

Pd-Au Bimetallic Catalysts for the Hydrogenation of Muconic Acid to Bio-Adipic Acid

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Supplementary Materials: The following are available online at www.mdpi.com/xxx/s1, Figure S1: title, Table S1: title, Video S1: title.

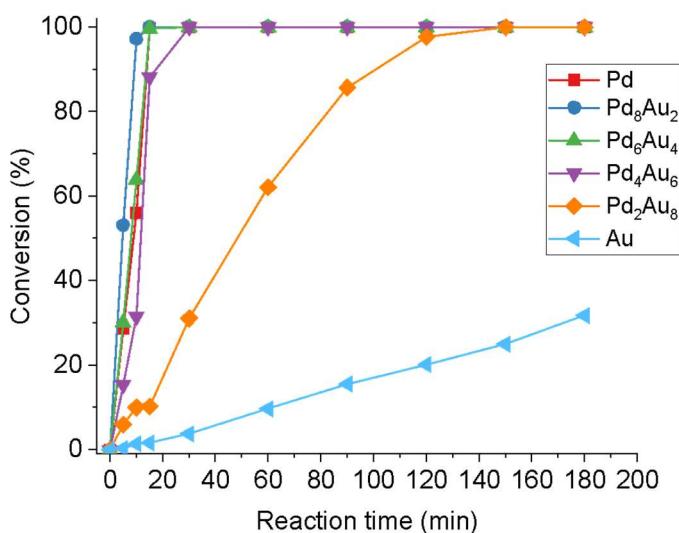


Figure S1. Catalyst conversion profile.

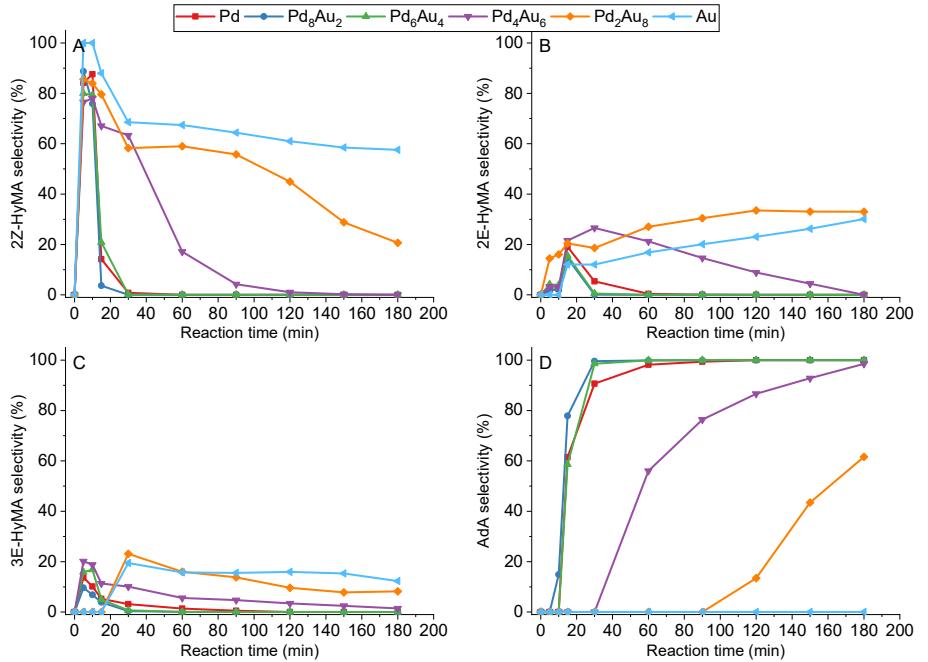


Figure S2. Intermediates (A,B,C) and AdA (D) selectivity profile using monometallic and bimetallic Pd/Au catalysts.

