

Supporting Information

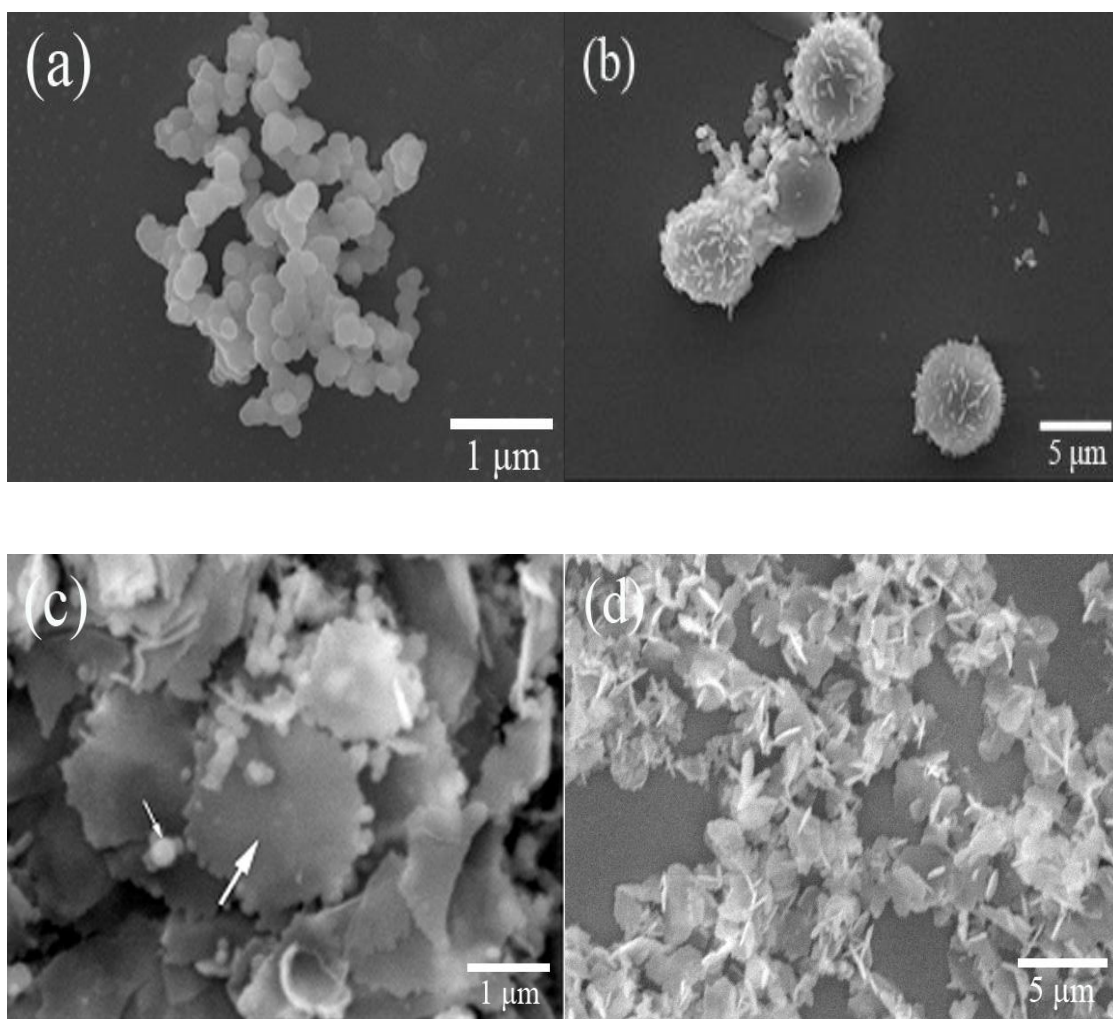


Fig. S1 The chains of polypeptide tuned the morphologies of silica using: (a) PLL₁ (MW = 1-5 KDa), (b) PLL₂ (MW = 4-15 KDa), (c) PLL₃ (MW = 15-30 KDa), and (d) PLL₄ (MW = 30-70 KDa).

