

## Supplementary

### **End-grafted Cu-NNN pincer complexes on PAMAM dendrimers-SiO<sub>2</sub>: synthesis and characterization**

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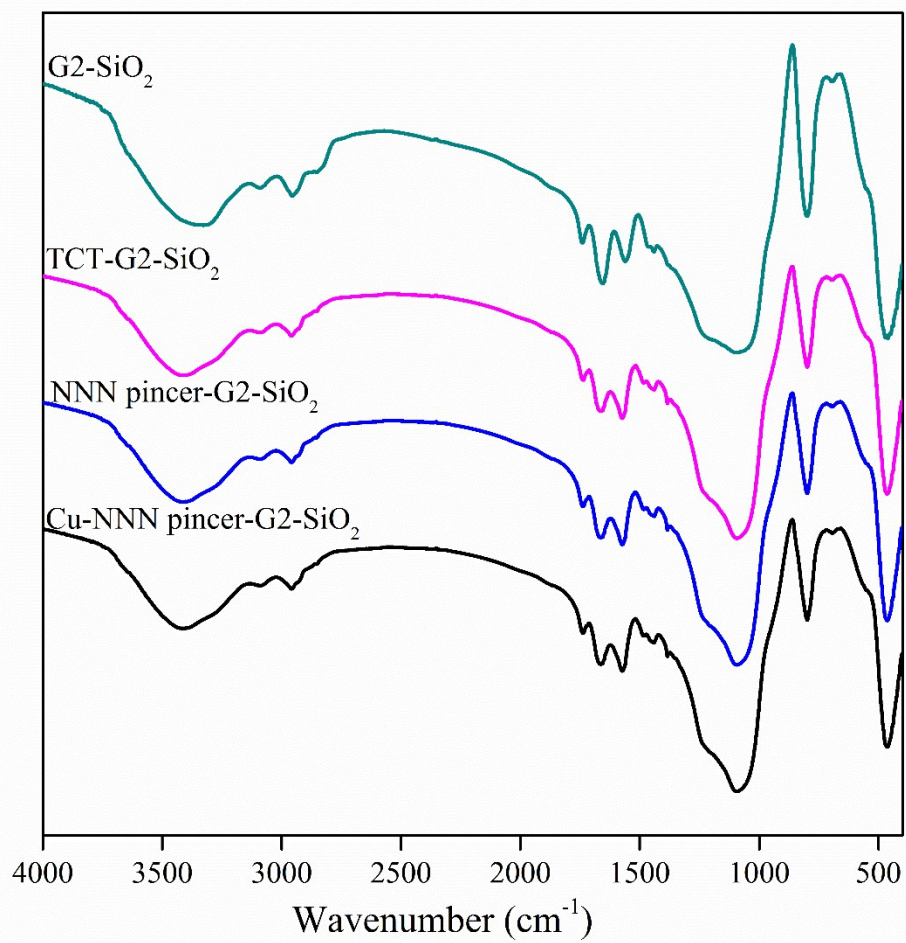


Figure S1 FTIR spectra of G2-SiO<sub>2</sub>, TCT-G2-SiO<sub>2</sub>, NNN pincer-G2-SiO<sub>2</sub> and Cu-NNN pincer-G2-SiO<sub>2</sub>.