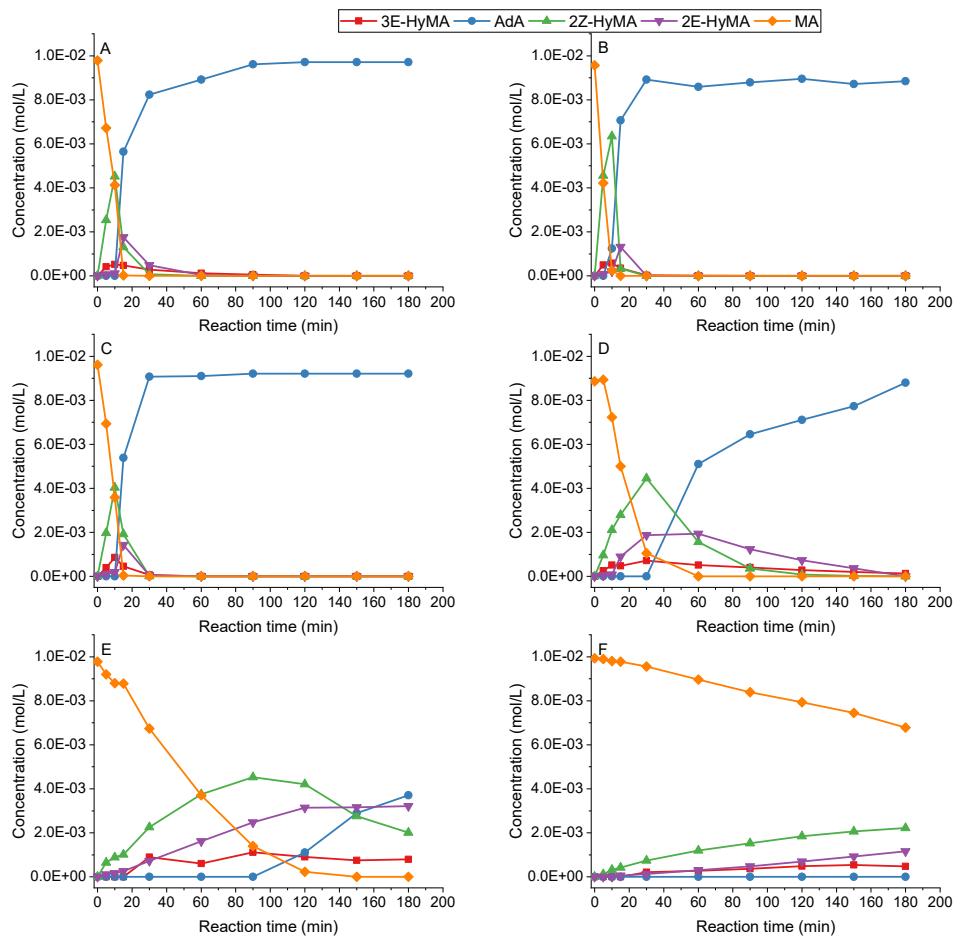


Figure S3. Reaction profile of (A) Pd/HHT, (B) Pd_8Au_2 /HHT, (C) Pd_6Au_4 /HHT, (D) Pd_4Au_6 /HHT, (E) Pd_2Au_8 /HHT and (F) Au/HHT catalyst.

