

## Online Supplementary Information

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### **Ultra simple catalyst layer preparation for the growth of vertically aligned CNTs and CNTs-based nanostructures**

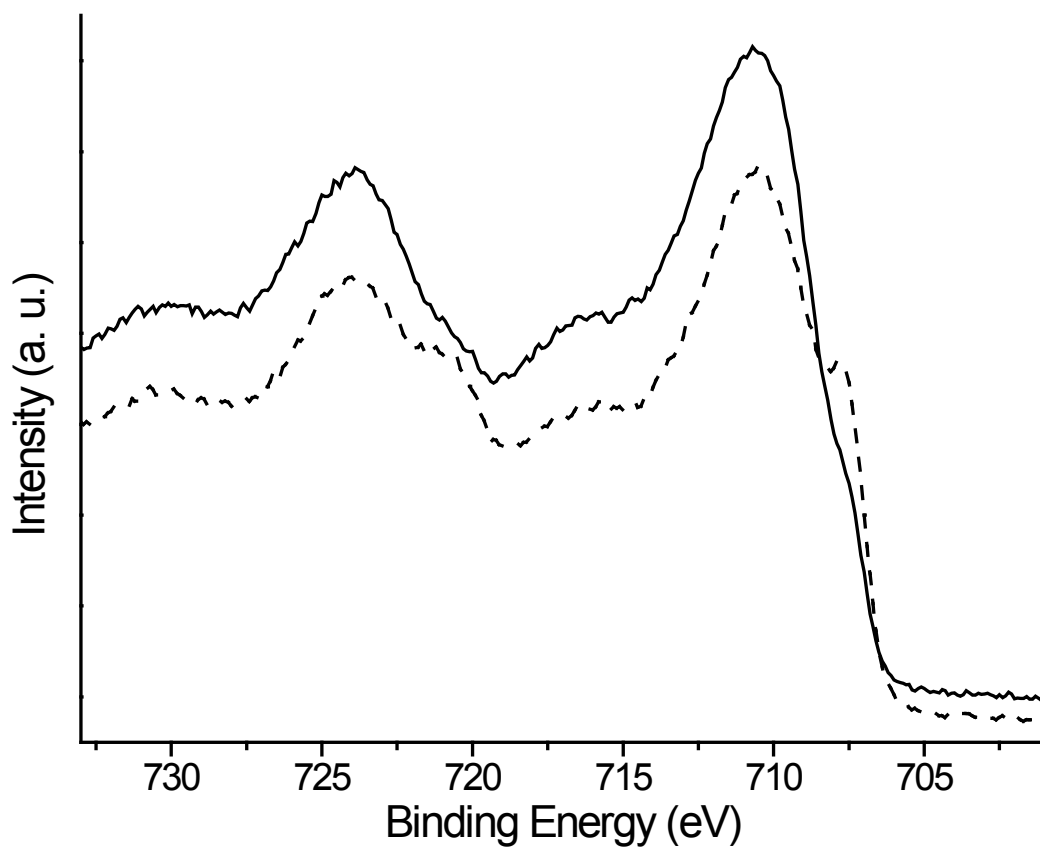
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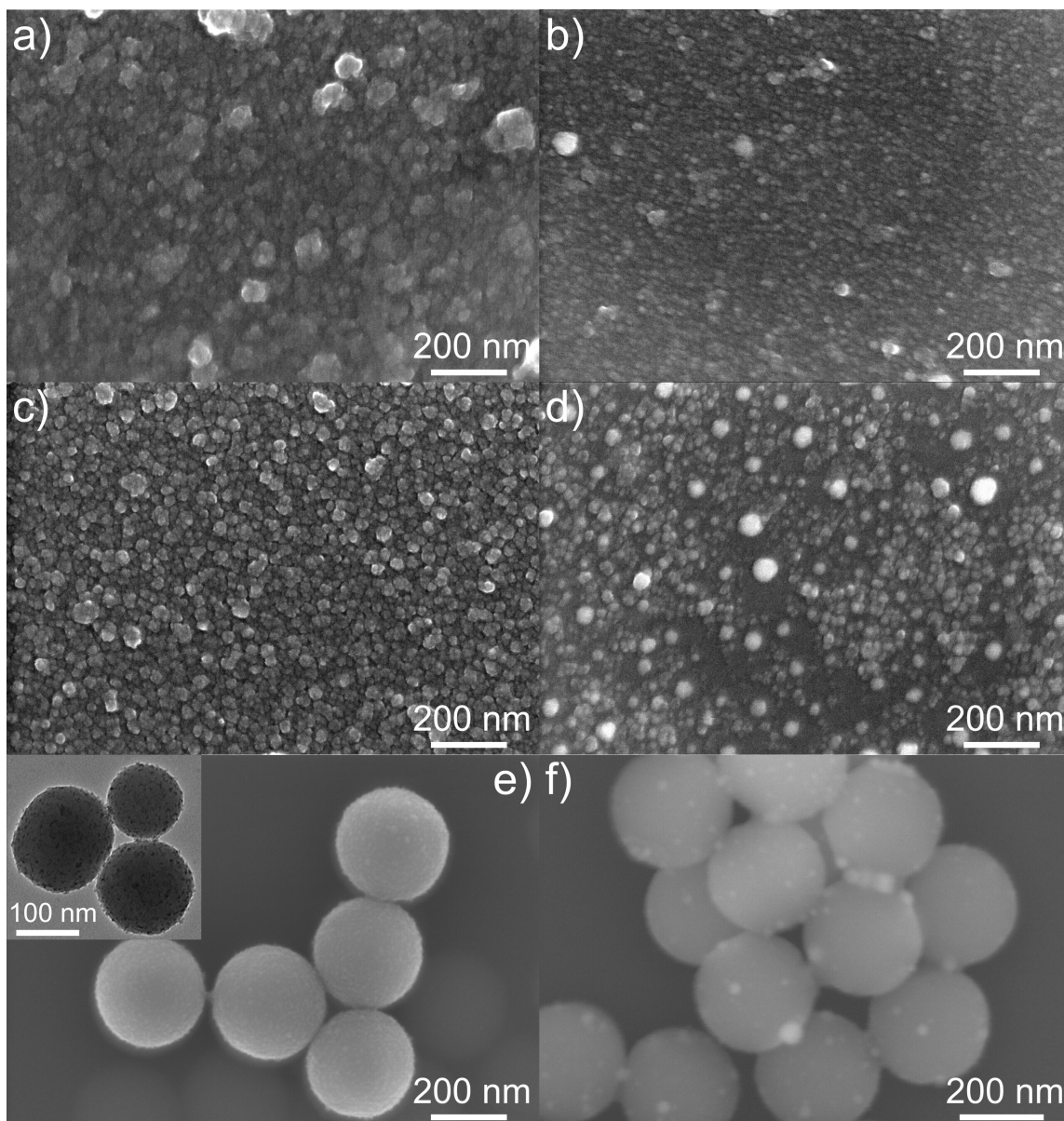
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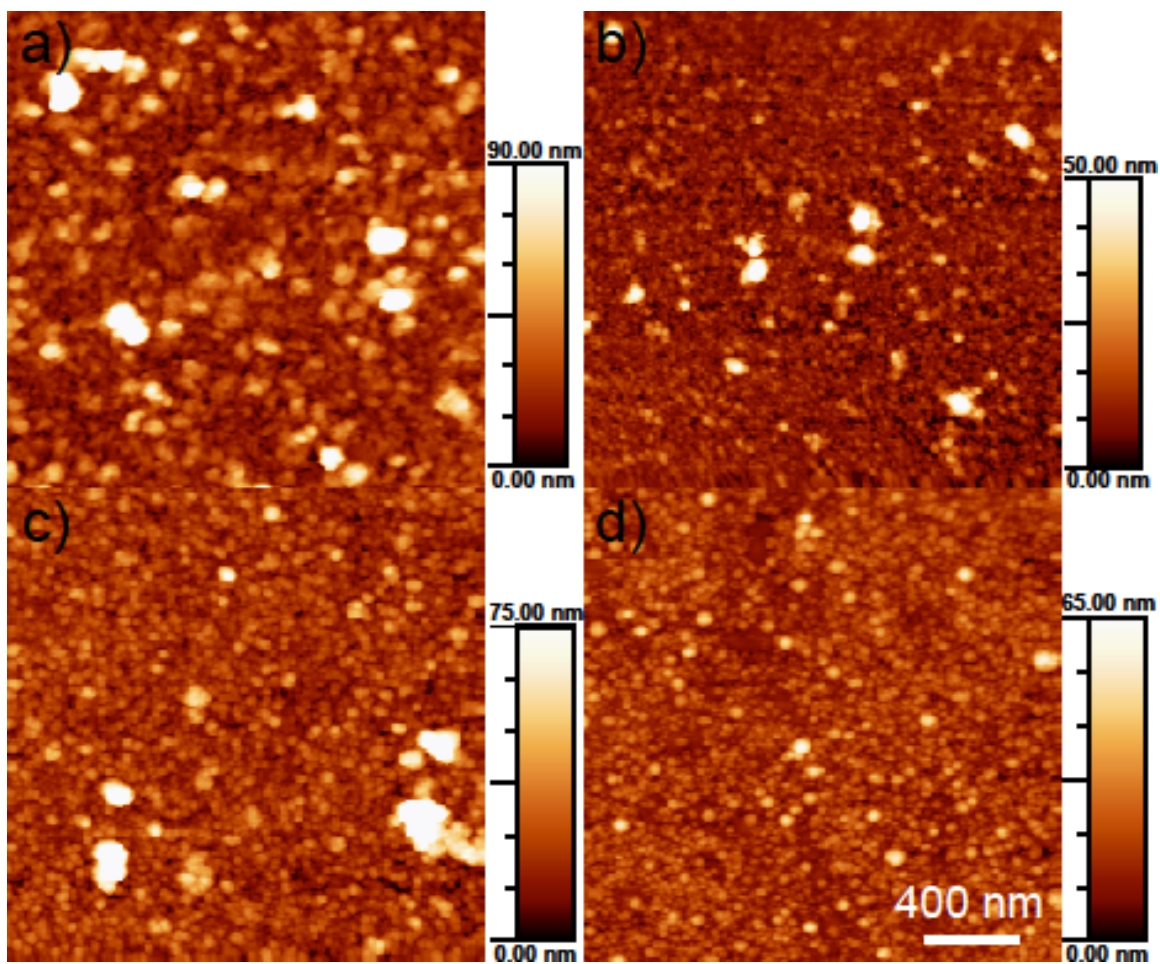


