

Supplementary Information for

**Synthesis of silver particles stabilized by a bifunctional  $\text{SiH}_x\text{-NH}_y\text{-PMHS}$  oligomer  
as recyclable nanocatalysts for catalytic reduction of 4-nitrophenol.**

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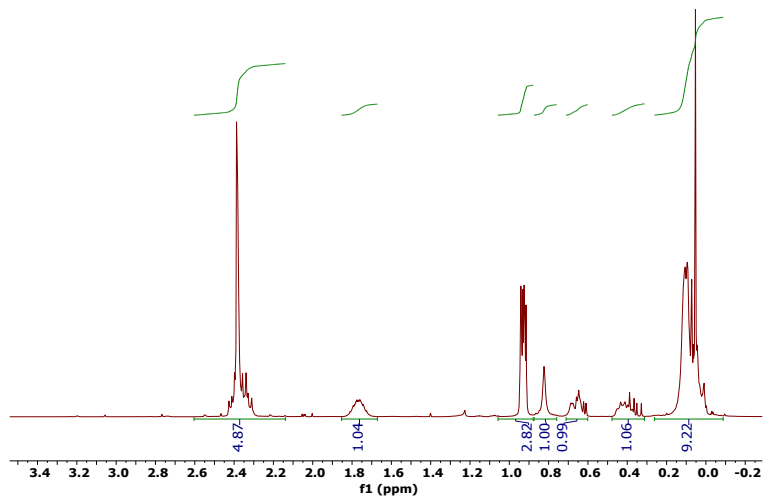


Figure S-1a.  $^1\text{H}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS IV}$

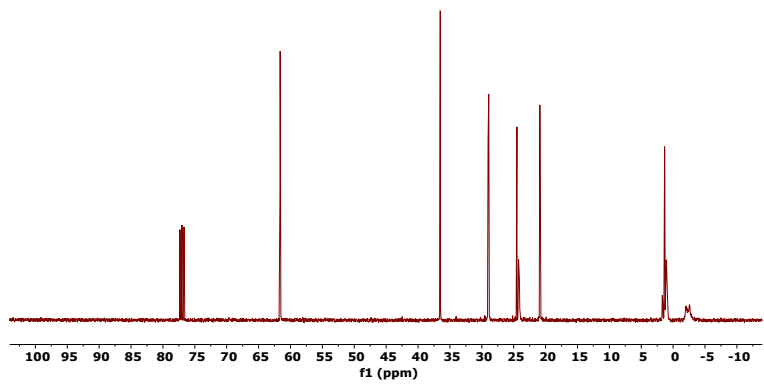


Figure S-1b.  $^{13}\text{C}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS IV}$

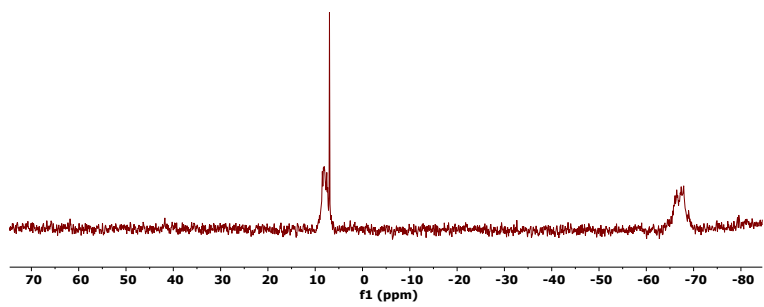


Figure S-1c.  $^{29}\text{Si}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS IV}$

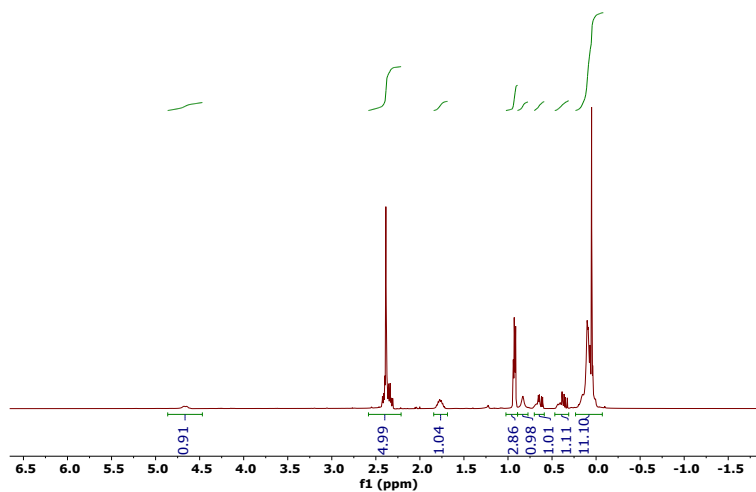


Figure S-2a.  $^1\text{H}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS V}$