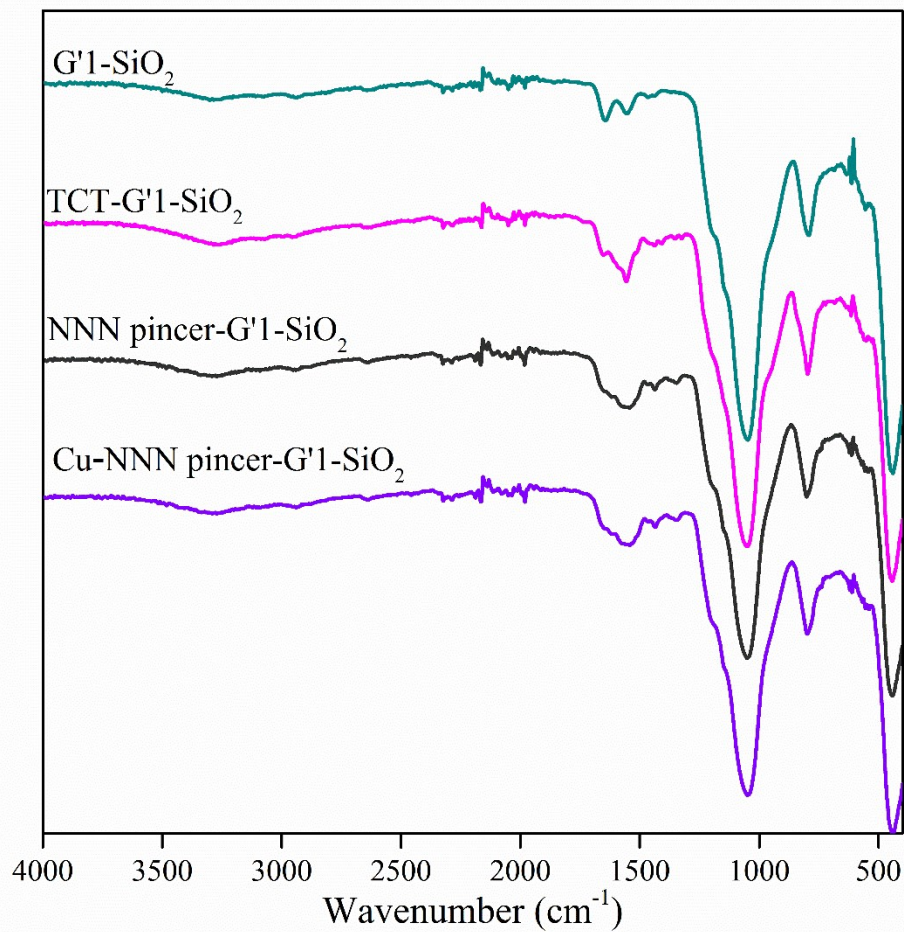


Figure S2 FTIR spectra of G'1-SiO<sub>2</sub>, TCT-G'1-SiO<sub>2</sub>, NNN pincer-G'1-SiO<sub>2</sub> and Cu-NNN pincer-G'1-SiO<sub>2</sub>.

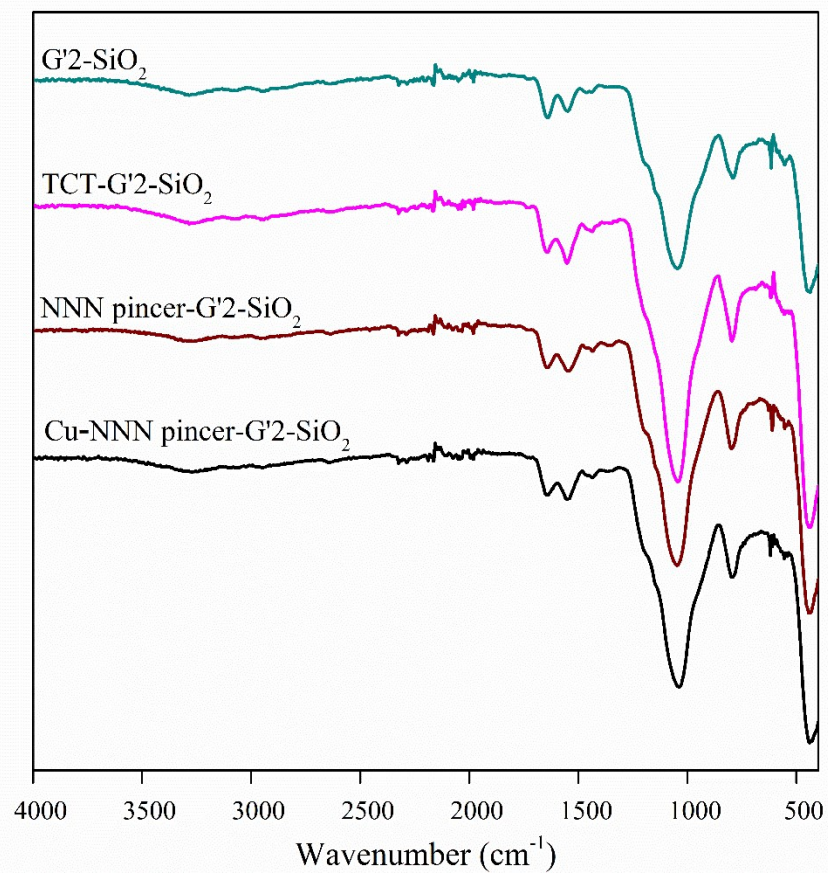


Figure S3 FTIR spectra of G'2-SiO<sub>2</sub>, TCT-G'2-SiO<sub>2</sub>, NNN pincer-G'2-SiO<sub>2</sub> and Cu-NNN pincer-G'2-SiO<sub>2</sub>.