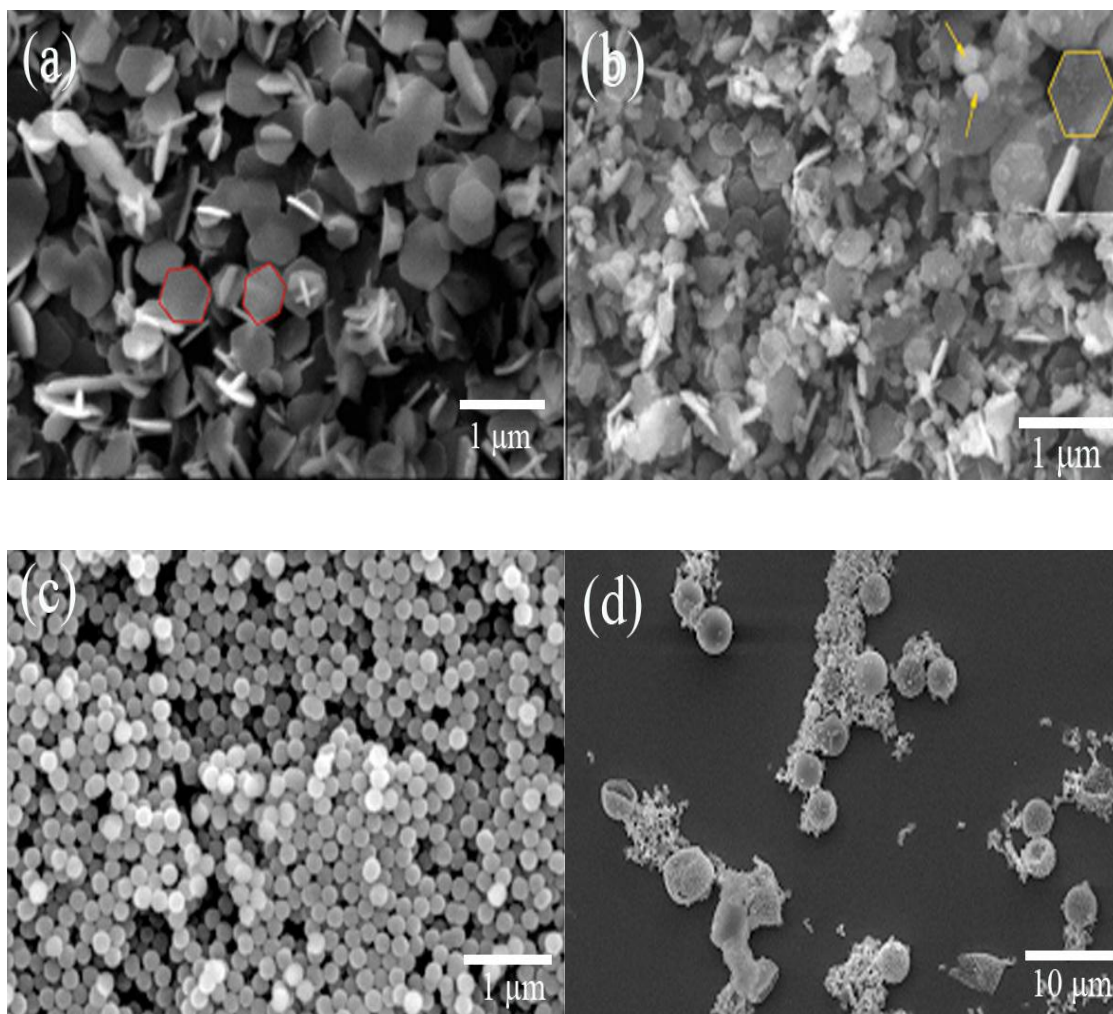


Fig. S2 The influence of PLL peptide concentration on silica morphology. (a) 1 mg/ml, (b) 3 mg/ml, (c) 6 mg/ml, and (d) 9 mg/ml.