**Fig. S11** Fe2p XPS spectra of iron oxide deposited on Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>/Si (dashed line) and SiO<sub>2</sub>/Si (full line) wafers

### High resolution version of the SEM, AFM and TEM figures of the manuscript

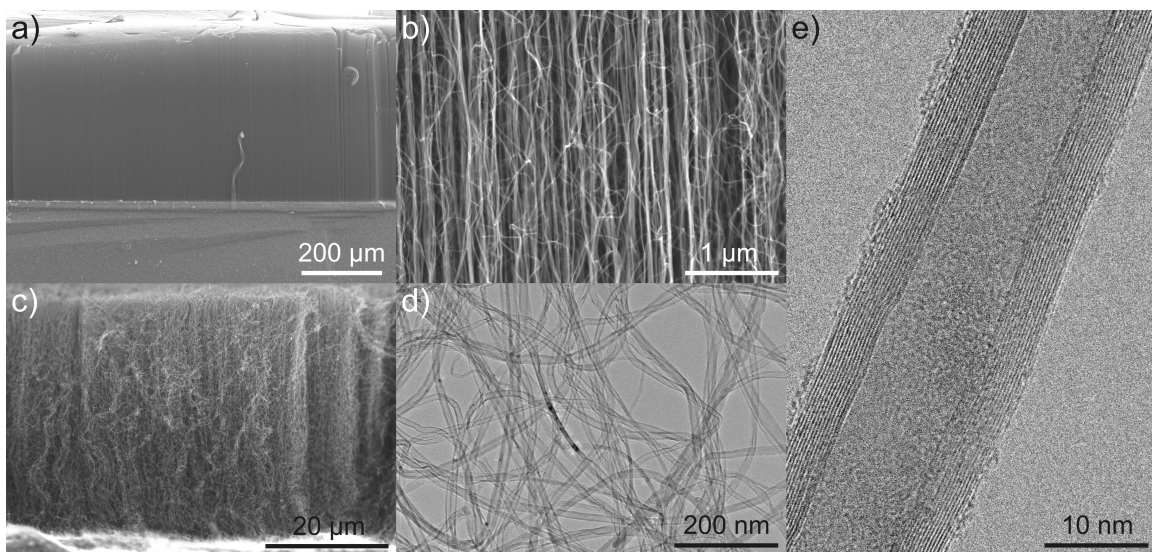


**Fig. 1** SEM images after iron oxide deposition (a,c,e) and after the annealing treatment (b,d,e) for Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>/Si, SiO<sub>2</sub>/Si wafers and silica spheres, respectively. Inset of e) TEM image of iron oxide coated silica spheres

