Supporting Information:

MoS$_2$/ Pt nanocomposites functionalized microneedle for real-time monitoring of hydrogen peroxide release from living cell

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Figure S1. SEM images of (A) bare acupuncture needle (Inset: the whole image of the tip) and (B) AuNPs decorated acupuncture needle.

Figure S2. SEM images of MoS$_2$/AN when the electrochemical polymerization time of MoS$_2$ is for 15s，30s，and 45s, respectively.

Figure S3. SEM images of MoS$_2$/PtNPs/AN when the electrochemical polymerization time of PtNPs is for 200s，300s，and 400s, respectively.
Figure S4. Nyquist plots of EIS and the corresponding fitting curve at the different nanomaterial-modified acupuncture needle in aqueous solution consisting of 5 mmol/L of K$_3$[Fe(CN)$_6$] and 0.1 mol/L of KCl.