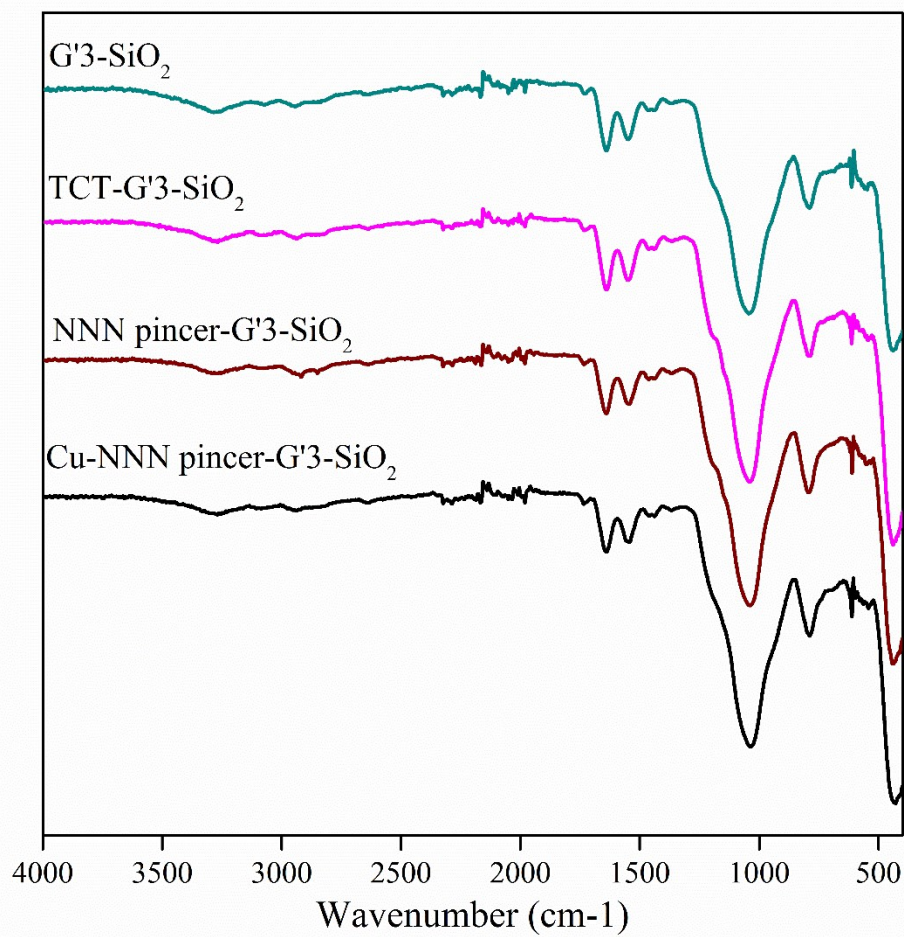


Figure S4 FTIR spectra of G'3-SiO<sub>2</sub>, TCT-G'3-SiO<sub>2</sub>, NNN pincer-G'3-SiO<sub>2</sub> and Cu-NNN pincer-G'3-SiO<sub>2</sub>.

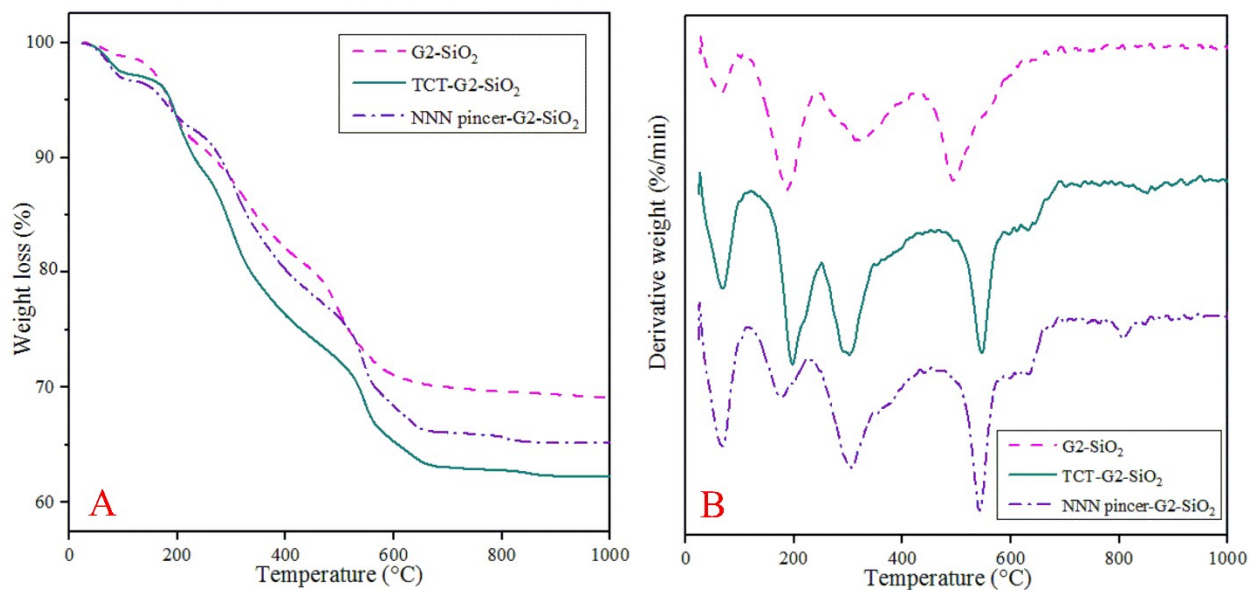


Figure S5 (A): TGA curves, (B): DTG curves of G2-SiO<sub>2</sub>, TCT-G2-SiO<sub>2</sub>, NNN pincer-G2-SiO<sub>2</sub>.

