

Supporting information

Development of Ga salt of molybdophosphoric acid for biomass conversion to levulinic acid

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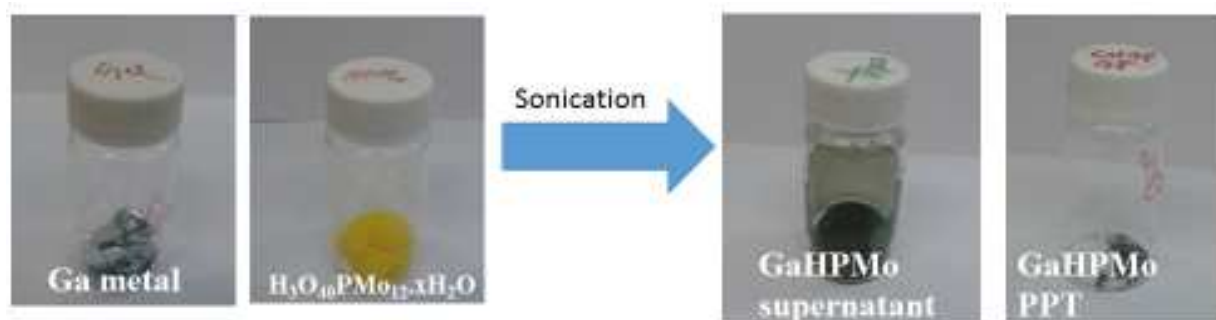


Figure S1. Pictorial representation of Ga metal, HPMo, GaHPMo (supernatant) and Ga@HPMo (precipitate)



Figure S2. Various components of the autoclave (the metal rod on the right is used for opening and closing the reactor).