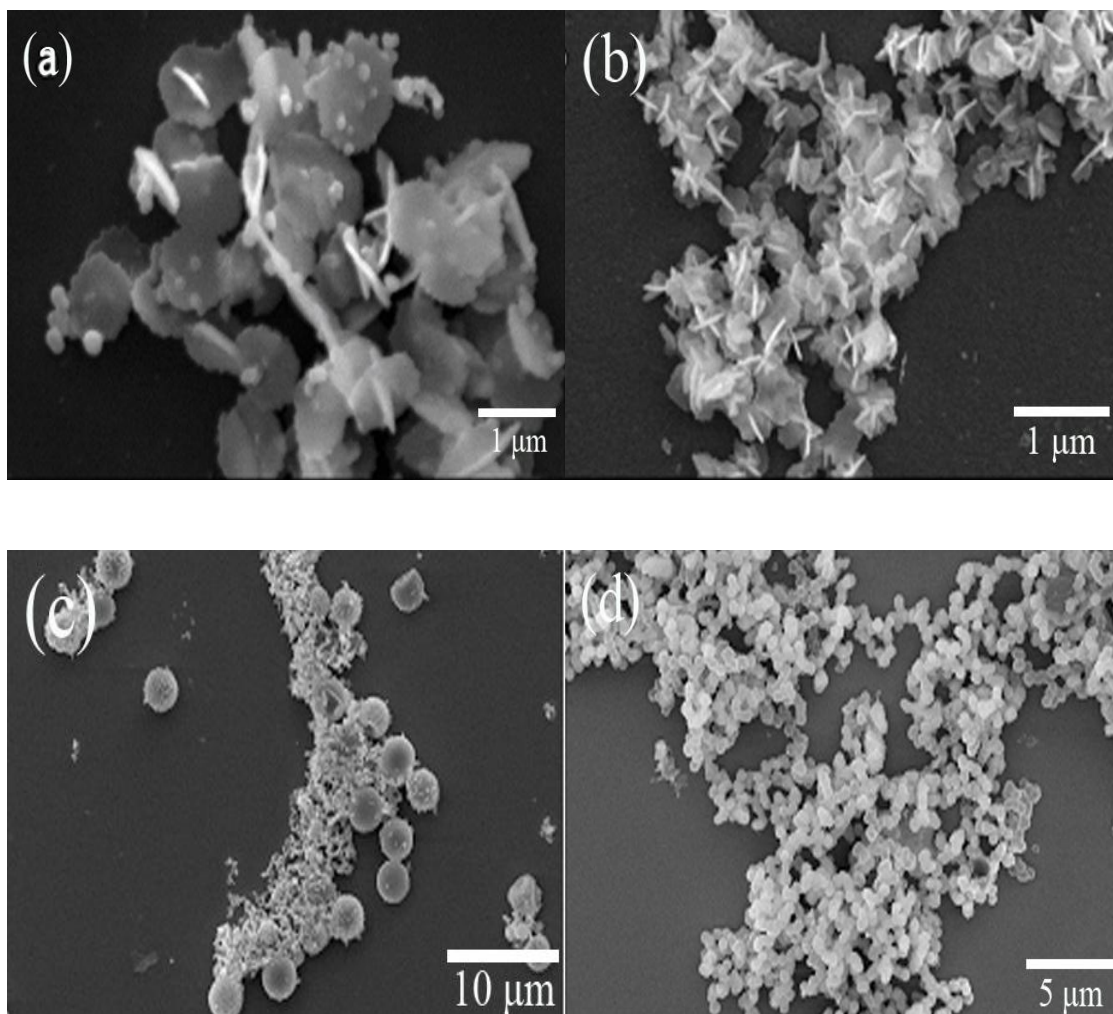


Fig. S3 The morphologies of silica were affected by the value of pH: (a) 6.5, (b) 7.0, (c) 7.6, and (d) 9.0.

