Supporting Information

Polymerization-assisted signal amplification for electrochemical detection of biomarkers

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Figure S1. AGET ATRP mechanism.
Figure S2. The representative SEM image of the substrate Ab2*-Ag-Ab1-Au.
Figure S3. (A) The surface reflectance FT-IR spectrum of the Au surface, a is Ab$_2^*$-Ag-Ab$_1$-Au, b is PGMA-Ab$_2$-Ag-Ab$_1$-Au; (B) X-ray photoelectron spectroscopy analysis. C 1s core-level spectra of the Ab$_2^*$/Ag/Ab$_1$/Au surface subjected to AGET ATRP of GMA for 2 h.
**Figure S4.** Plots of the the reduction peak currents of FeNH$_2$ against the coupling time of FeNH$_2$ and PGMA, the concentration of PSA is 40 ng mL$^{-1}$, AGET ATRP reaction time is 2 h.