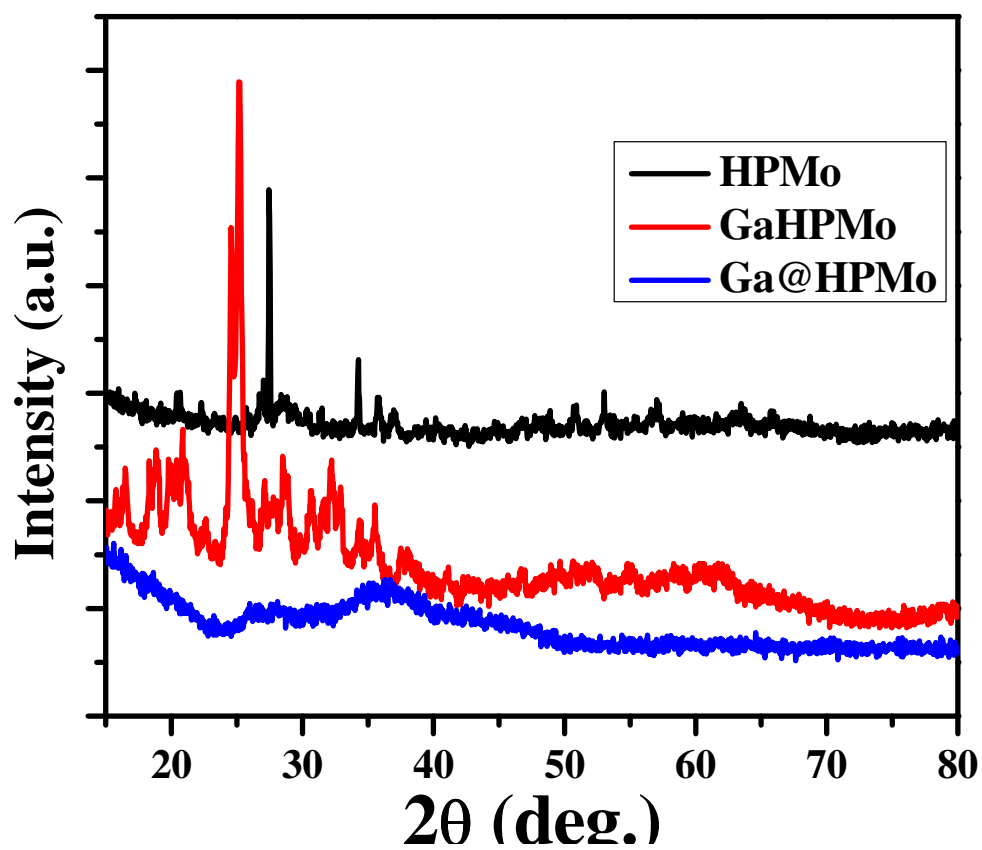


Figure S3. XRD patterns of HPMo, GaHPMo and Ga@HPMo

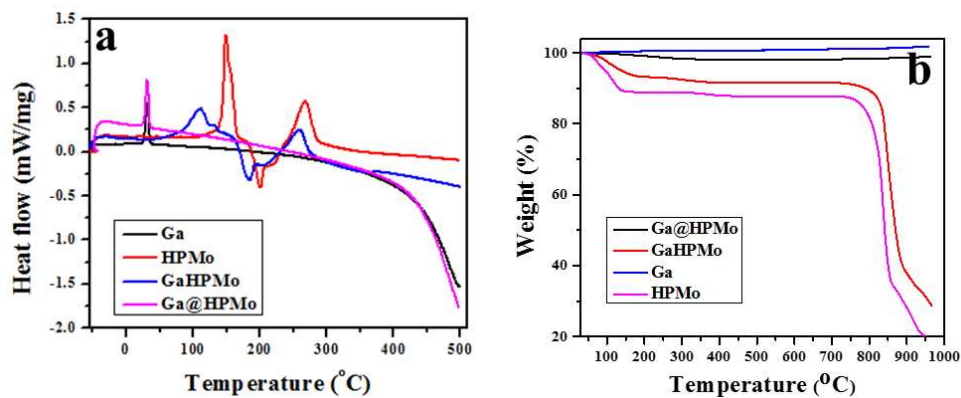


Figure S4. (a) DSC (b) TGA traces of Ga metal, HPMo, GaHPMo, and Ga@HPMo.

