

Supporting information for the paper

**Indium tin oxide electrode modified by a SH⁺ ion
implantation technique for direct electrocatalytic sensing of
hydrogen peroxide**

Mingxing Zhang^a, Jingbo Hu^{*a, b}

^aCollege of Chemistry, Beijing Normal University, Beijing, 100875, PR China

^bKey Laboratory of Beam Technology and Material Modification of Ministry of

Education, Beijing Normal University, Beijing, 100875, PR China

*Corresponding author. E-mail: hujingbo@bnu.edu.cn (Jingbo Hu)

Tel: +86 10 62209398; Fax: +86 10 58807843

Figure Captions

Figure 1S. XPS spectra for (a) ITO and (b) SH/ITO electrode surface.

Figure 2S. AFM images of (a) ITO, (b) SH/ITO, (c) Hb/SH/ITO and (d) Nf/Hb/SH/ITO electrode.

Figure 3S. UV-vis adsorption spectra of (a) Hb solution (0.1 mg/mL), (b) Nf/Hb/SH/ITO and (c) Hb/ITO electrodes.

Figure 4S. EIS of (a) ITO, (b) SH/ITO, (c) Hb/SH/ITO and (d) Nf/Hb/SH/ITO electrodes in 0.1 M KCl containing 5 mM $\text{Fe}(\text{CN})_6^{3-/4-}$ solution. Potential, 0.31 V; alternative voltage, 5 mV and frequency range, 0.1 ~ 10⁵ Hz.

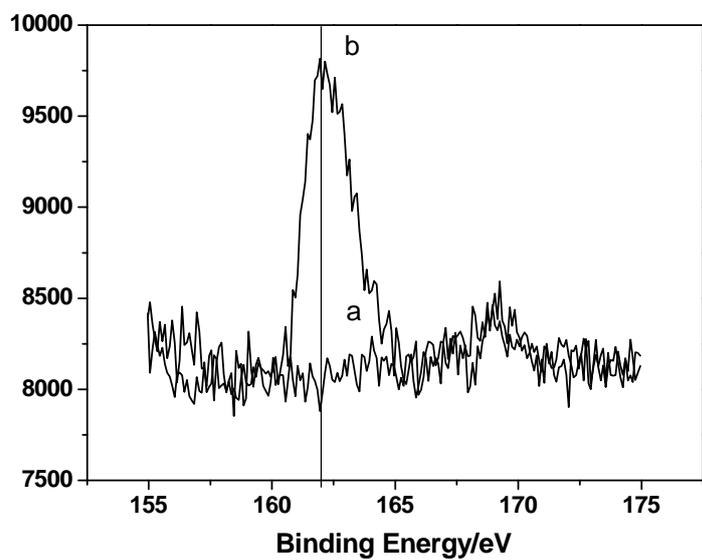


Figure 1S

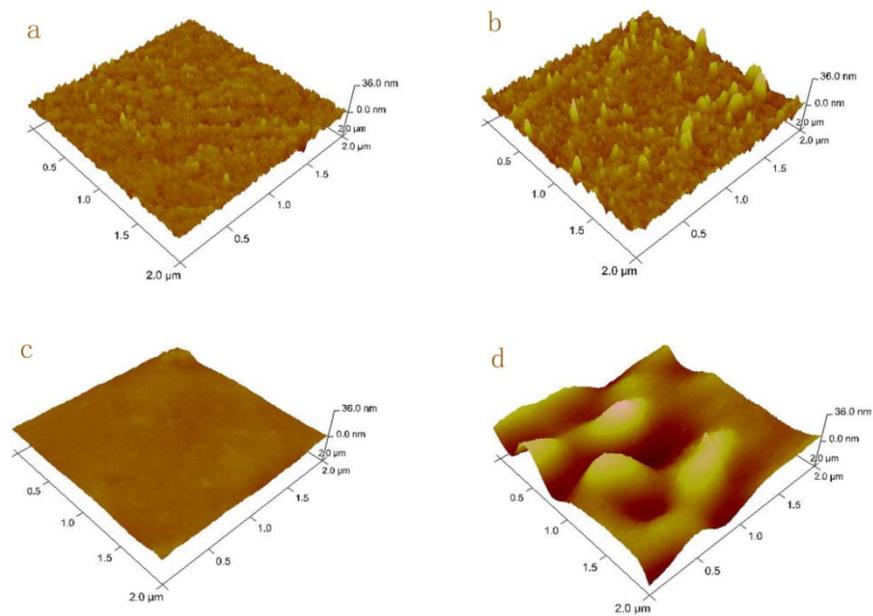


Figure 2S

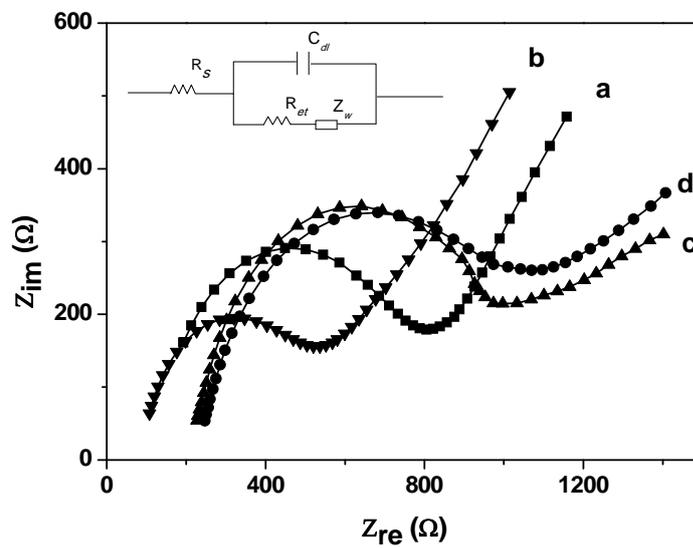


Figure 3S

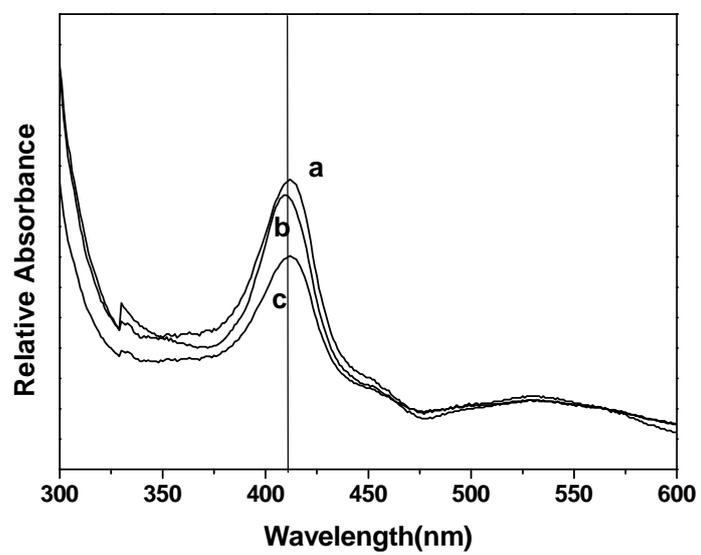


Figure 4S