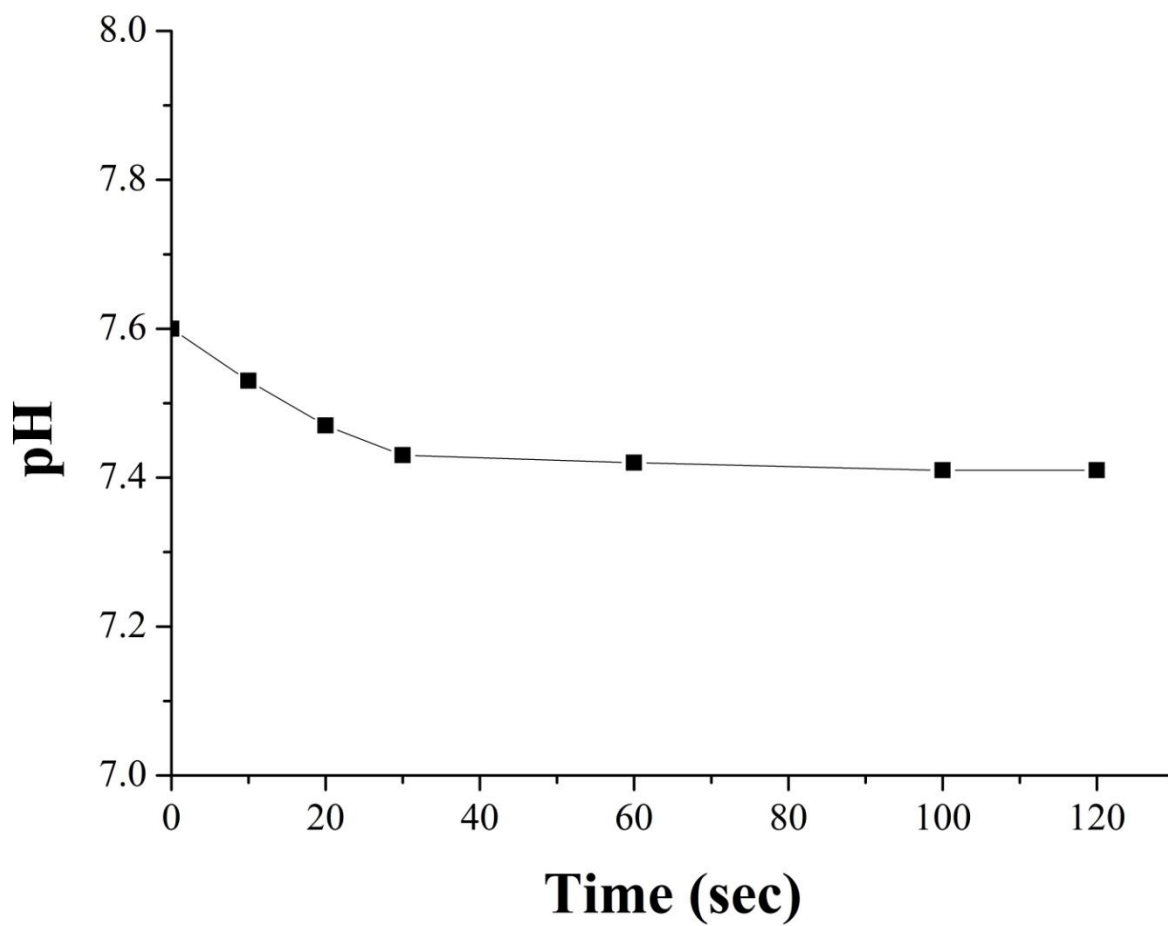


Fig. S4 The pH variation of the biomimetic reaction upon silicic acid was added to the peptide/PBS mixture.