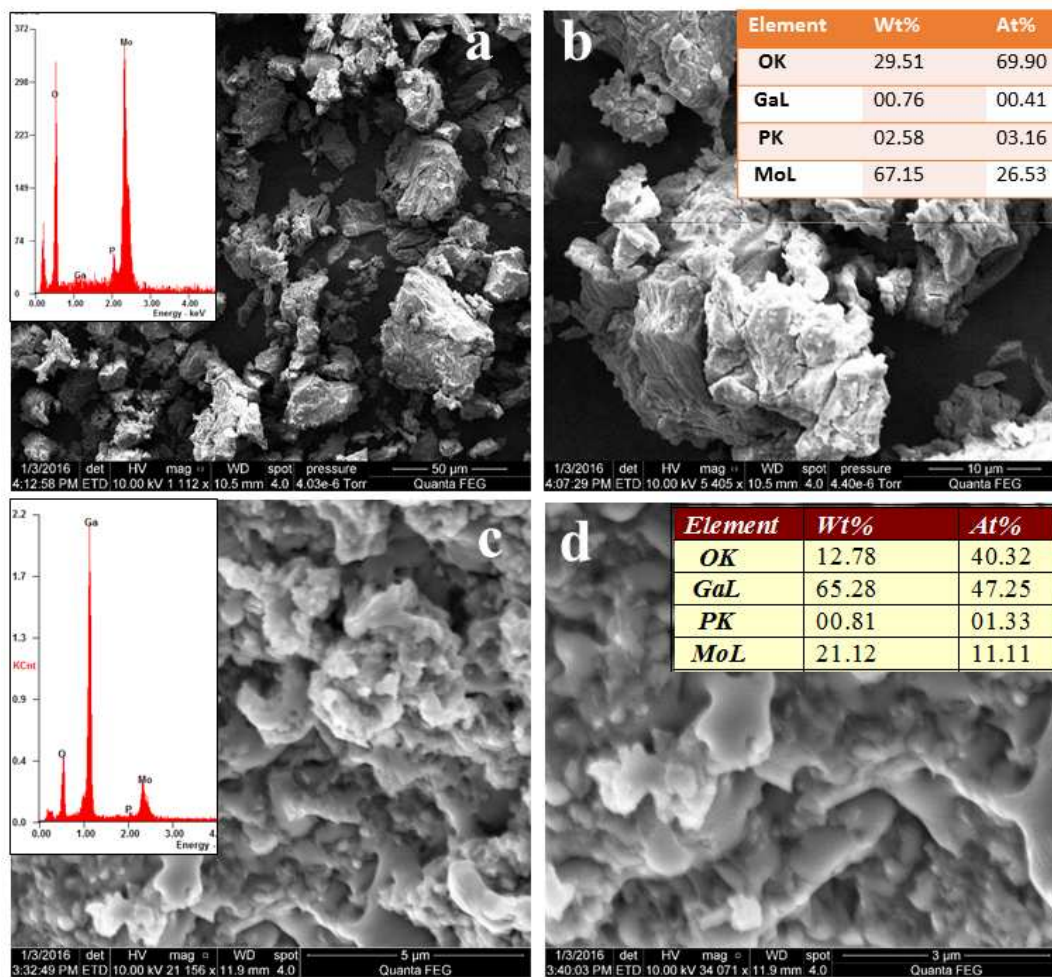


Figure S5. SEM images of (a, b) GaHPMo (inset: EDS), (c, d) Ga@HPMo (inset: EDS).

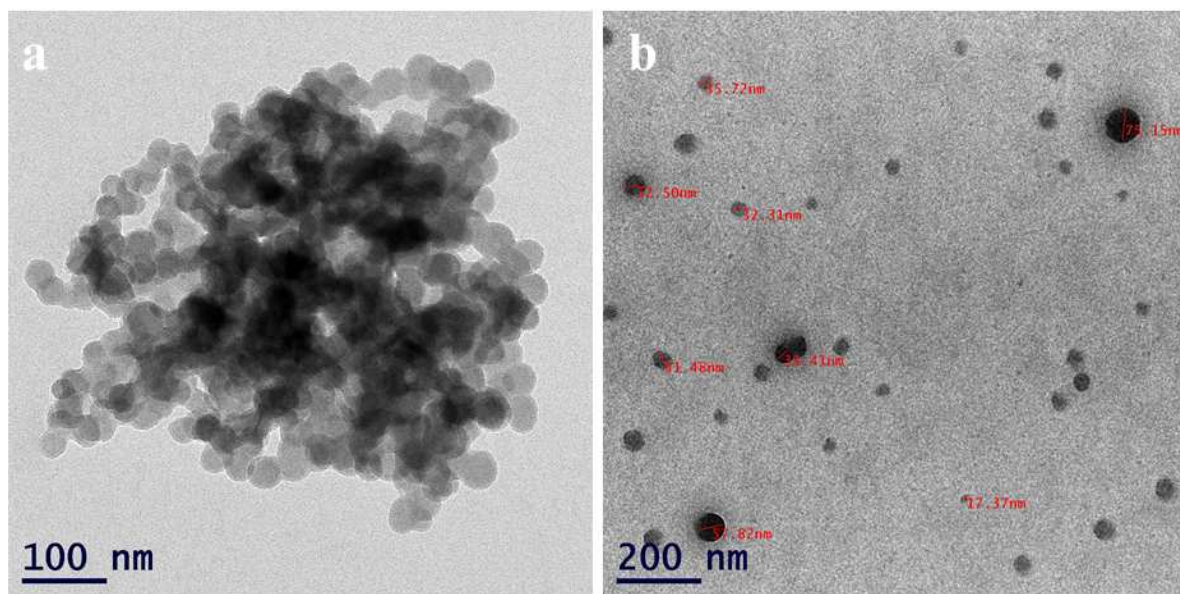


Figure. S6. TEM images of (a) Ga@HPMo (b) GaHPMo.

