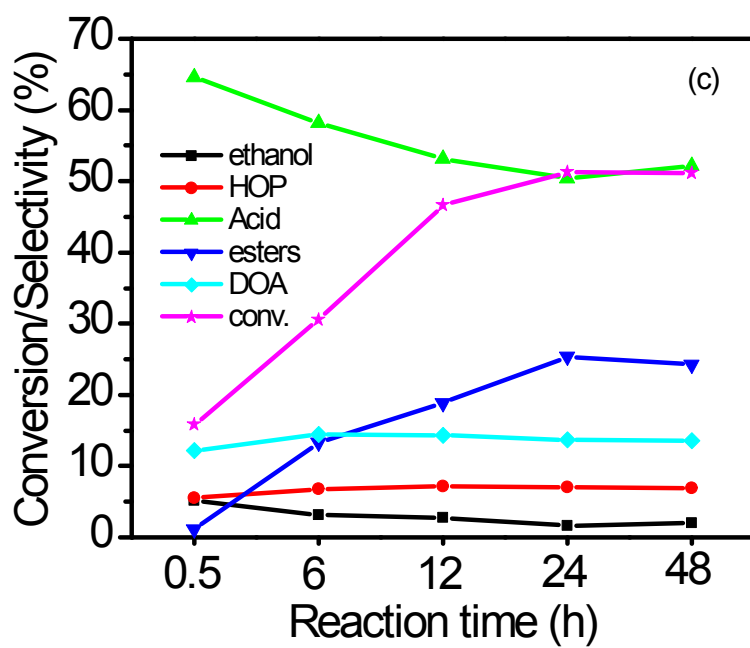
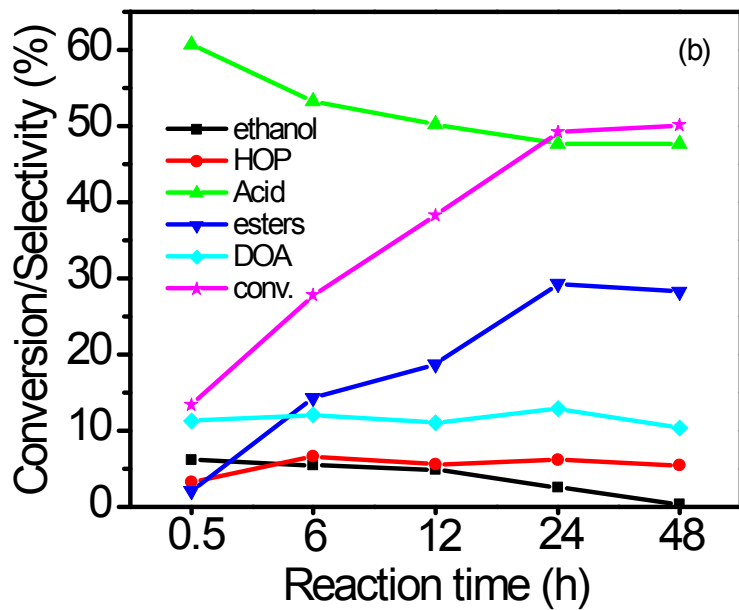


