Supporting Information

"Ready-to-Use" Hollow Nanofibers Membrane-Based Glucose Testing Strips

Xiaoyuan Ji,[a] Zhiguo Su,[a,b] Ping Wang,[a,c] Guanghui Ma,[a] Songping Zhang [a,b,*]

[a] National Key Laboratory of Biochemical Engineering, Institute of Process Engineering, Chinese Academy of Sciences, Beijing 100190, China

[b] Collaborative Innovation Center of Chemical Science and Engineering (Tianjin), Tianjin, 300072, China

[c] Department of Bioproducts and Biosystems Engineering and Biotechnology Institute University of Minnesota, St. Paul, MN 55108, USA

* Corresponding author:

Songping Zhang, Email: spzhang@ipe.ac.cn, Tel (fax): +86 10 82544958

y =0.25x - 1.68E-8
r^2 = 0.9975

y =0.045x +0.075
r^2 = 0.9966

ABTS as chromogenic agent
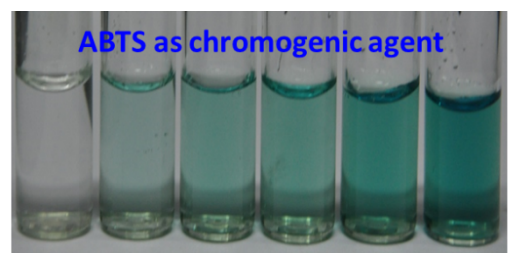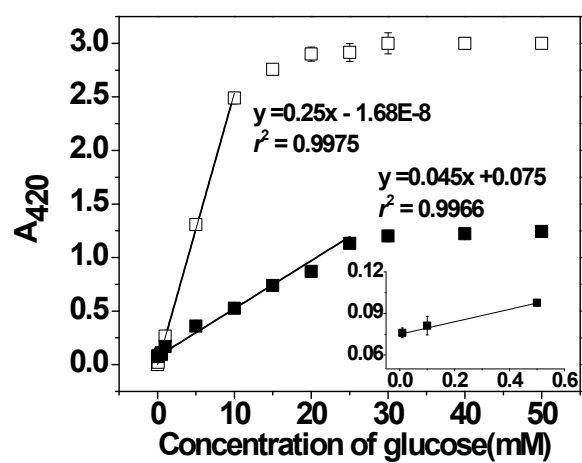
0 mM   5mM   10mM   15mM   20mM   25mM

Figure S1. Calibration curves for glucose assay obtained by using (□) free and (■) hollow nanofibers membrane based GOD/HRP bi-enzyme systems with ABTS as chromogenic agents. Inset figure shows the data points for 0.01, 0.1, and 0.5 mM glucose solution measured with ABTS-test strip. Concentrations of enzymes and chromogenic agents for the free system was adjusted to the same as that of the immobilized system. Picture in right hand shows the photographs of the detection of different concentration of glucose obtained by digital camera after removal of the ABTS-test strips.
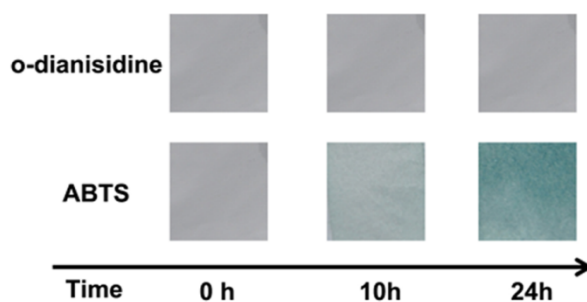

Figure S2. Color change of hollow nanofibers membrane based o-dianisidine-test strip and ABTS-test strip in air.