

Supporting information

The synthesis of Pd/SBA-15 catalyst employing surface bonded vinyl as reductant and its application in the hydrogenation of nitroarenes

Ying Duan,^{ab} Min Zheng,^a Dongmi Li,^a Dongsheng Deng,^a Cuicui Wu^a and Yanliang Yang^{*a}

^a. Henan Key Laboratory of Function-Oriented Porous Material, College of Chemistry and Chemical Engineering, Luoyang Normal University, Luoyang 471934, P. R. China. Email: yangyl0410@126.com

^b. College of Food and Drug, Luoyang Normal University, Luoyang 471934, China

1. Additional Results

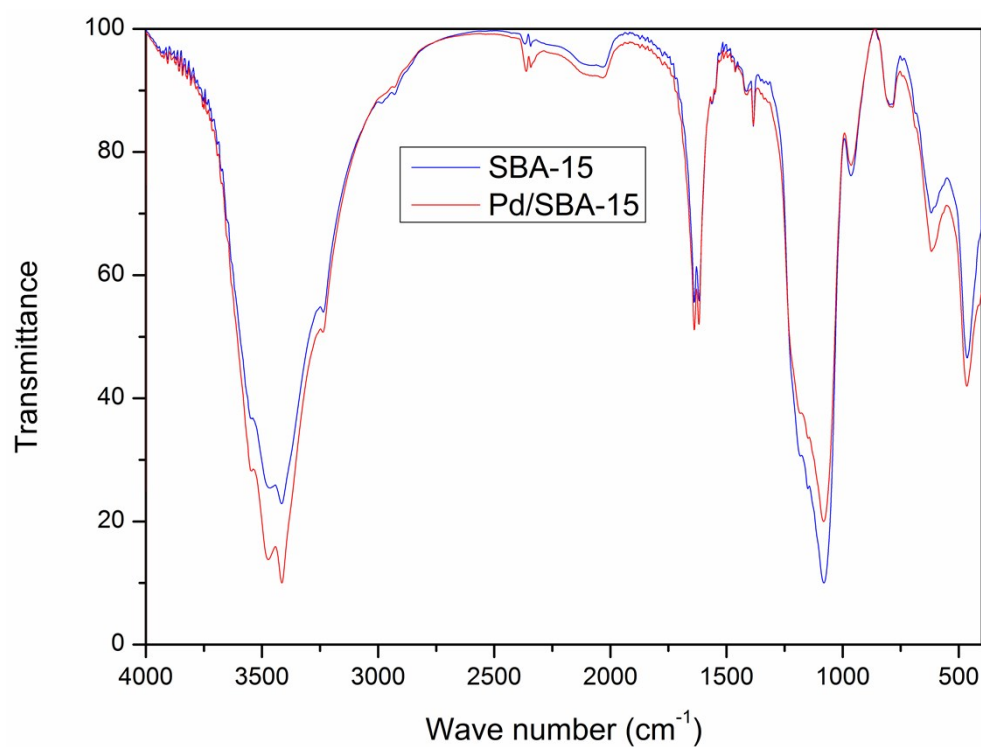


Fig. S1 FT-IR spectrum of SBA-15 and Pd/SBA-15.

Table S1 The calculated rate constants and TOF for the hydrogenation of aromatic nitro compounds.

Entry	Substrates	k (mmol L ⁻¹ min ⁻¹)	TOF (h ⁻¹) ^a
1	Nitrobenzene	4.73	1124
2	2-Nitrotoluene	1.97	468
3	3-Nitrotoluene	3.39	805
4	4-Nitrotoluene	3.48	827
5	4-Nitrophenylethane	2.38	566
6	2-Fluoronitrobenzene	2.48	590

^a calculated based on the Pd contents determined by ICP-AES.