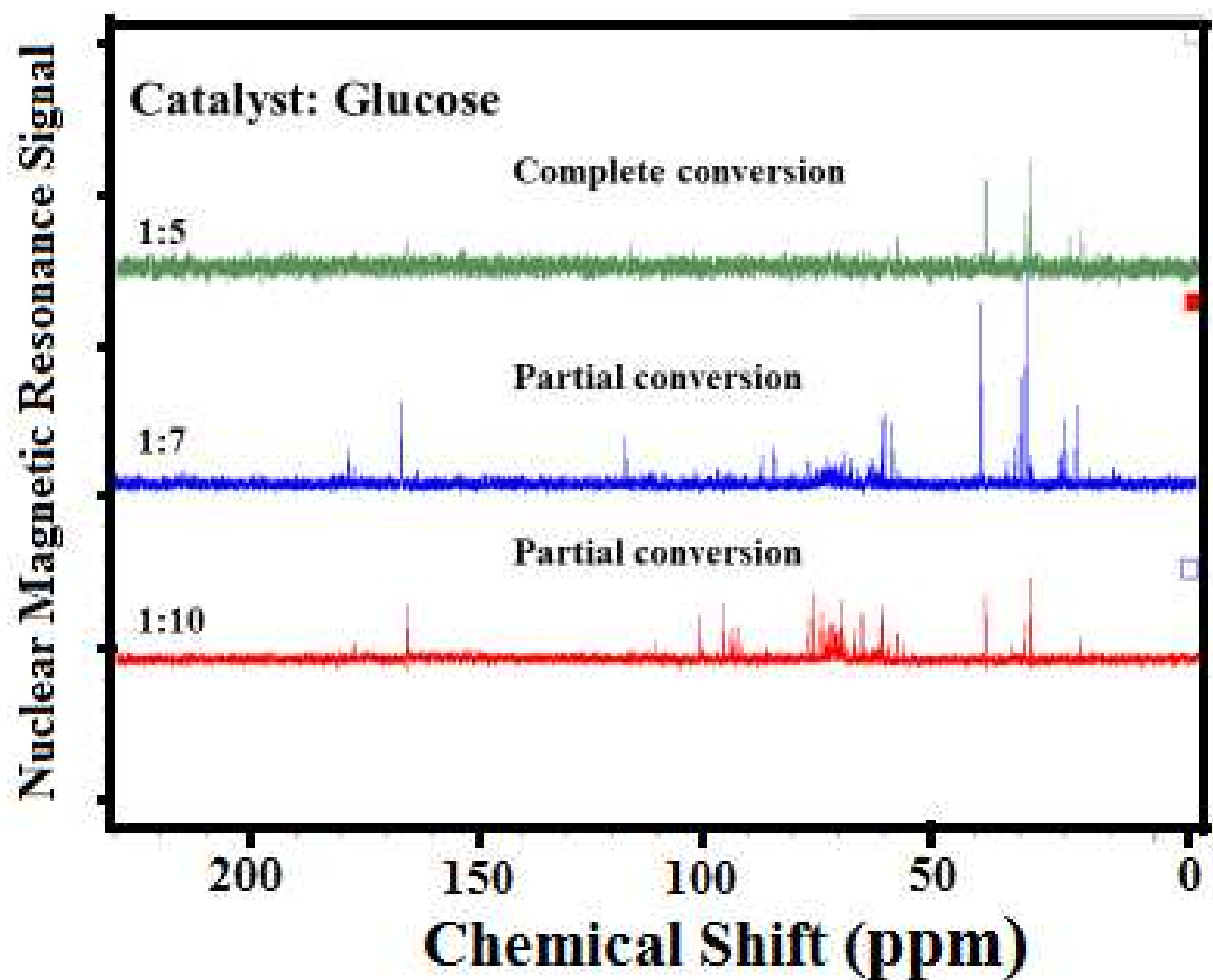


Fig. S7 ^{13}C NMR spectra of the reaction product obtained from the hydrothermal reaction (6 h at 150 °C) with different ratios of the catalyst (GaHPMo) and glucose.