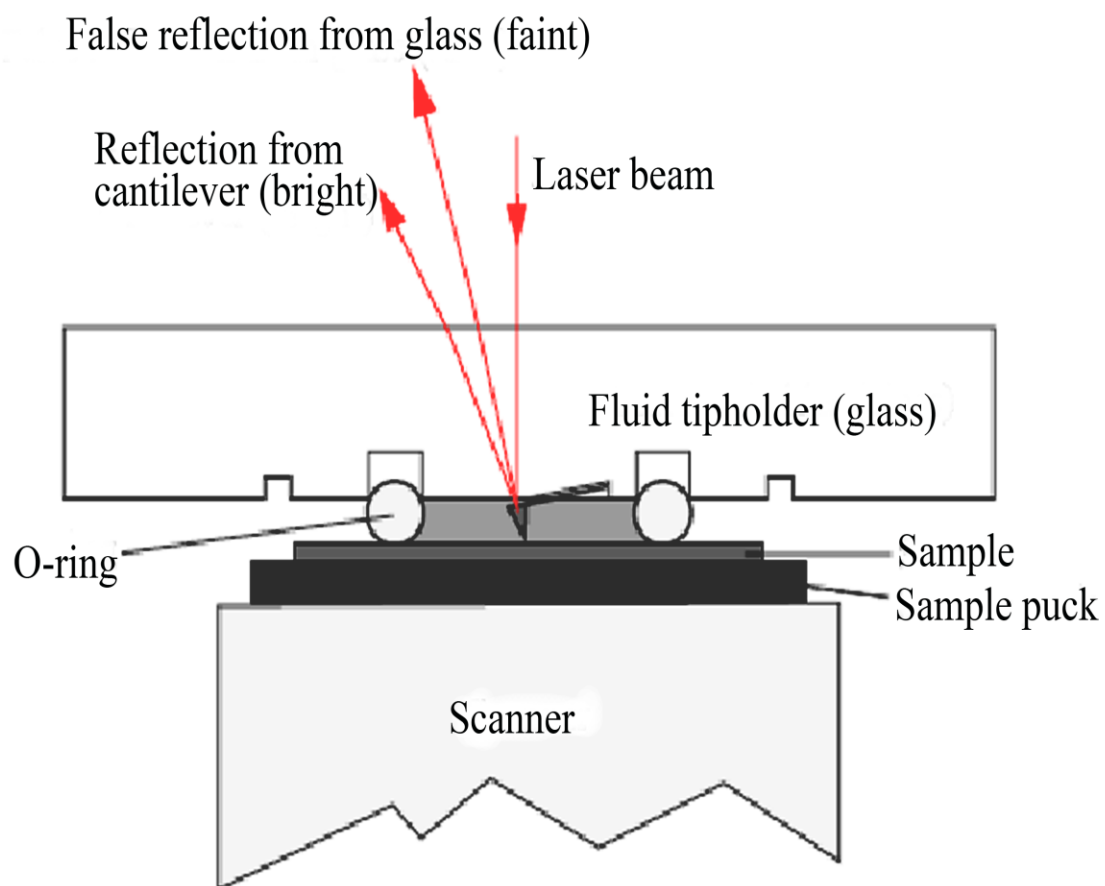


Fig. S5 The structure schematic diagram of Liquid Cell Tip Holder.

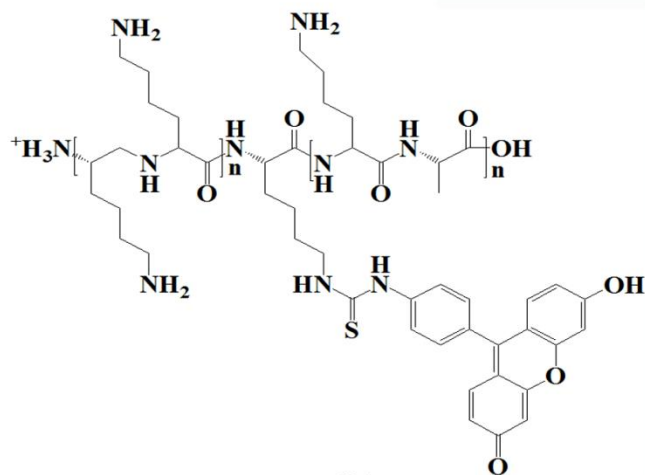
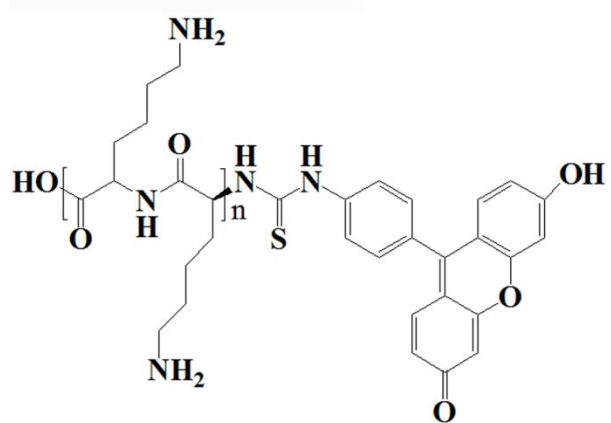