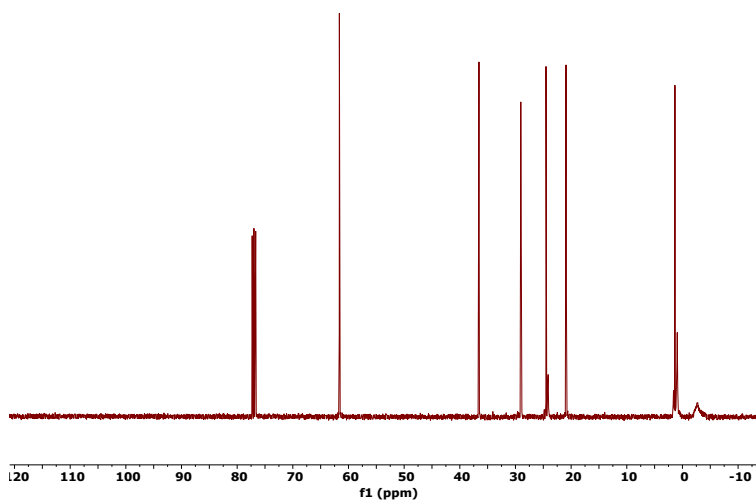


Figure S-2b.  $^{13}\text{C}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS V}$

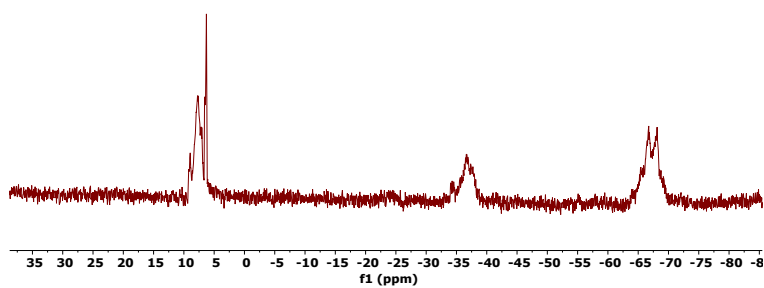


Figure S-2c.  $^{29}\text{Si}$  NMR of  $\text{SiH}_x\text{-NH}_y\text{-PMHS V}$

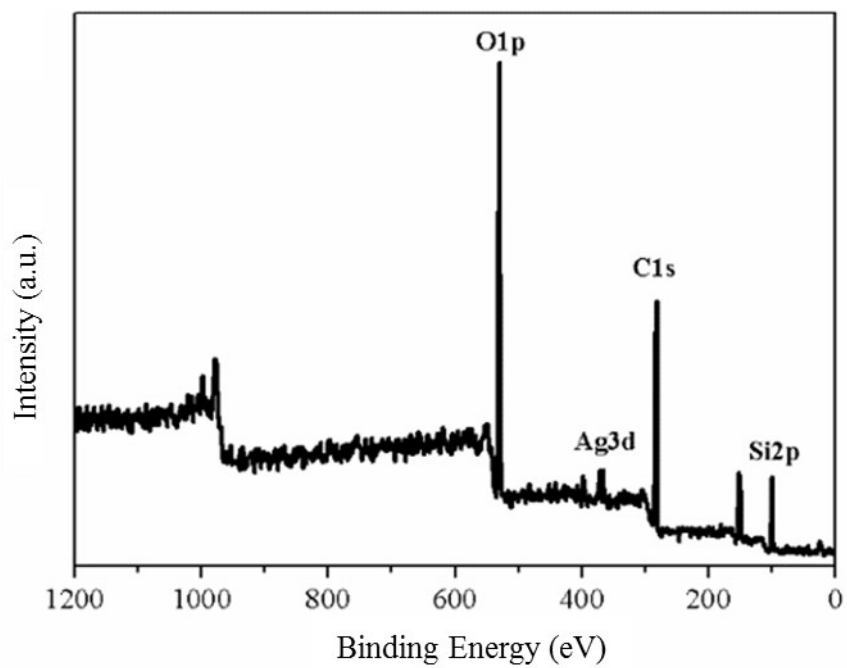


Figure S-3 XPS survey scan of Ag/SiO<sub>2</sub>-1.

