

Supporting Information

Modified silicon nanowires: a fluorescent nitric oxide biosensor with enhanced selectivity and stability †

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1. Preparation of SiNW arrays

High-quality SiNW arrays were fabricated according to previous work ¹. A clean n-type silicon wafer with (100) orientation was immersed into 5% hydrofluoric acid (HF) solution to bring Si-H bonds on the surface of the wafer. Afterwards, the wafer was soaked in a 5 mM silver nitrate solution to deposit Ag particles on its surface, and the particles would act as catalyst in the following etching process. Finally, the wafer attached with Ag particles was soaked in the etching solution consisting of 4.8 M HF and 0.2 M H₂O₂ at 50 °C for 30 min to produce SiNW arrays. The diameters of the SiNWs are in the range of 100–250 nm, while the wire length is around 30 μm (Figure S1).

2. SEM image of the SiNW arrays ^{S1}.

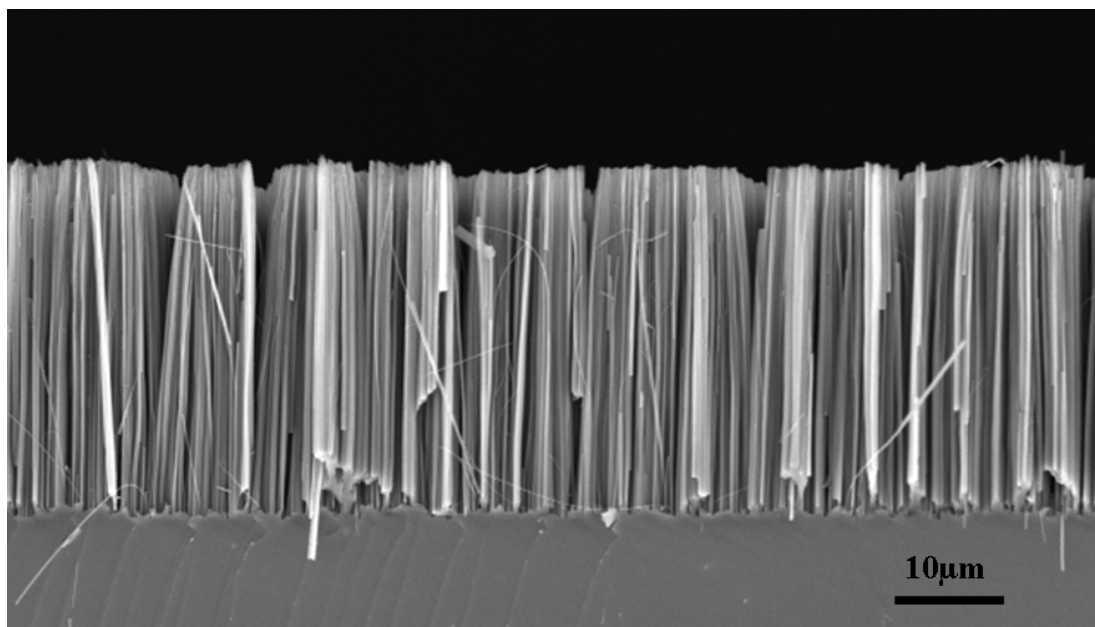


Figure S1. SEM image of the side view of the substrate of the SiNW arrays.

3. Modification of SiNW arrays

The modifying procedures applied to SiNW arrays were the same as to SiNWs obtained by CVD methods reported in the letter.

4. References.

- S1 X. T. Wang, W. S. Shi, G. W. She, L. X. Mu and S. T. Lee, *Appl. Phys. Lett.*, 2010, **96**, 053104.