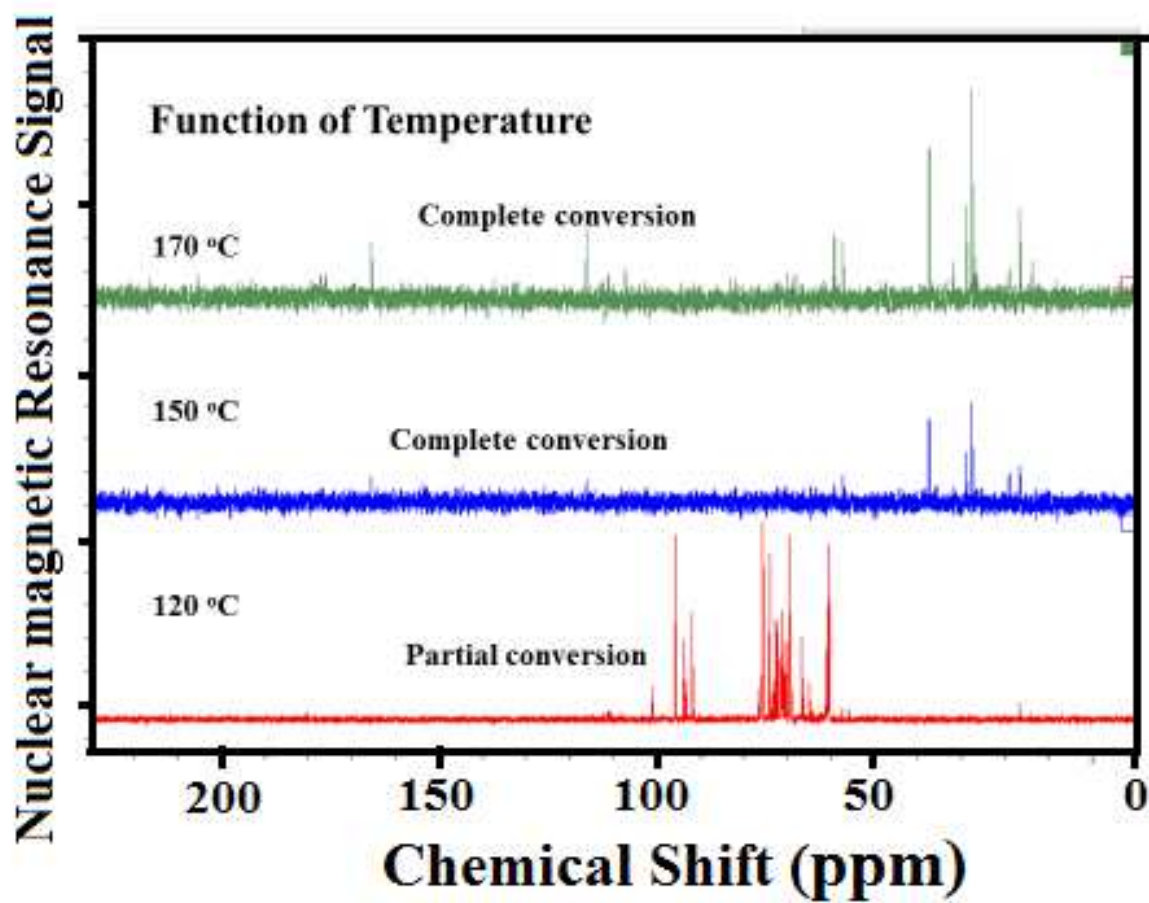


Fig. S8. ^{13}C NMR spectrum of the product obtained at deferent reaction temperatures.