

## Electronic Supplementary Information (ESI)

### In Situ Growth of ZnO/SnO<sub>2</sub>(ZnO:Sn)<sub>m</sub> Binary/Superlattice Heterojunction Nanowire Arrays

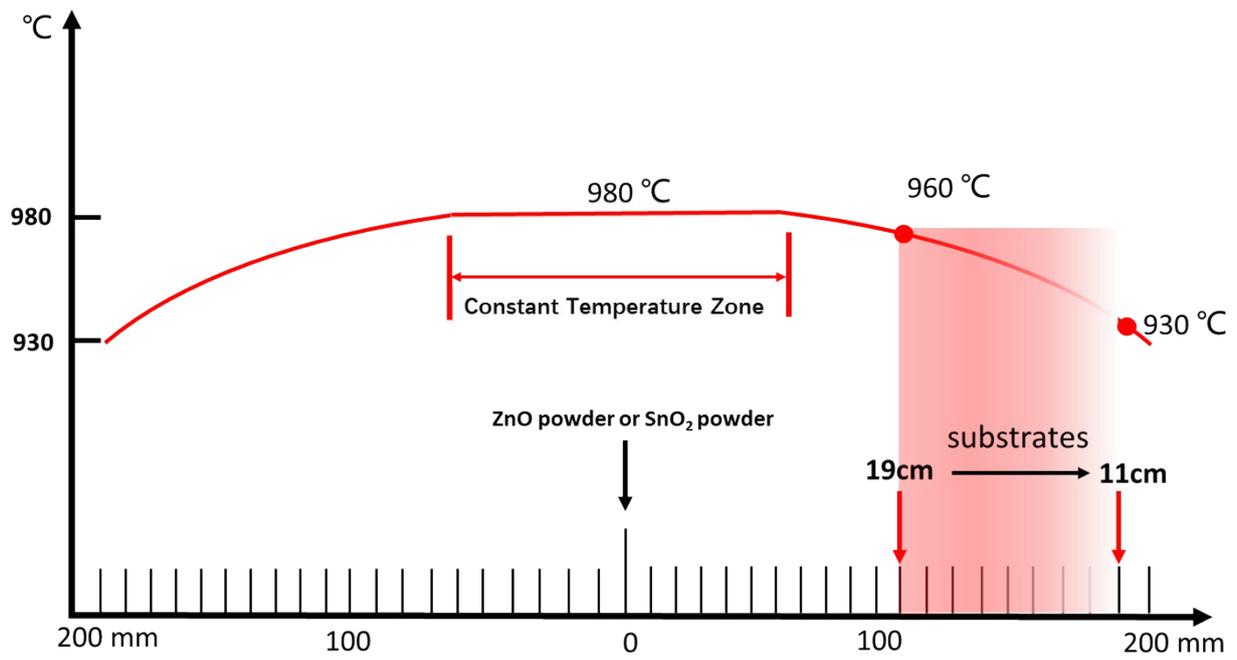
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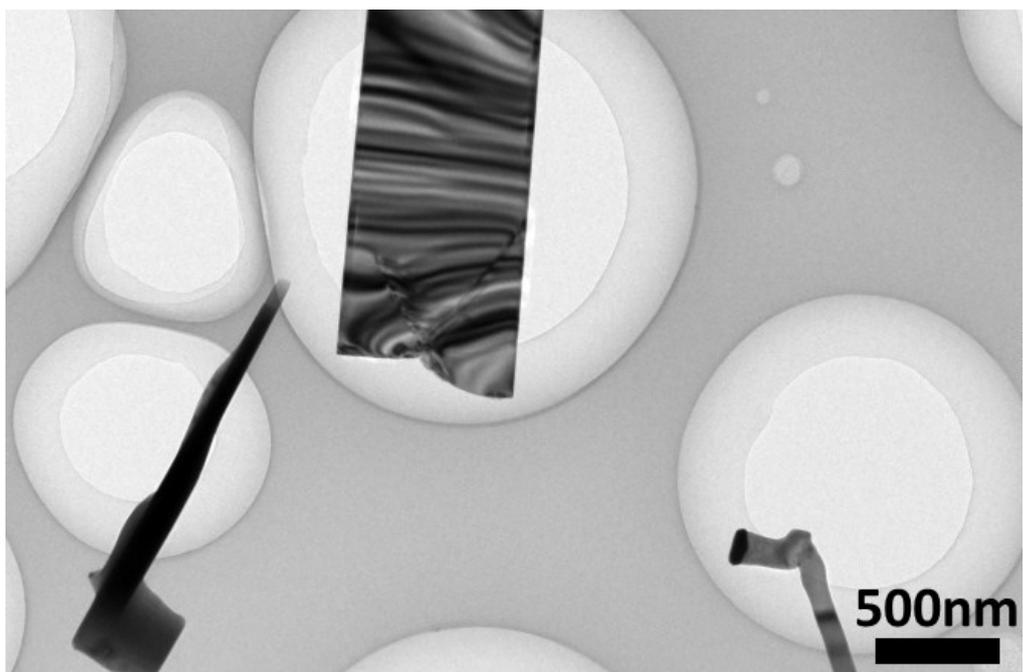
<sup>b</sup>Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Science, Beijing, People's Republic of China