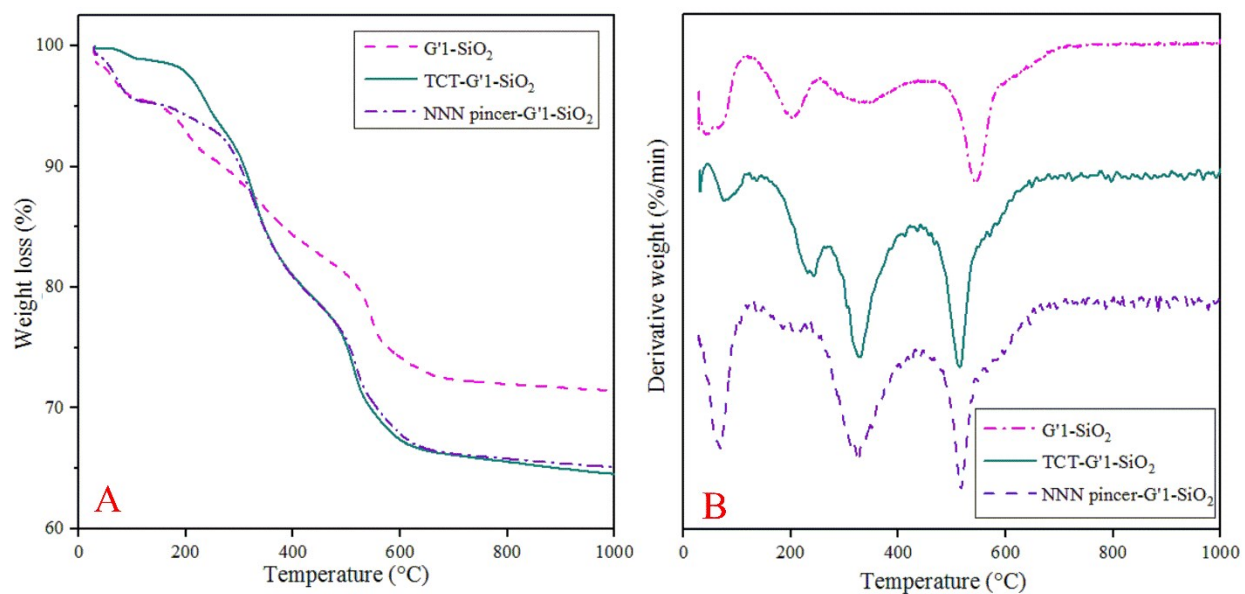


Figure S6 (A): TGA curves, (B): DTG curves of G'1-SiO<sub>2</sub>, TCT-G'1-SiO<sub>2</sub>, NNN pincer-G'1-SiO<sub>2</sub>.