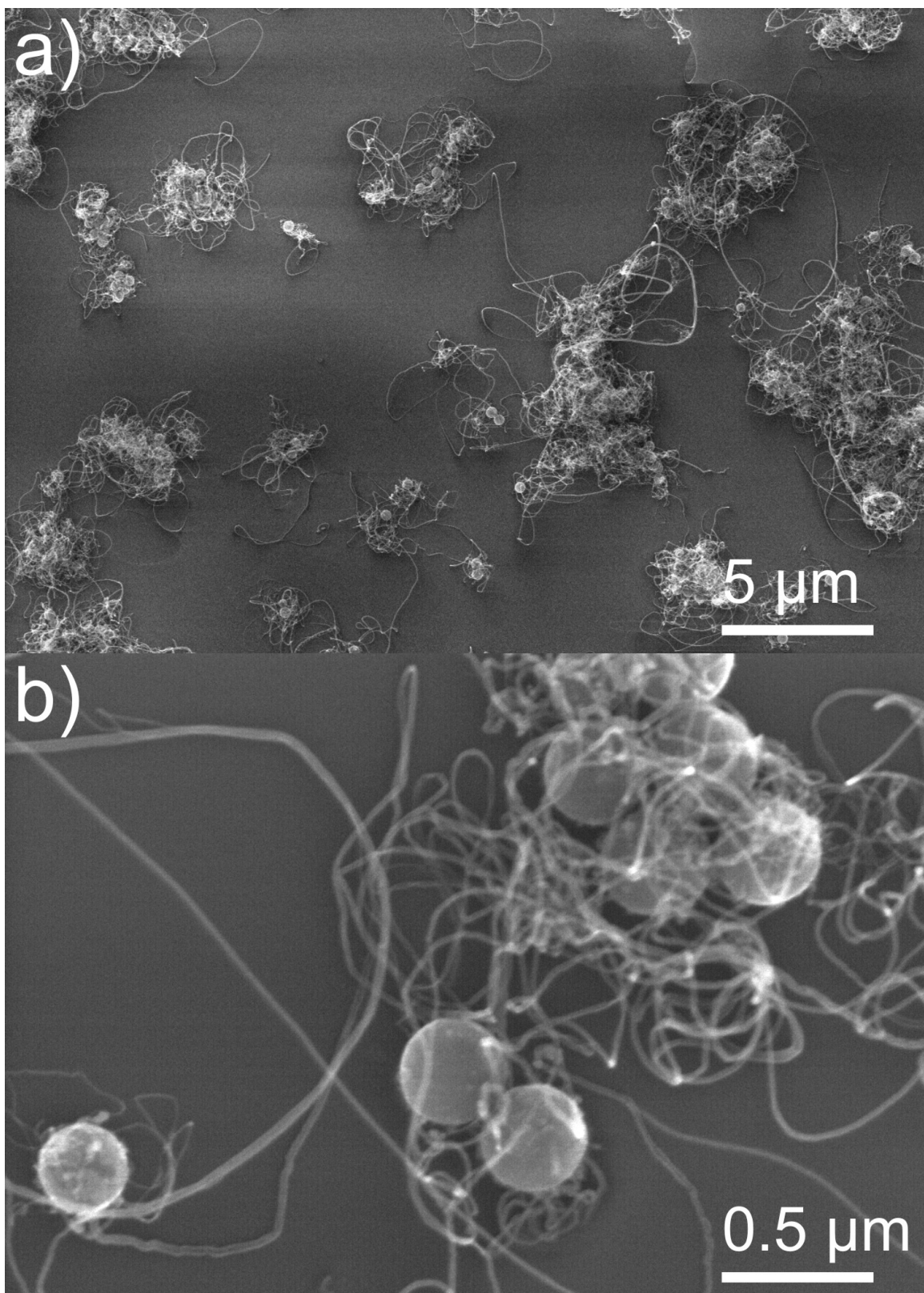


**Fig. 2** AFM images after iron oxide deposition (a,c) and after the annealing treatment (b,d) for  $\text{Al}_2\text{O}_3/\text{SiO}_2/\text{Si}$  and  $\text{SiO}_2/\text{Si}$  wafers, respectively





**Fig. 3** SEM images of nanotubes grown on Al<sub>2</sub>O<sub>3</sub>/SiO<sub>2</sub>/Si (a,b). SEM, TEM and HRTEM images of nanotubes grown on SiO<sub>2</sub>/Si (c,d,e)



**Fig. 5** SEM images of CNTs grown onto SiO<sub>2</sub> spheres for 10 (a) and 30 s (b)