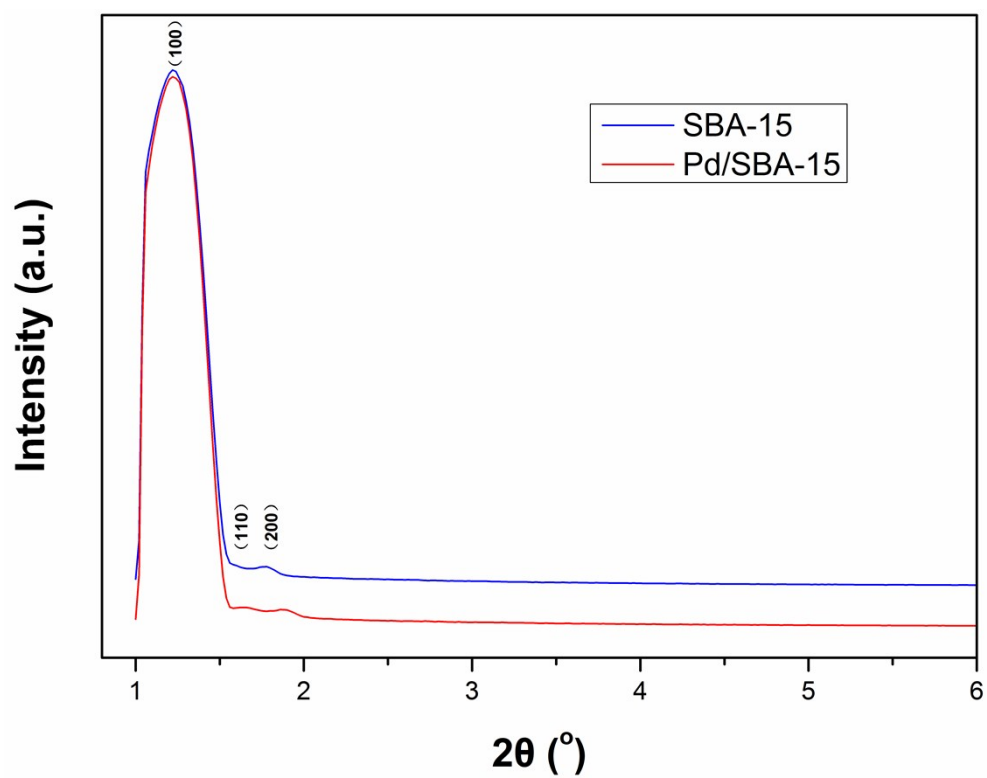


Fig. S2 Small angle XRD pattern of as-synthesized SBA-15 and Pd/SBA-15.

2.MS Traces

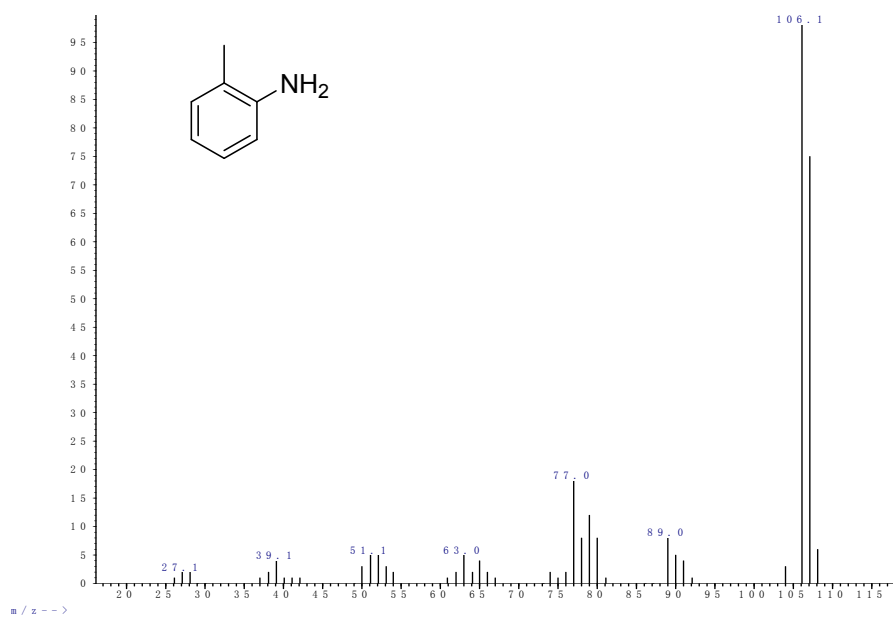


Fig. S3 Mass spectrum of *o*-toluidine.