Figure S1 XRD patterns of MOF and POM raw materials





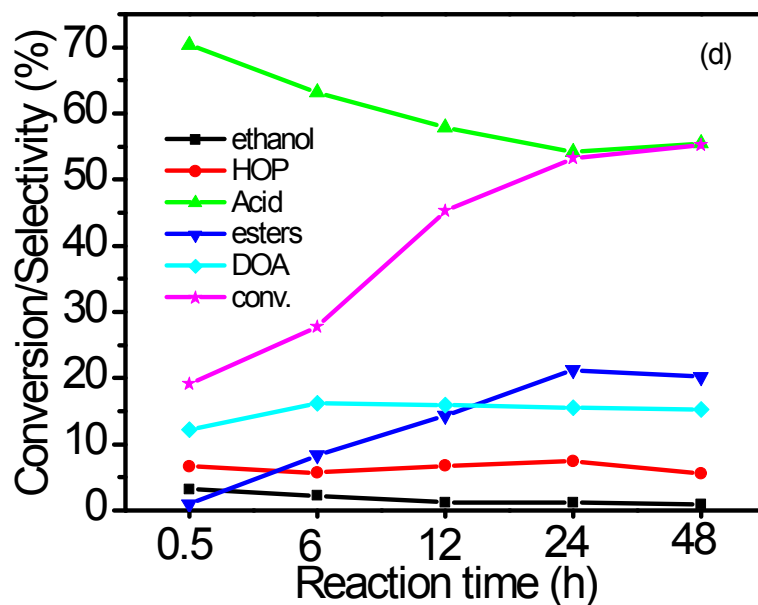
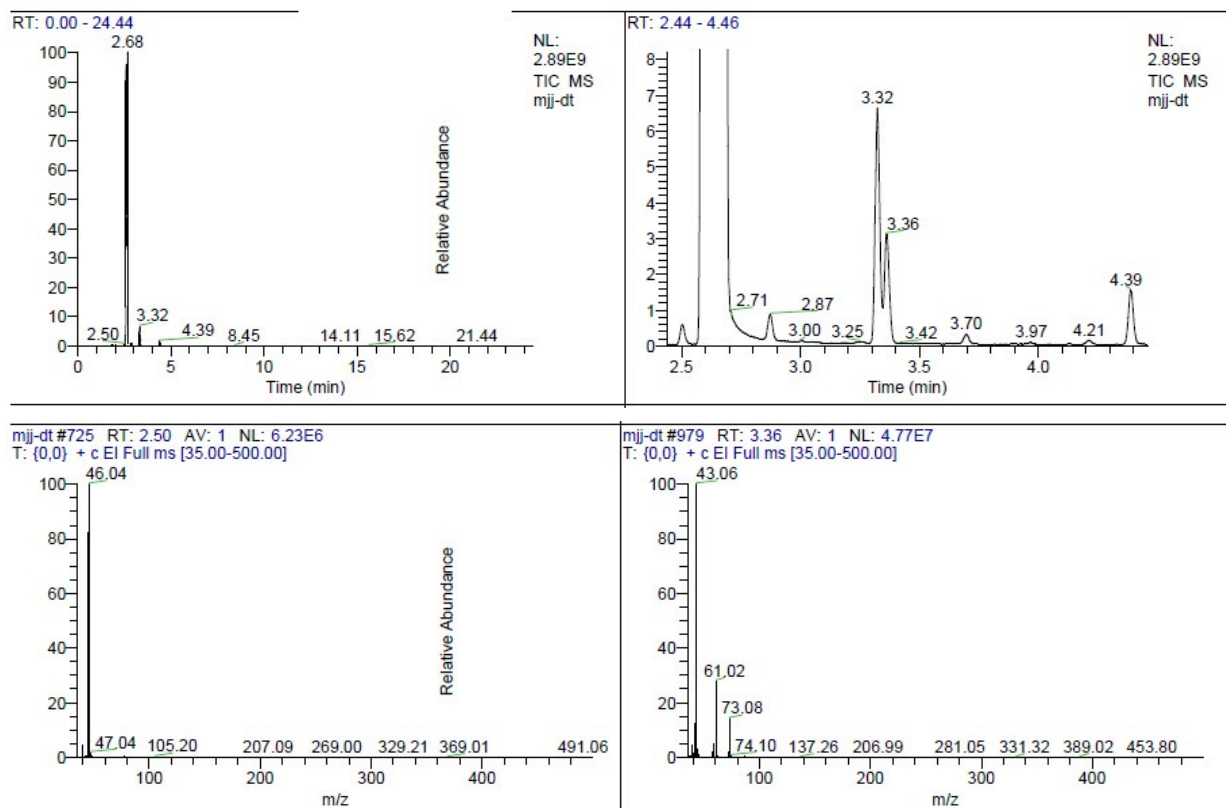


Figure S2 Products distribution of glycerol transformation over (a) MOF-HPMo; (b) MOF-HPMoV1; (c) MOF-HPMoV2; (d) MOF-HPMoV3. Reaction conditions: glycerol 5 mmol, deionized H₂O 2 mL, H₂O₂ (1 mL a.q., 30% w.t.), catalyst 20 mg, 40°C, 24 h.



