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Sn-Fe cyanogels noncovalently grafted by carbon nanotube in versatile biointerface design: an efficient matrix and a facile platform for glucose oxidase immobilization

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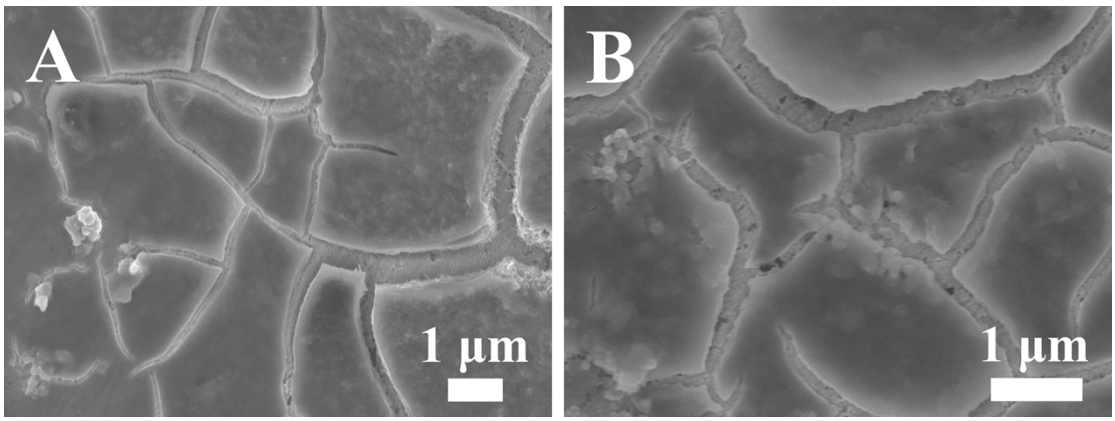

Fig. S1 SEM images of the Cyanogels-PB-MWCNTs/Au electrode in different magnification.

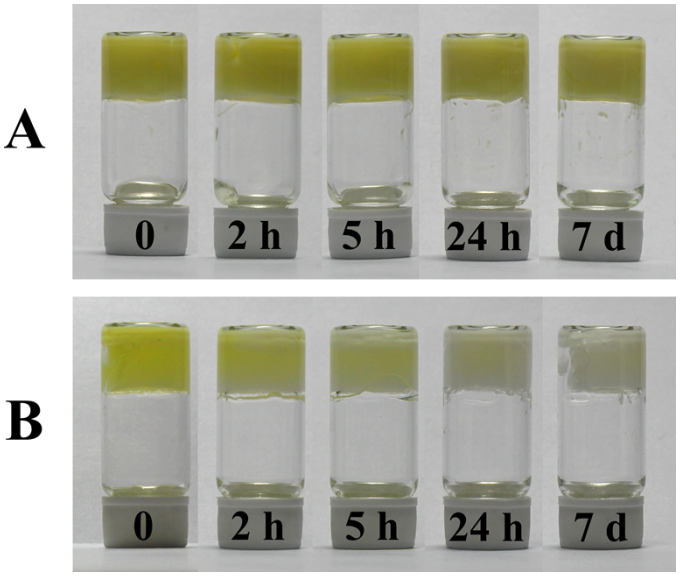

Fig. S2 Digital photographs of (A) the Sn-Fe cyanogels and (B) the silica gel, entrapped with the same amount of GOx after immersed in 48 mM sodium acetate buffer solution at pH 5.1 for various time under 4 °C.

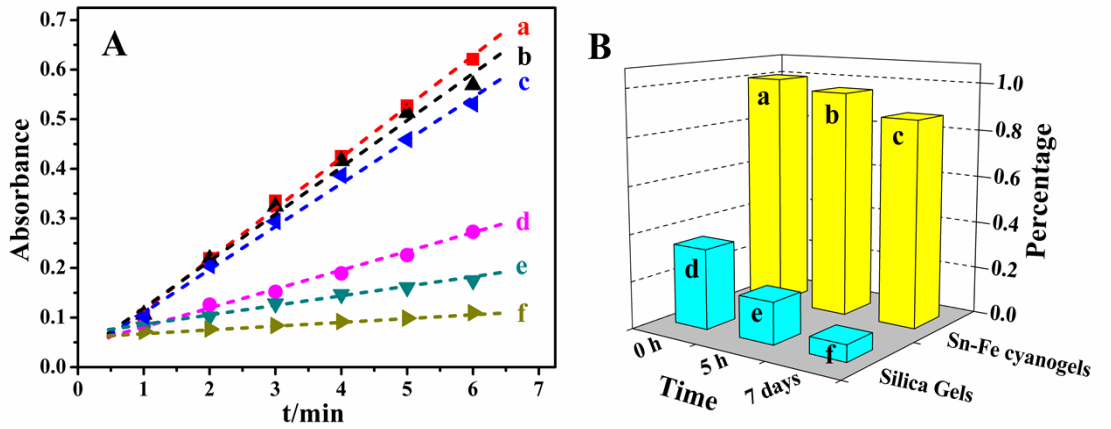

Fig. S3 (A) Kinetic curves of GOx-bound Sn-Fe cyanogels film (a, b, c) and GOx-bound silica gel film (d, e, f) in 48 mM sodium acetate buffer solution at pH 5.1, containing 0.16 mM o-dianisidine, 1.61% (w/v) glucose, and 1.94 units/mL POD, determined by monitoring the corresponding absorbance spectra of oxidized o-Dianisidine at 500 nm at different reaction time by UV-visible spectrophotography. The enzyme-bound complex films were immersed in 48 mM sodium acetate buffer solution at pH 5.1 for (a, d) 0 h, (b, e) 5 h, (c, f) 7 days, before detection. (B) The activity profile of the immobilized enzyme normalized on the initial activity of GOx entrapped in Sn-Fe cyanogels film as shown in kinetic curve a.

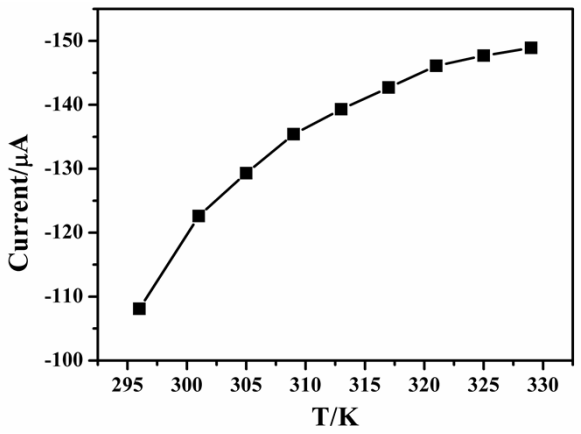

Fig. S4 Effect of temperature on response current of the Cyanogels-PB-MWCNTs/Au electrode toward glucose biosensing at the concentration of 2.00×10^{-1} M.