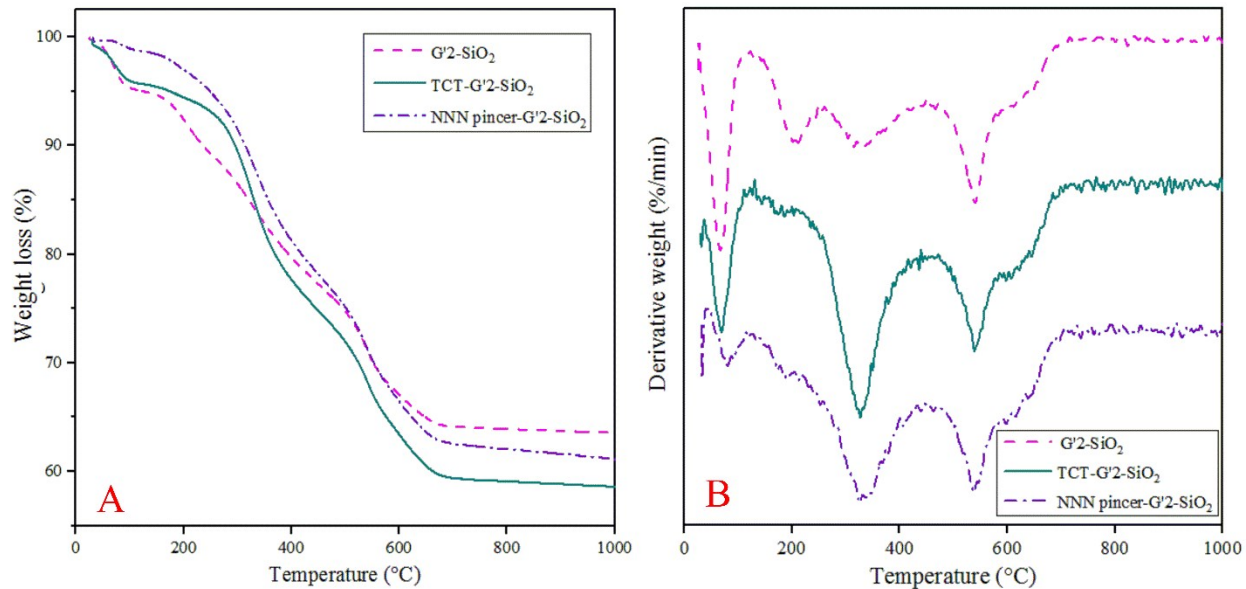


Figure S7 (A): TGA curves, (B): DTG curves of G'2-SiO<sub>2</sub>, TCT- G'2-SiO<sub>2</sub>, NNN pincer- G'2-SiO<sub>2</sub>.

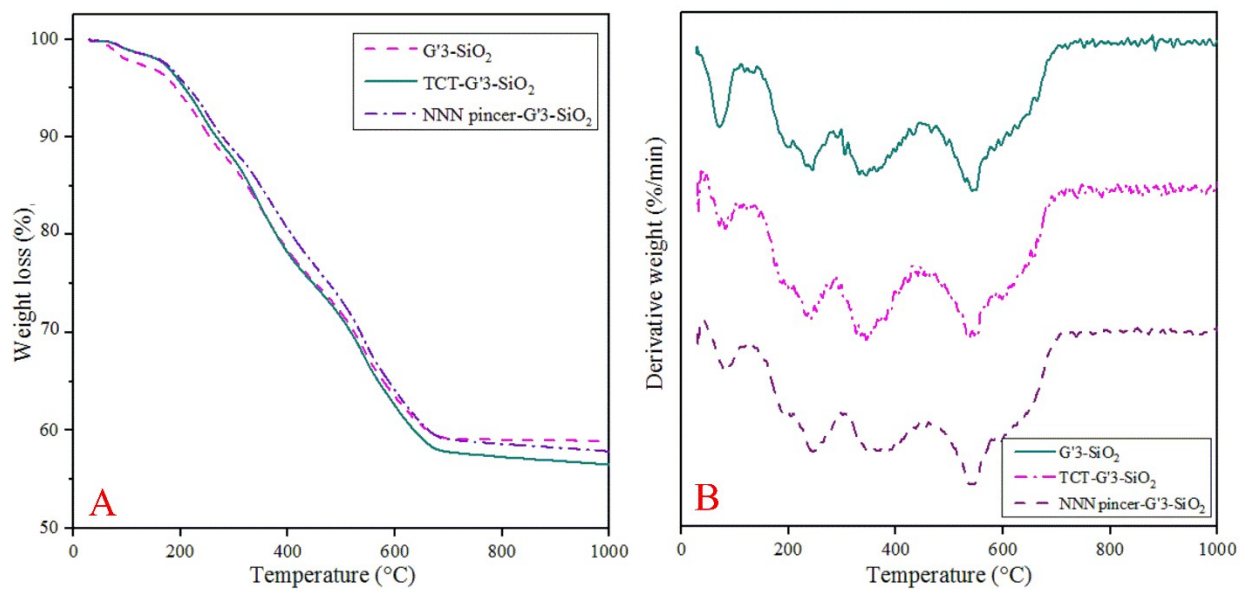


Figure S8 (A) TGA curves, (B) DTG curves of G'3-SiO<sub>2</sub>, TCT- G'3-SiO<sub>2</sub>, NNN pincer- G'3-SiO<sub>2</sub>.

