# Supporting Information 

Poly(2-vinylpyridine) Brushes as a Reaction Chamber to Fabricate Spiky Gold Nanoparticles

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Figure S1. Tapping-mode AFM height images and before scanning, a needle was used to gently scratch a trace on the surface of the P2VP brushes grafted on the silicon surface by SIPGP.

The gold-PPy composites layer was peeled from silicon wafers and its TGA curve was shown in Figure S2. The TGA curve of gold-PPy composites showed a two-step weight loss. The initial weight loss below $200{ }^{\circ}$ Cwas attributed to the evaporation of moisture. The second step corresponded the decomposed process of PPy and completely ended at around $600^{\circ} \mathrm{C}$.


Figure S2. TGA curve of the gold-PPy composites peeled from silicon wafers.

