

## Supplementary information for

### ZnO/SiO<sub>2</sub> core/shell nanowires for capturing CpG rich single-stranded DNAs

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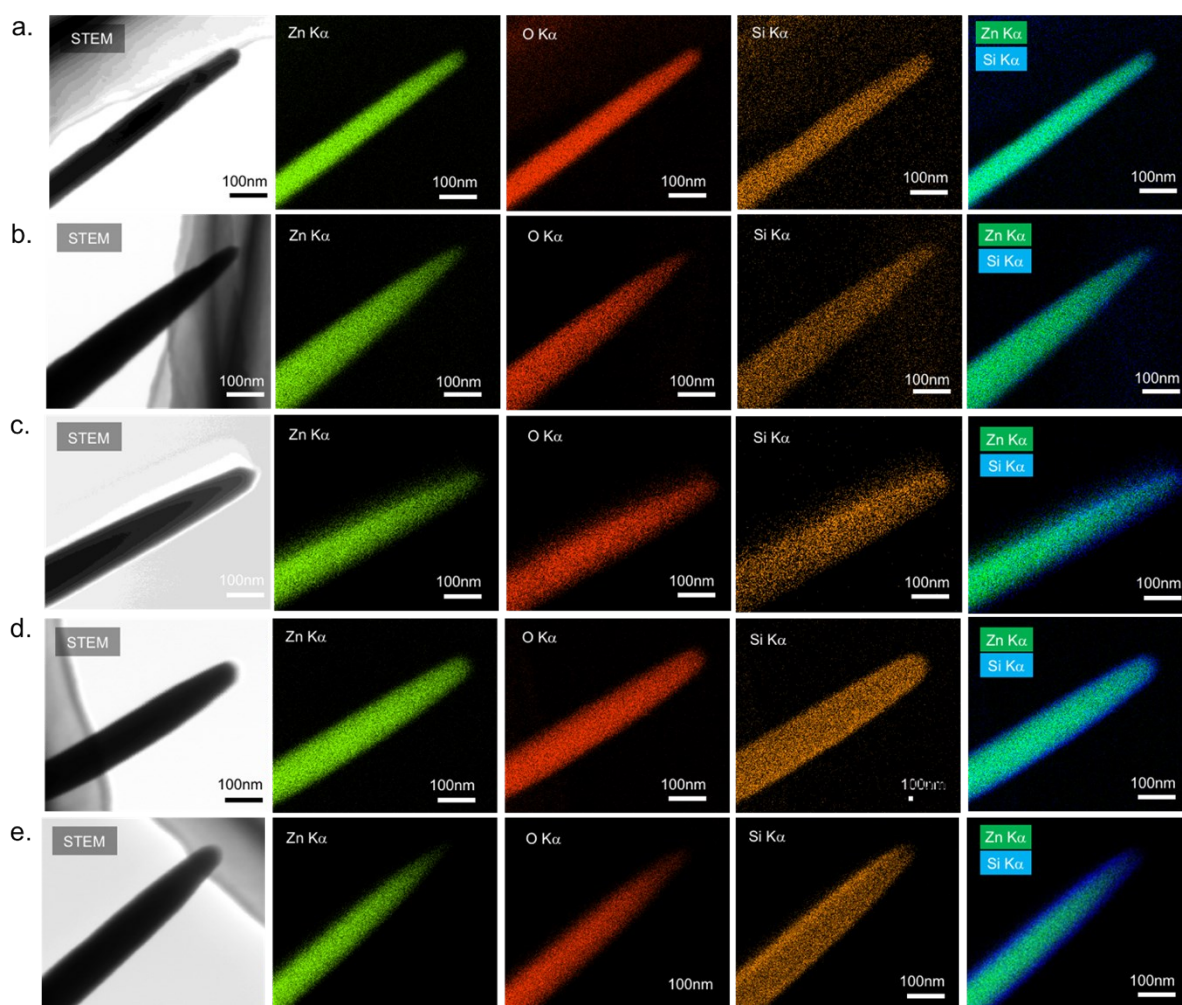
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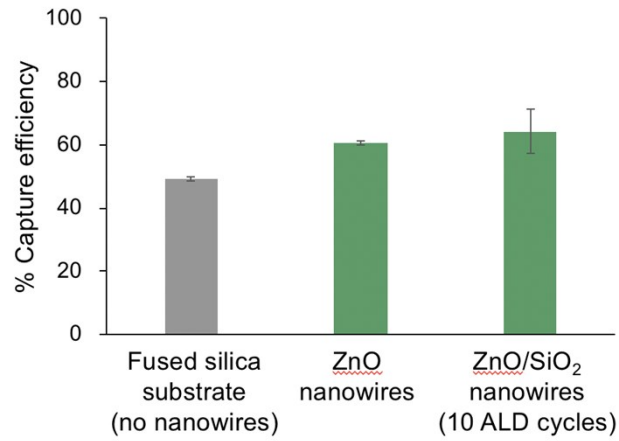
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**Supplementary Figure 1.** STEM-EDS elemental mapping of ZnO/SiO<sub>2</sub> nanowires fabricated with different numbers of ALD cycles. **(a)** 10 cycles. **(b)** 25 cycles. **(c)** 55 cycles. **(d)** 100 cycles. **(e)** 200 cycles. Zn, O and Si are respectively highlighted as green, red and orange for single elemental mappings, and Zn and Si are respectively highlighted as green and blue for dual elemental mappings.



**Supplementary Figure 2.** Capture efficiency of ssDNAs on fused silica substrate (no nanowires), ZnO nanowires and ZnO/SiO<sub>2</sub> nanowires (10 ALD cycles). Experimental conditions: 50  $\mu$ L of 50 ng/ $\mu$ L DNA solution; flow rate 5  $\mu$ L/min.