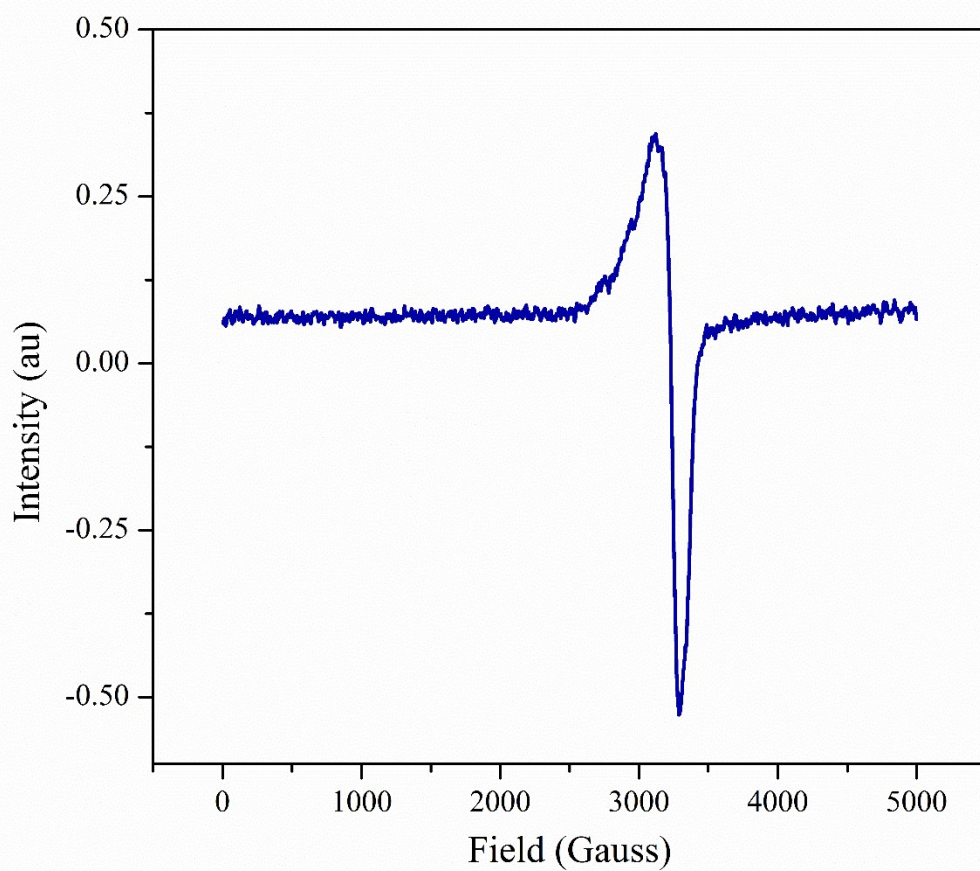


Figure S9 EPR spectrum of Cu-NNN pincer-G1-SiO<sub>2</sub>



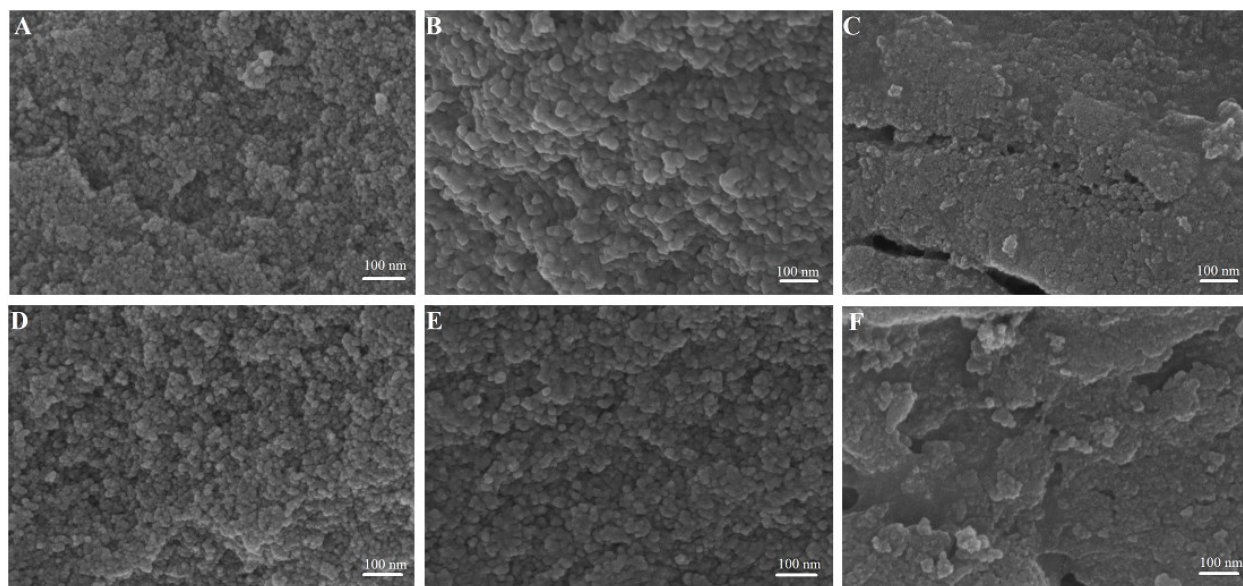


Figure S10 SEM images of A: TCT-G1-SiO<sub>2</sub>, B: NNN pincer- G1-SiO<sub>2</sub>, C: Cu-NNN pincer- G1-SiO<sub>2</sub>  
 D: TCT-G2-SiO<sub>2</sub>, E: NNN pincer- G2-SiO<sub>2</sub>, F: Cu-NNN pincer- G2-SiO<sub>2</sub>.