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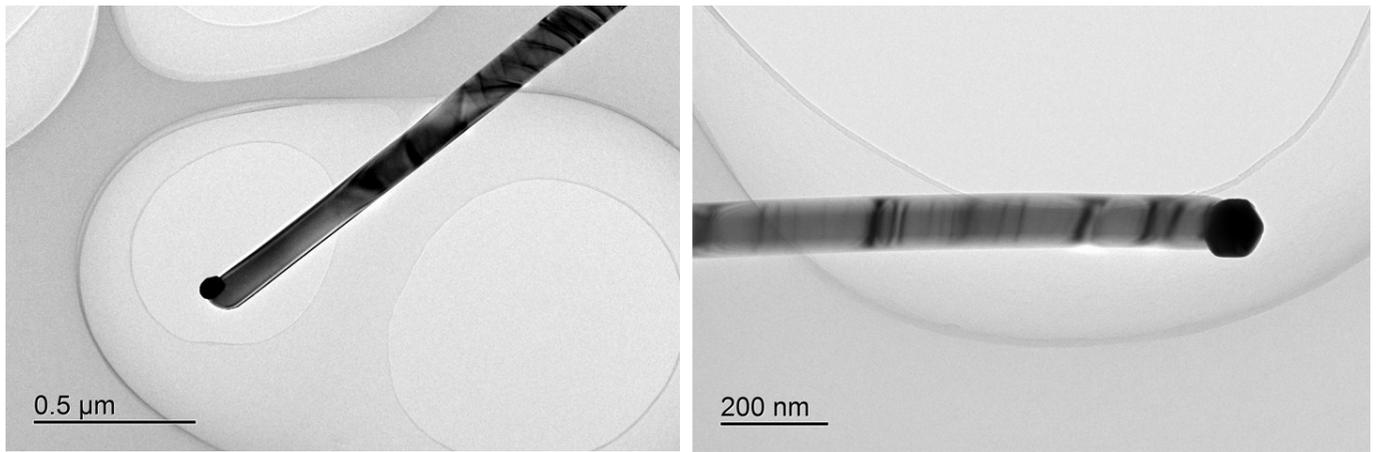
baobao-cao@hotmail.com



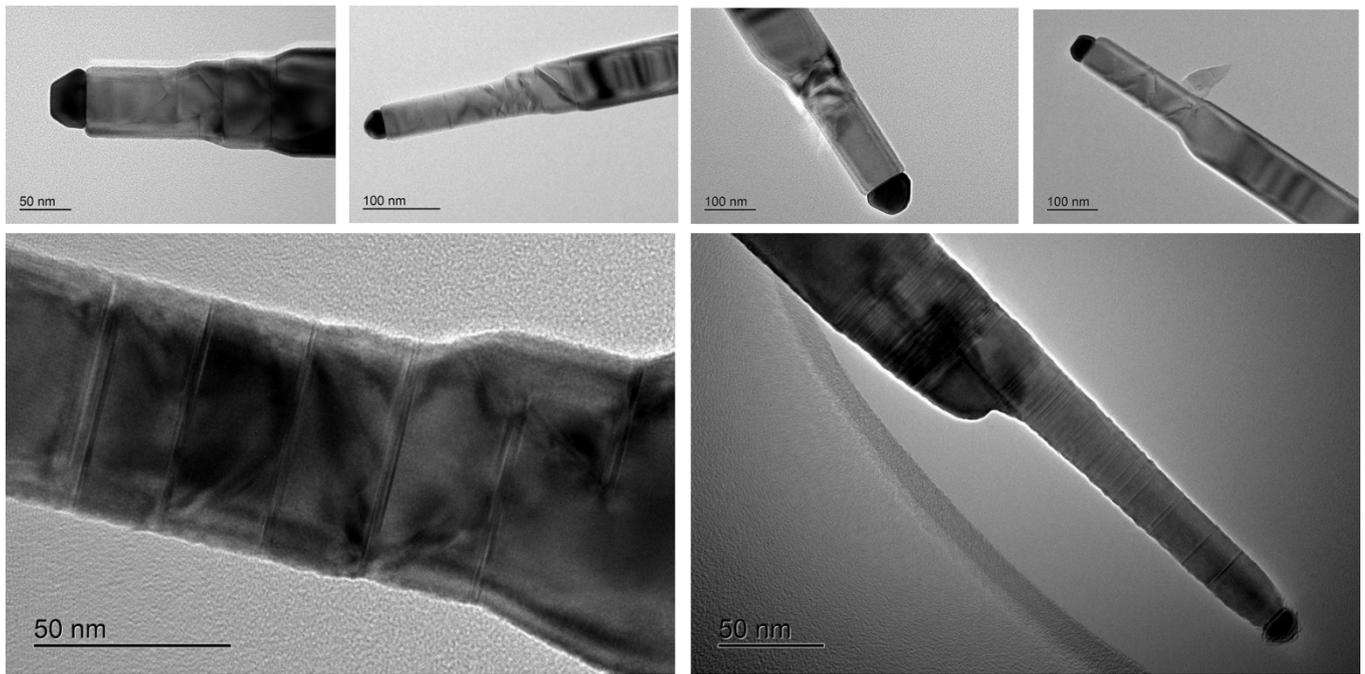
**Fig. S1** The furnace temperature distribution.