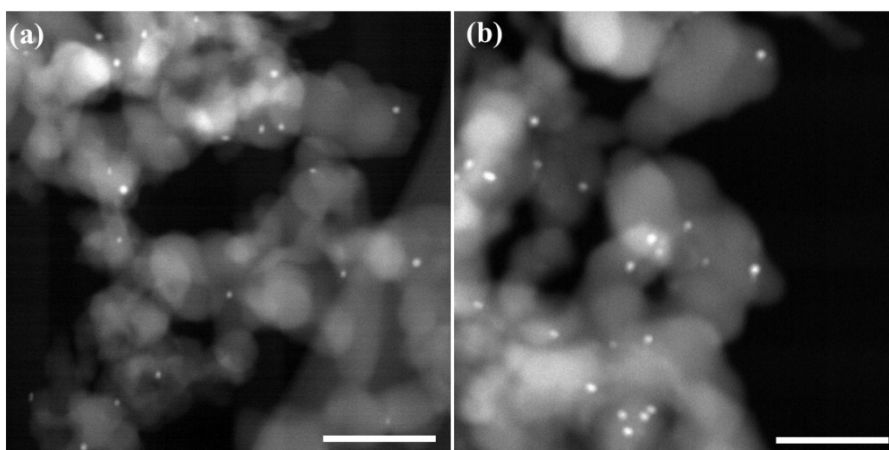


Figure S-4 STEM images of Ag/SiO<sub>2</sub>-1; (a) before catalytic test (b) after catalytic test for seven successive reduction of 4-NP. Scale bar is 20 nm.

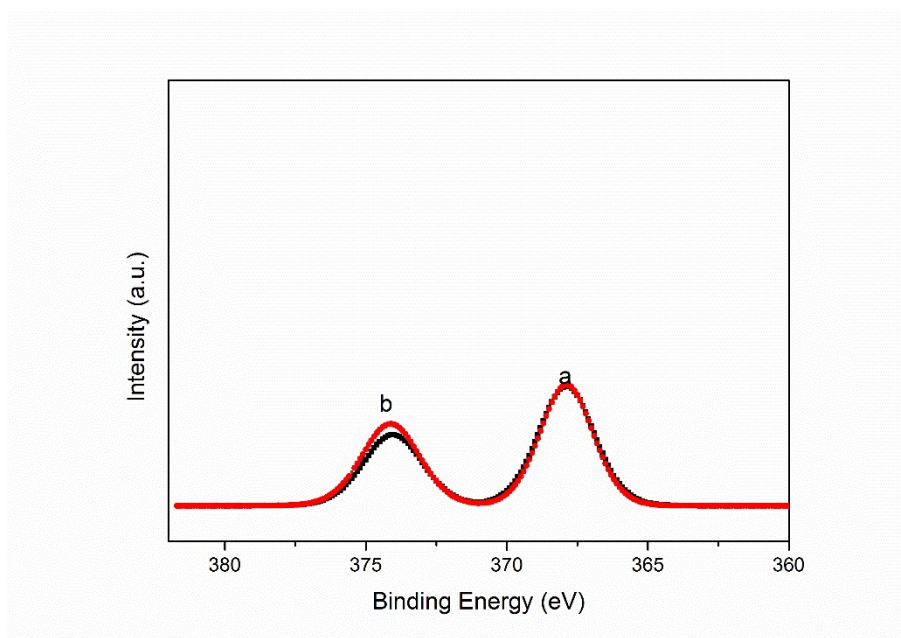


Figure S-5 XPS spectra of Ag/SiO<sub>2</sub>-1; (a) before catalytic test (b) after catalytic test for seven successive reduction of 4-NP.