Fig. S6 Chemical structure of (a) FITC-terminal-tagged PLL and (b) FITC-middle-tagged PLL.

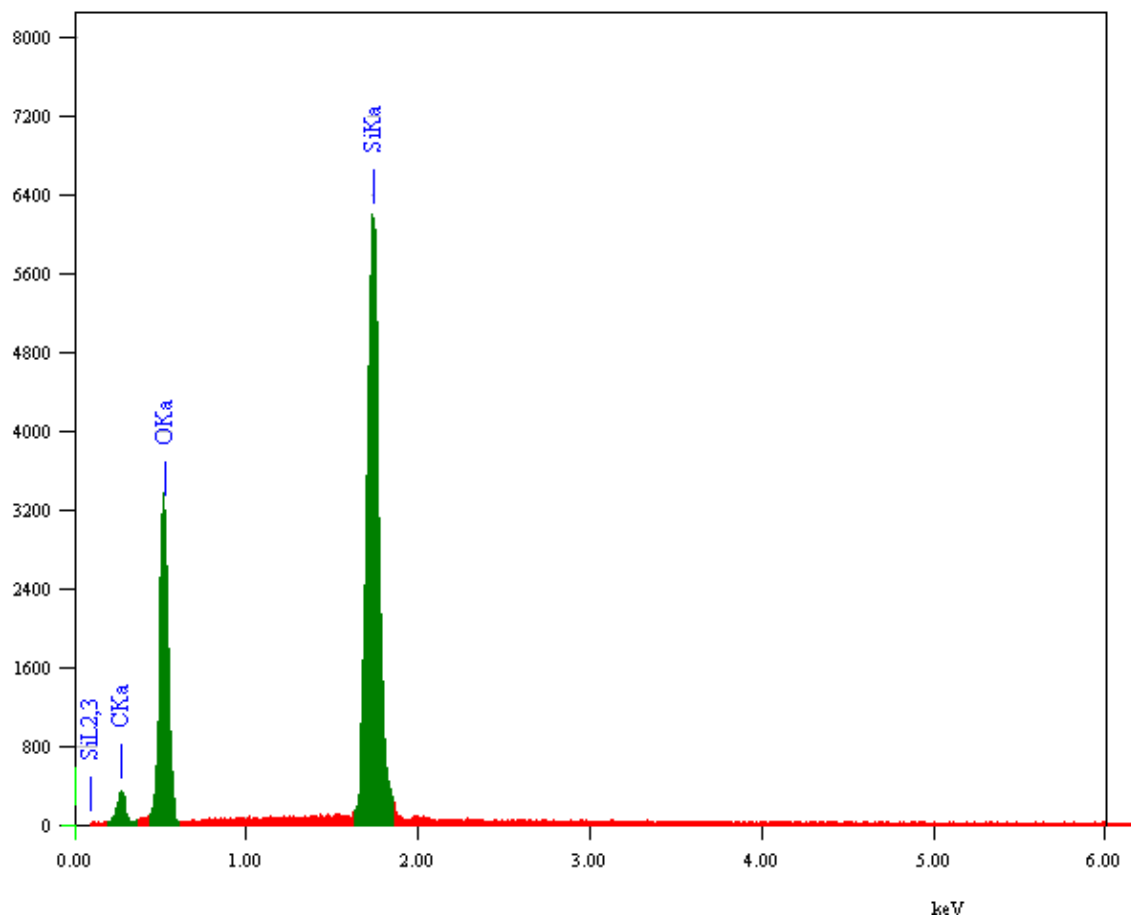


Fig. S7 Representative EDS spectrum of silica mediated by PLL.