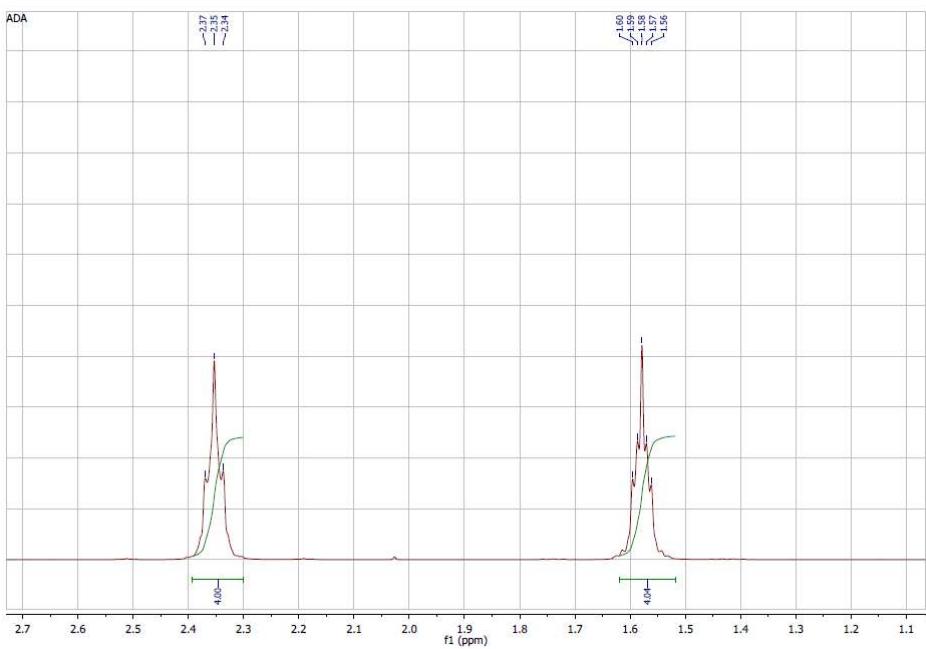


Figure S4. ^1H -NMR of commercial AdA in D_2O

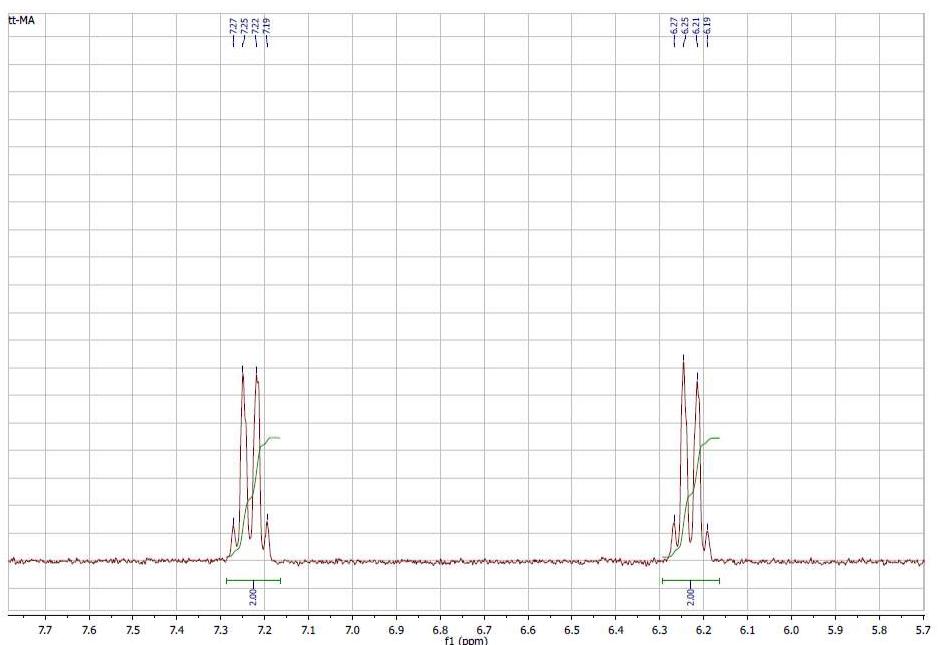


Figure S5. ^1H -NMR of commercial *t,t*-MA in D_2O

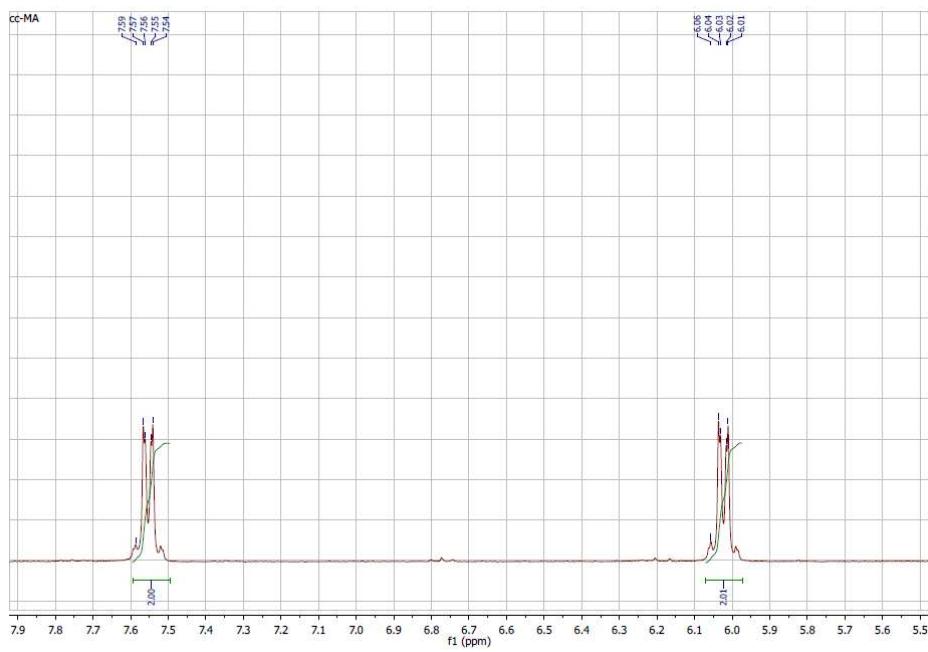


Figure S6. ¹H-NMR of commercial *c,c*-MA in D_2O

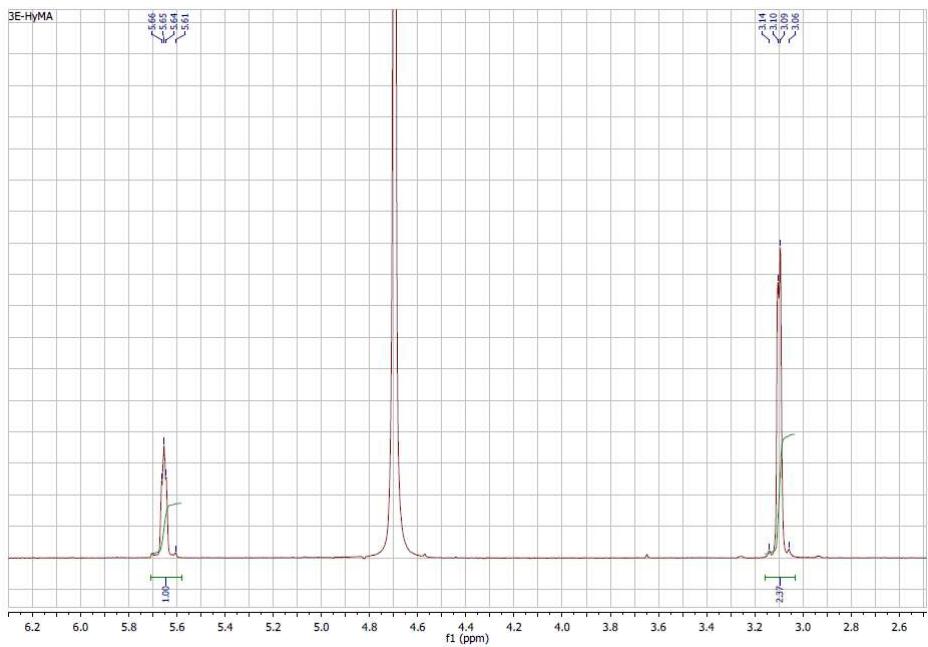


