

Supplementary Information

Highly portable fluorescent turn-on sensor for Sulfide Anions based on Silicon nanowires

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Table S1. Samples investigated by TGA

Sample	Mass loss (%)	M (organic. residues) [g mol ⁻¹]
SiNWs	2.4	-
4-A-SiNWs	36.8	415.21

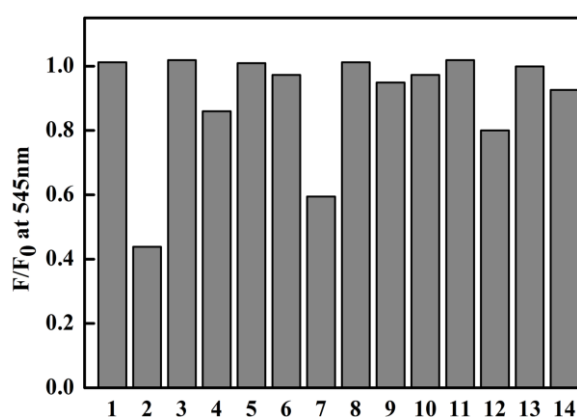


Fig. S1 Relative fluorescence intensity of 4-A-SiNWs (50 μg/mL) in the presence of 10 μM various metal ions. HEPES buffer (pH=7.0). $\lambda_{\text{ex}}=430\text{nm}$, $\lambda_{\text{em}}=545\text{nm}$. 1-14 is

successively for blank, Cu^{2+} , Ca^{2+} , Cd^{2+} , Mg^{2+} , Al^{3+} , Co^{2+} , Na^+ , Hg^{2+} , Mn^{2+} , K^+ , Ni^{2+} , Pb^{2+} , Zn^{2+} .

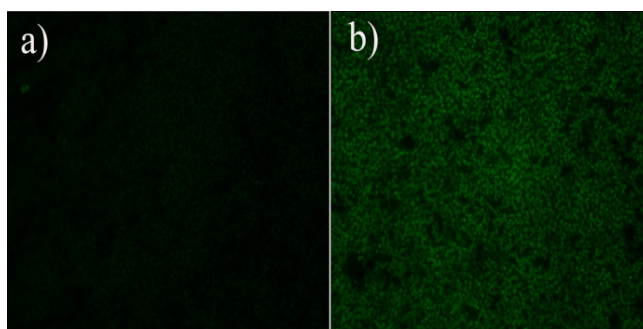


Fig. S2 Fluorescence images of the SiNW arrays based sensor before a) and b) after being treated with H_2S gas for 1 minute. The sensor prewetted with water was placed in a conical flask, then the H_2S gas produced by ferrous sulfide and dilute sulphuric acid was introduced into the system.