

Supporting Information for

**Facile fabrication of anti-fouling polymeric membrane
potentiometric ion sensors based on a biocide 4,5-dichloro-2-*n*-octyl-
4-isothiazolin-3-one-containing self-adhesive waterborne
polyurethane coating**

Ying Zhou ^{a, c}, Rongning Liang ^{a, *}, Wei Qin ^{a, b, d}

^a CAS Key Laboratory of Coastal Environmental Processes and Ecological Remediation, Yantai Institute of Coastal Zone Research (YIC), Chinese Academy of Sciences (CAS); Shandong Key Laboratory of Coastal Environmental Processes, YICCAS, Yantai, Shandong 264003, P. R. China

^b Laboratory for Marine Biology and Biotechnology, Qingdao Marine Science and Technology Center, Qingdao, Shandong 266237, P. R. China

^c University of Chinese Academy of Sciences, Beijing 100049, P. R. China

^d Center for Ocean Mega-Science, Chinese Academy of Sciences, Qingdao, Shandong 266071, P. R. China

* Corresponding author. Fax: +86-535-2109000

E-mail address: rnlwang@yic.ac.cn



Fig. S1. The prepared self-adhesive anti-fouling polymer composite.

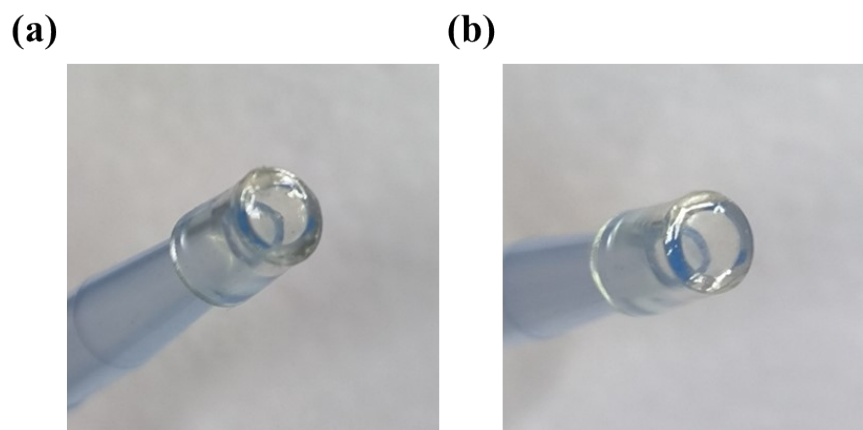


Fig. S2. Photographs showing the macro-observations of (a) the pristine plasticized PVC Ca²⁺-selective membrane and (b) the same membrane after modification of the self-adhesive anti-fouling coating.

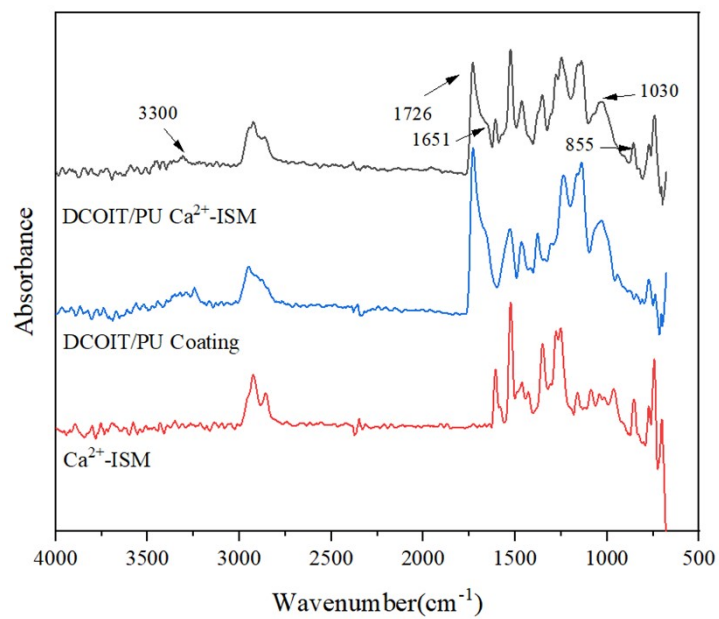


Fig. S3. ATR-FTIR spectra of DCOIT/PU coating and the ISM before and after DCOIT/PU modification.

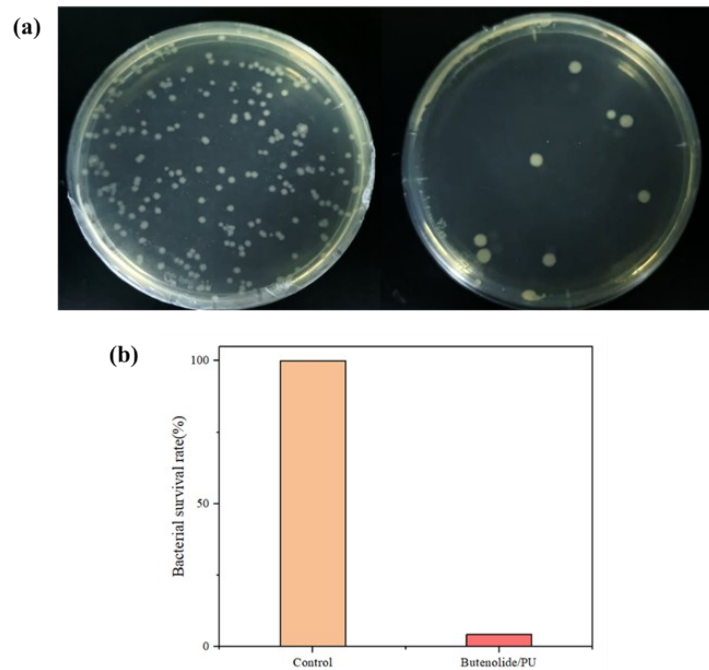


Fig. S4. Colony-forming units (CFUs) of the live *Bacillus Subtilis* cells adsorbed onto the membrane surfaces of the control blank and DCOIT/PU-coated Ca^{2+} -ISEs after contact with a bacterial suspension solution ($\sim 10^8$ CFU mL^{-1}) for 6 h. Inset shows the corresponding images of bacterial culture plates of the *Bacillus Subtilis* cells adhered on the membranes.

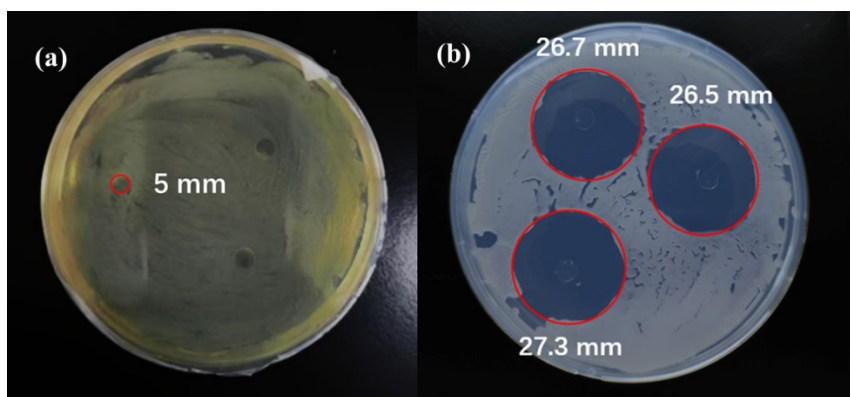


Fig. S5. Inhibition zones and their diameters formed on solid culture media after 24-h incubation at 37°C: (a) Blank ISM; (b) DCOIT/PU-coated ISM.