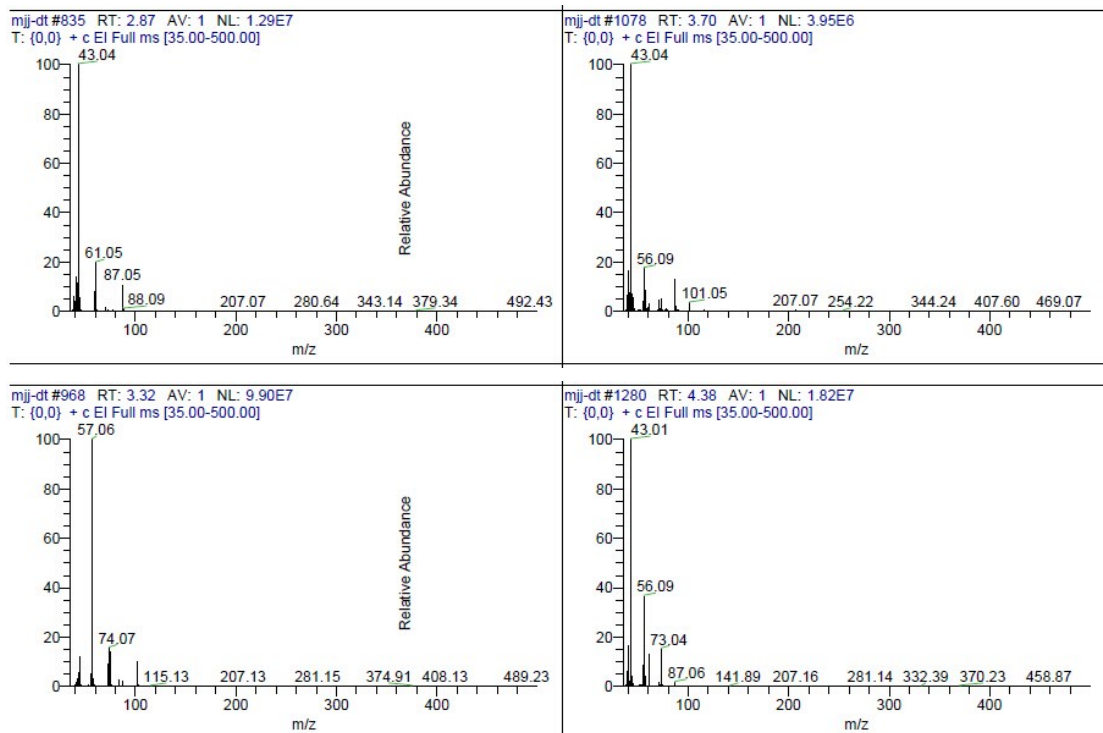


Figure S3 GC-MS results, reaction conditions: lycerol 5 mmol, MOF-HPW 20 mg, deionized H₂O 2 mL, H₂O₂ (1 mL a.q., 30% w.t.), 40°C, 24 h.

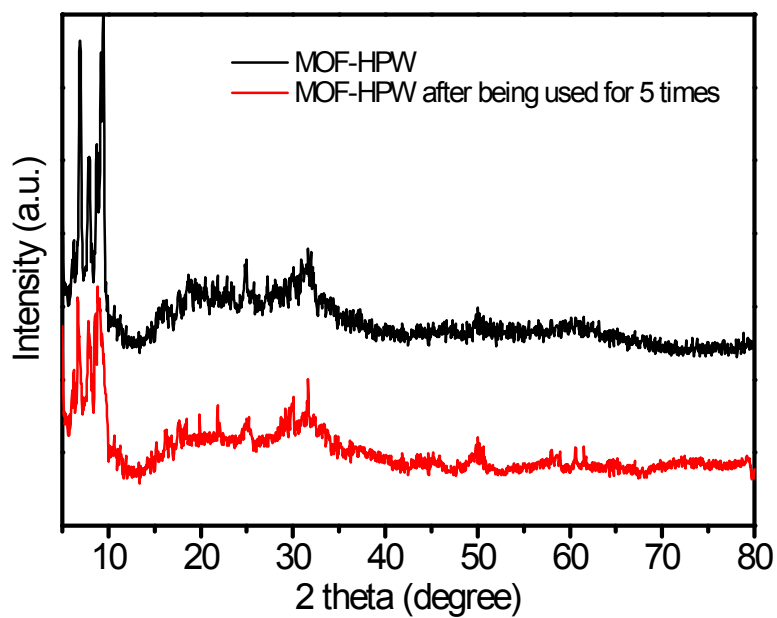


Figure S4 XRD patterns of MOF-HPW and MOF-HPW after being used for 5 times.

Table S1 Concentration of H₂O₂ after reaction ^a

pH value	4	6	8	8 ^b
H ₂ O ₂ concentration (mol/L)	0.039	0.036	0.016	0.043

^a Reaction conditions: glycerol 5 mmol, deionized H₂O 2 mL, H₂O₂ (1 mL a.q., 30% w.t.), catalyst 20 mg, 40°C, 24 h.

^b Another 1 mL H₂O₂ was added.