Electronic Supplementary Information

Stabilisation of Pd(0) on surface functionalised Fe_3O_4 nanoparticles: Magnetically recoverable and stable recyclable catalyst for hydrogenation and Suzuki–Miyaura reactions

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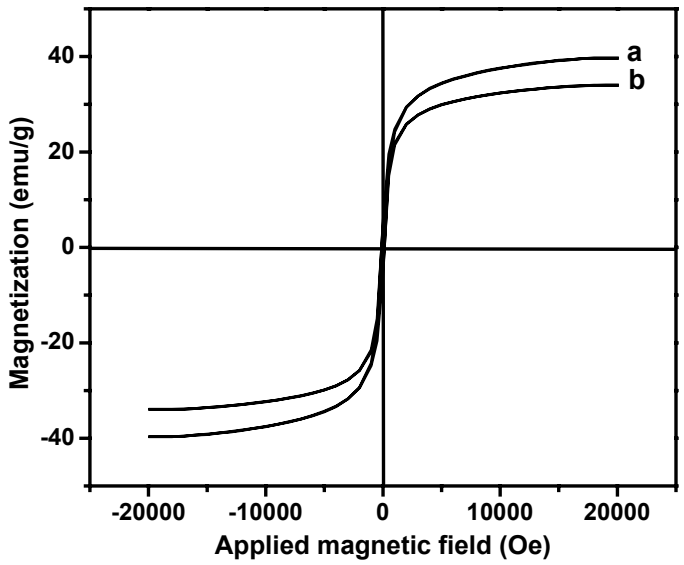

Fig. S1. Magnetisation curve of (a) PEI surface functionalised Fe_3O_4 and (b) Pd@Fe_3O_4.

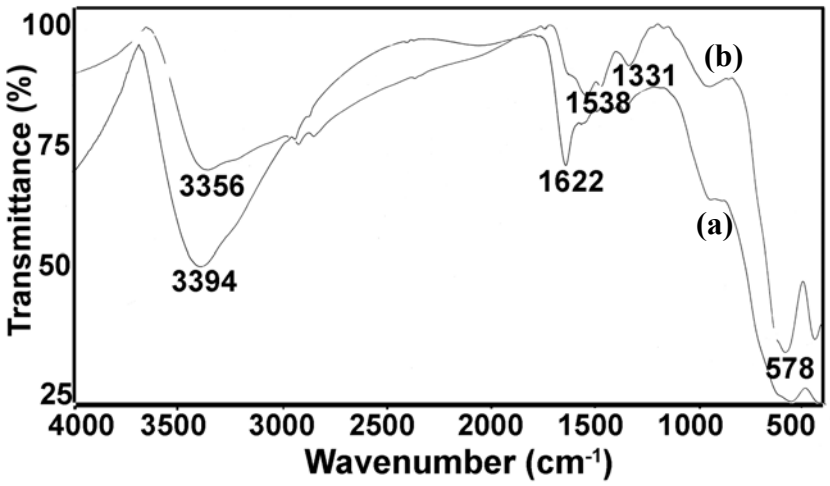

Fig. S2. FT-IR spectra of (a) Citrate functionalised Fe_3O_4 and PEI functionalised Fe_3O_4.

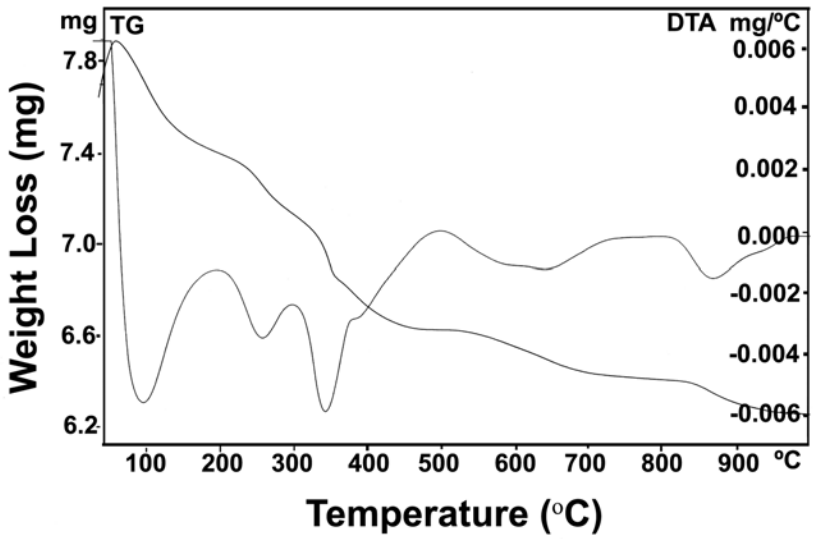

Fig. S3. TG-DTA profiles of $Pd@Fe_3O_4$ depicting the weight loss due to thermal decomposition of the organic contents.

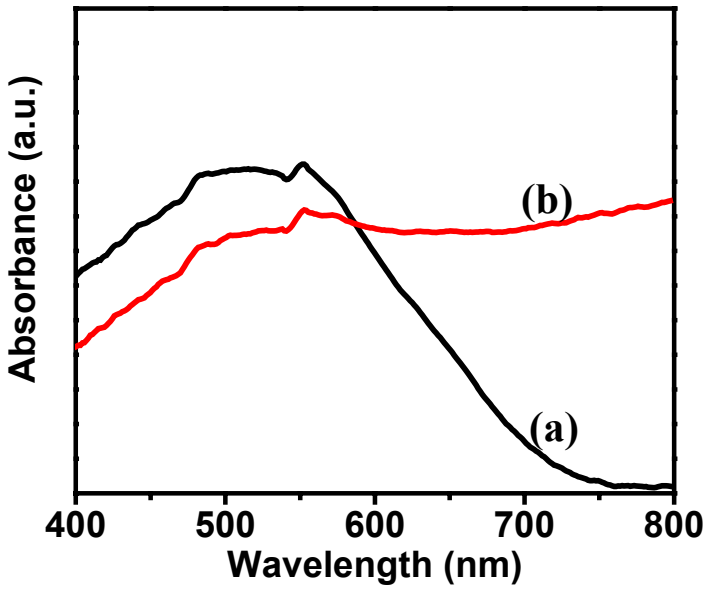

Fig. S4. UV-Vis-Diffuse Reflectance Spectra of (a) PEI functionalised Fe_3O_4 and (b) Pd@Fe_3O_4.

Literature references for products

Biphenyl, CAS-Registry-No. : 92-52-4

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4-Acetyl- biphenyl, CAS-Registry-No. : 92-91-1

Liang, L-C.; Chien, PS.; Huang, M-H. *Organometallics* **2005**, *24*, 353.

4-Nitro-biphenyl, CAS-Registry-No. : 86-00-0

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4-Methyl- biphenyl, CAS-Registry-No. : 92-91-1

Liu, L.; Zhang, Y.; Xin, B. *J. Org. Chem.* **2006**, 71, 3994.

4-Methoxy-biphenyl CAS-Registry-No. : 613-37-6

Mino, T.; Shirae, Y.; Sakamoto, M.; Fujita, T. *J. Org. Chem.* **2005,** 70, 2191.