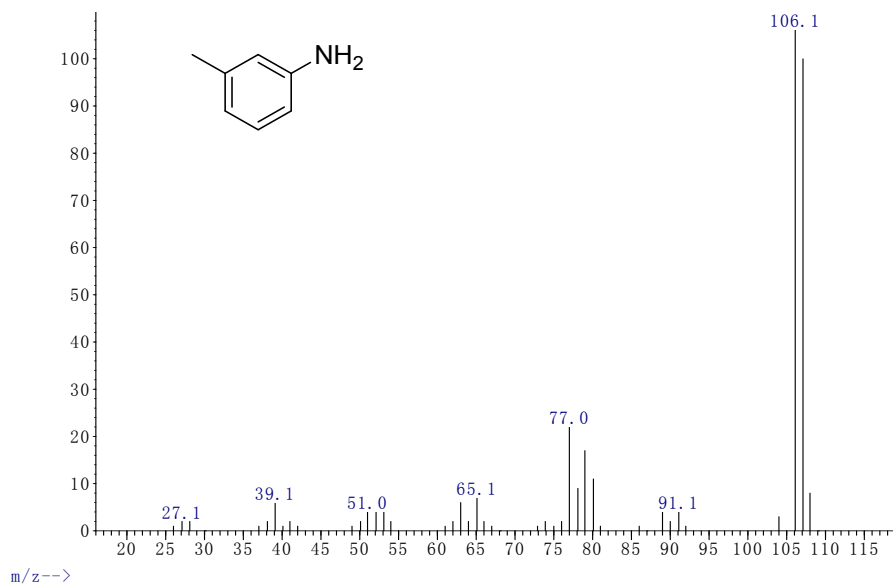


Fig. S4 Mass spectrum of *m*-toluidine.

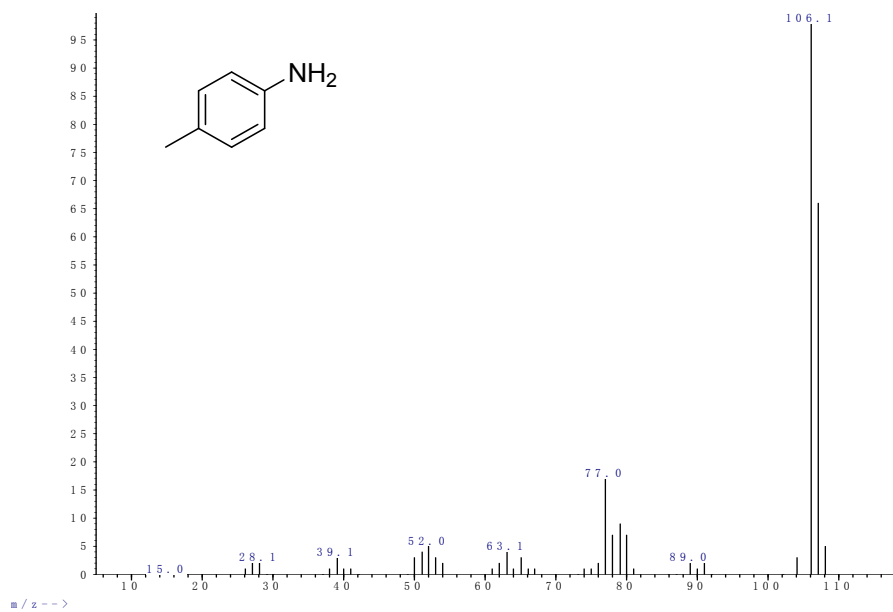


Fig. S5 Mass spectrum of p-toluidine.