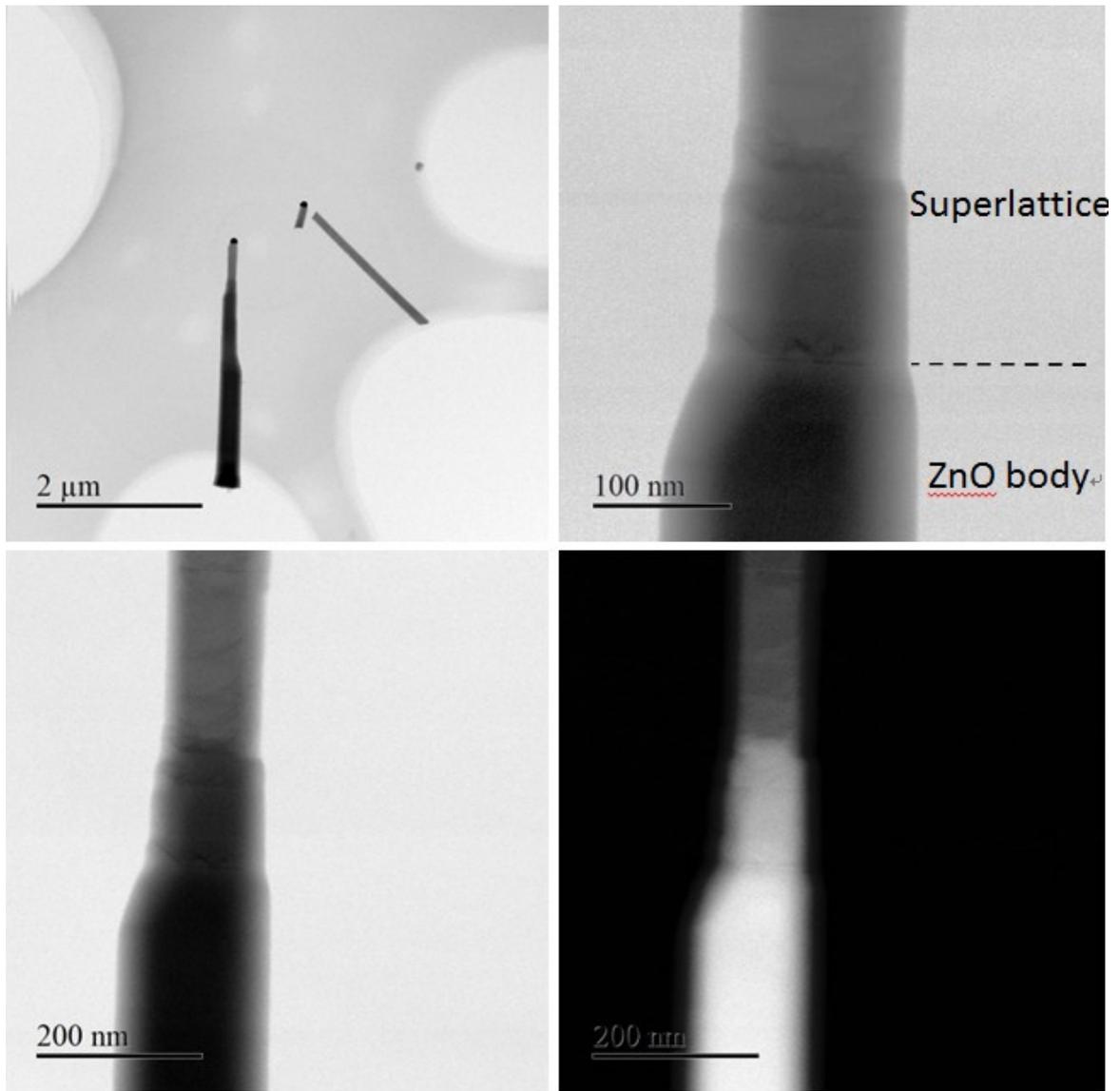
**Fig. S2** Low-mag TEM image of the nanostructures with 0.80g SnO<sub>2</sub> feeding.



**Fig. S3** Low-mag TEM image of the nanowires with 0.10g SnO<sub>2</sub> feeding.



**Fig. S4** Low-mag TEM image of the nanostructures with 0.40g SnO<sub>2</sub> feeding.



**Fig. S5** Cs-corrected STEM images of superlattice sections, Sn distribution could be clearly seen.