Electronic Supplementary Information

Fractal Nanogold Electrode for Ultrasensitive Thrombin Detection

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![Graph](image)

**Fig. S1** Current reduction of biosensors. (a) FracAu biosensor in the buffer containing 1pM thrombin; (b) Bulk Au biosensor in the buffer containing 1nM thrombin. Although FracAu biosensor was placed in 1000 times diluted thrombin solution, the ΔI is still 131% of the ΔI for bulk Au biosensor, which indicates FracAu electrode is much more sensitive than bulk Au electrode for thrombin detection.
**Fig. S2** Cyclic voltammogram of FracAu (red) and bulk Au (black) electrode in aqueous 0.5M H₂SO₄ solution. Scan rate is 100mV/s. The surface area of FracAu electrode is about 10.5 times compared with that of bulk Au electrode.