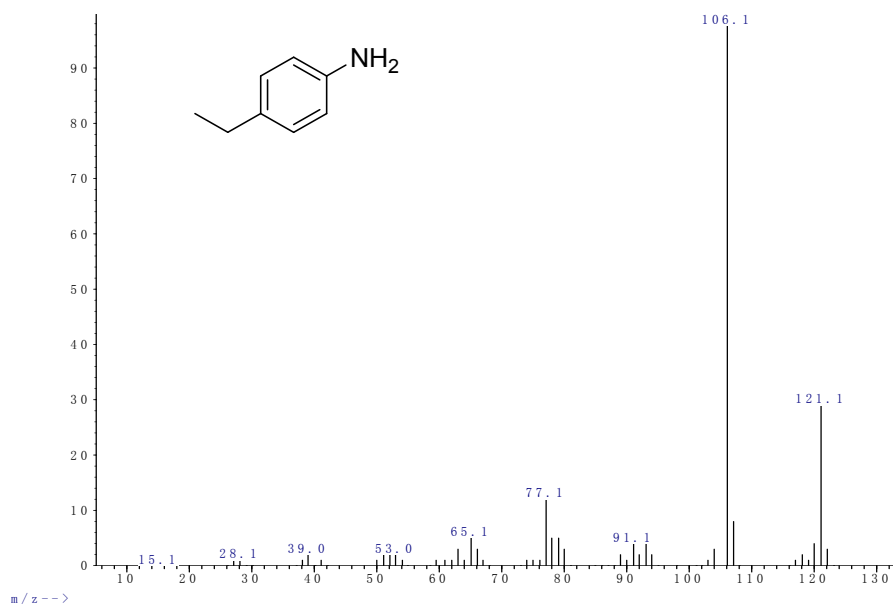


Fig. S6 Mass spectrum of 4-ethylaniline.

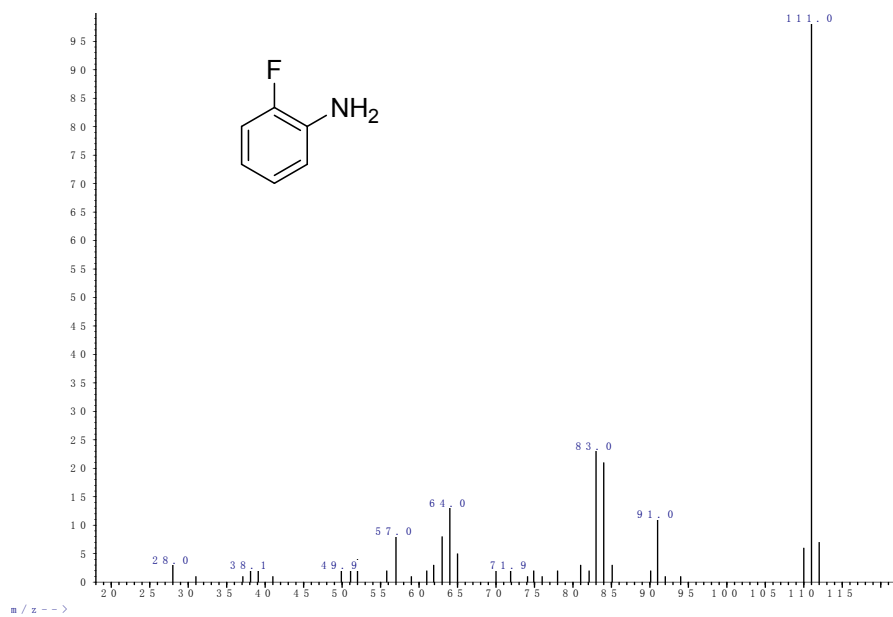


Fig. S7 Mass spectrum of 2-fluoroaniline.