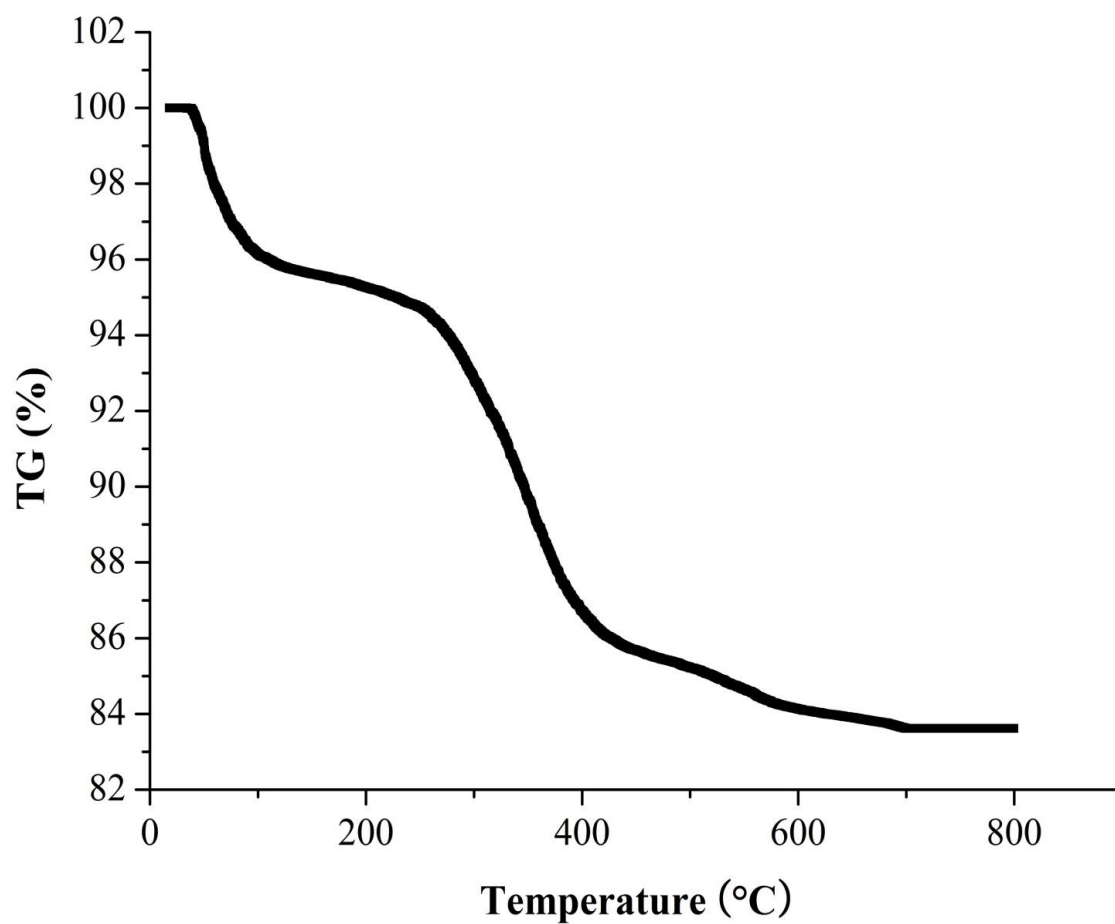


Fig. S8 Representative TGA spectrum of silica precipitated using PLL.