Figure S7. ¹H-NMR of commercial 3E-HyMA in D_2O

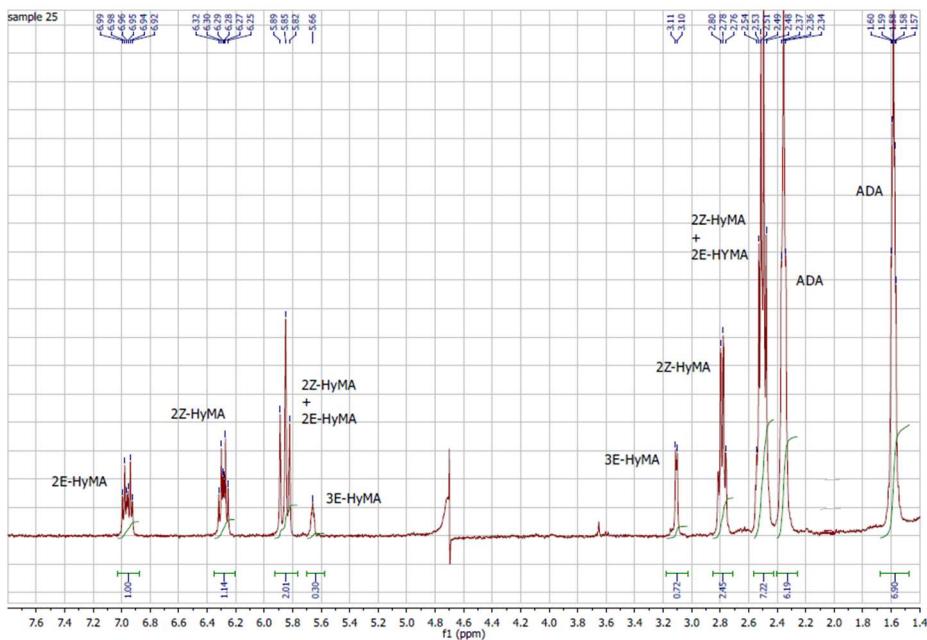


Figure S8. ¹H-NMR in D₂O after 60 min using Pd₄Au₆/HHT catalyst

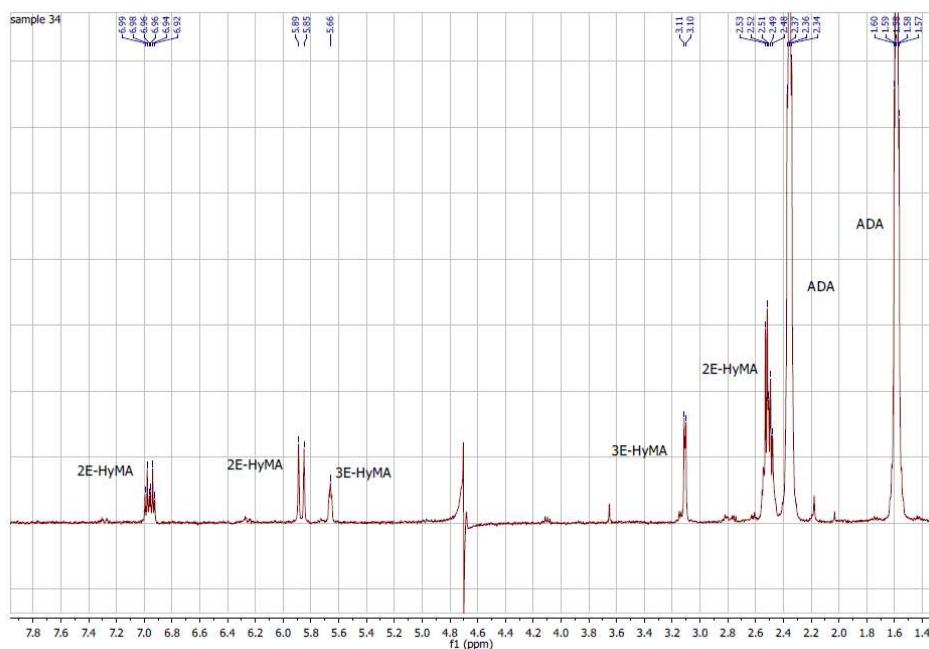


Figure S9. ¹H-NMR in D₂O after 120 min using Pd₄Au₆/HHT catalyst

The NMR spectra were also compared with the ones reported in Carraher et al.¹

References

- Carraher, J.M.; Pfennig, T.; Rao, R.G.; Shanks, B.H.; Tessonniere, J.-P. Cis,Cis-Muconic Acid Isomerization and Catalytic Conversion to Biobased Cyclic-C₆-1,4-Diacid Monomers. *Green Chem.* **2017**, 21–25. <https://doi.org/10.1039/C7GC00658F>.