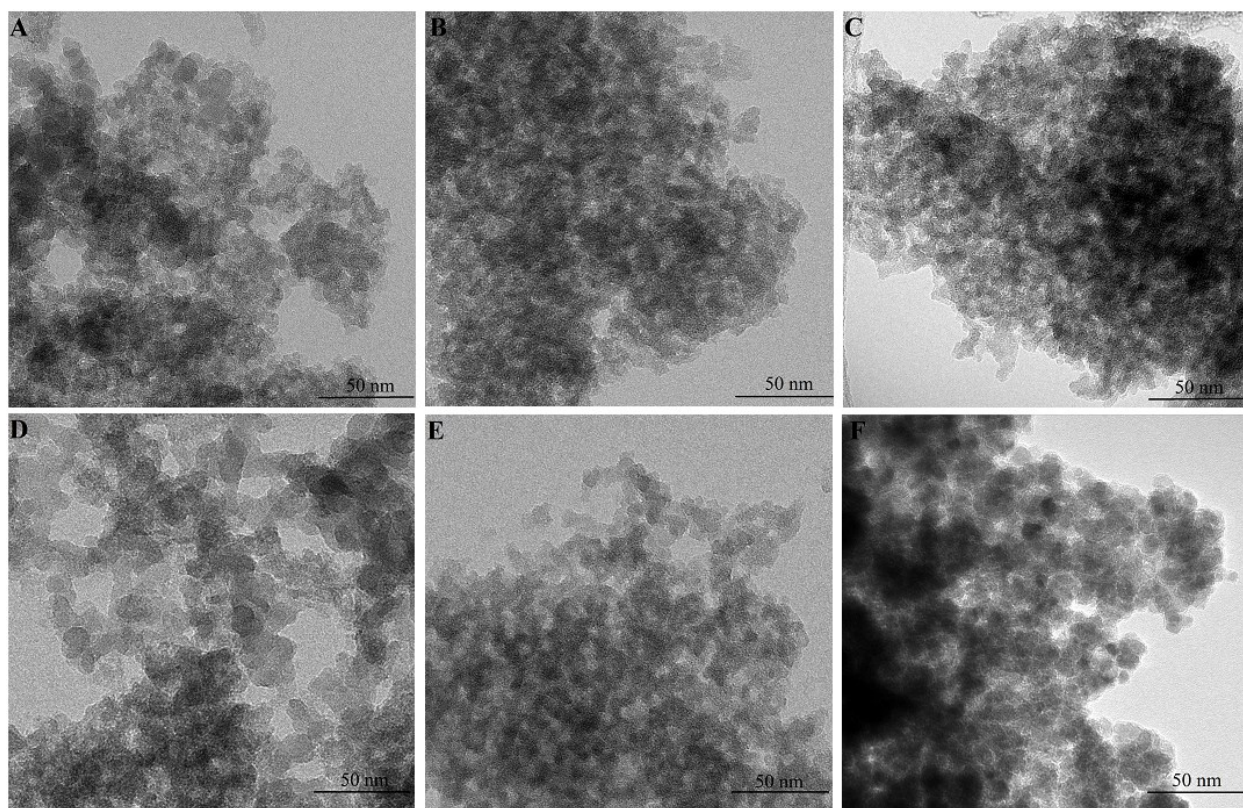


Figure S11 TEM images of A: TCT-G1-SiO<sub>2</sub>, B: NNN pincer- G1-SiO<sub>2</sub>, C: Cu-NNN pincer- G1-SiO<sub>2</sub>  
 D: TCT-G2-SiO<sub>2</sub>, E: NNN pincer- G2-SiO<sub>2</sub>, F: Cu-NNN pincer- G2-SiO<sub>2</sub>.

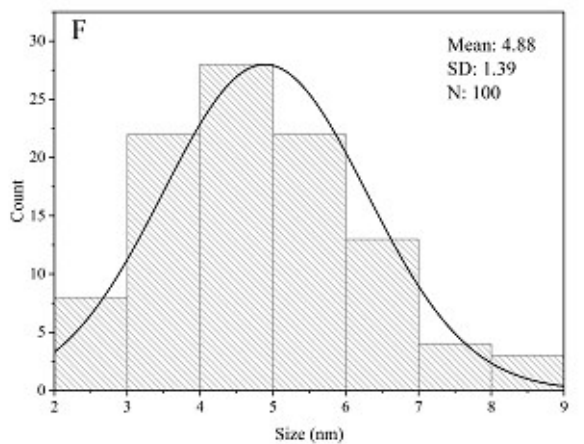
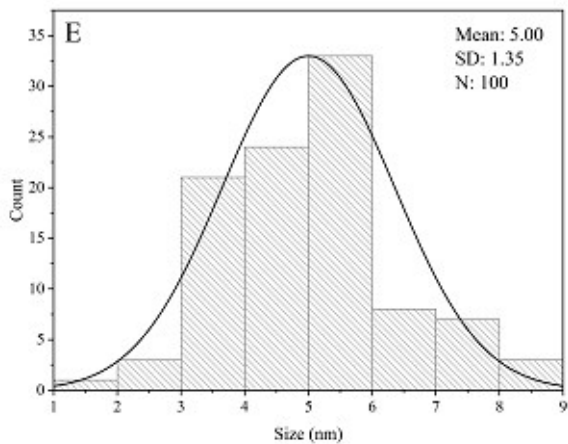
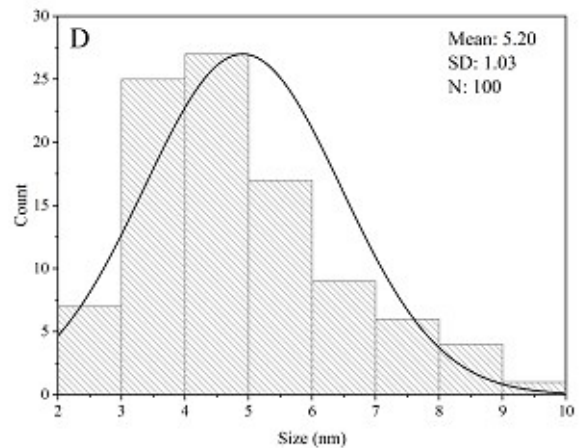
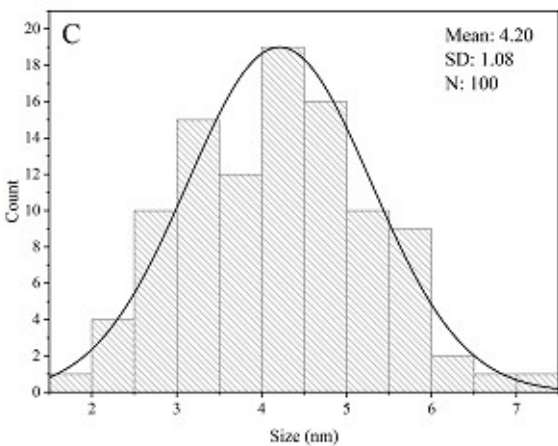
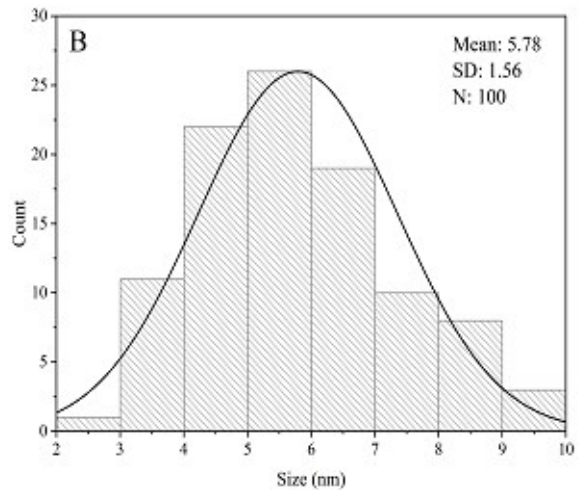
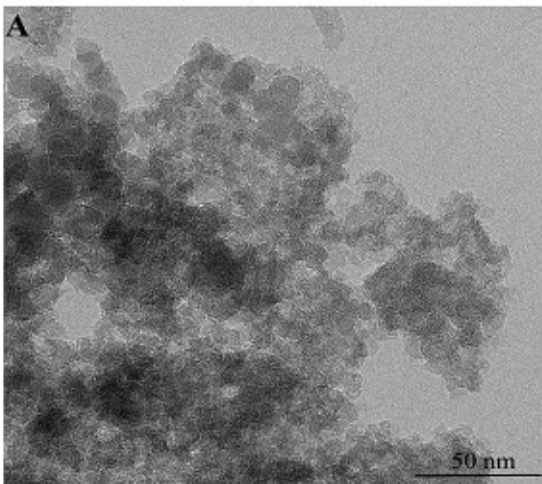


Figure S12 A: TEM image of silica gel, Histogram of B: silica gel, C: G1-SiO<sub>2</sub>, D: Cu-NNN pincer- G1-SiO<sub>2</sub>, E: G2-SiO<sub>2</sub>, F: Cu-NNN pincer- G2-SiO<sub>2</sub>.