

## Supplementary Materials

### Electrical conductivity of multiwall carbon nanotube bundle contacting with metal electrodes by nano manipulators inside SEM

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We obtained about the other 6 groups of current voltage curves in the single electrode contact mode and the other 3 groups of current voltage curves in the double electrode contact mode in the Supporting Materials.

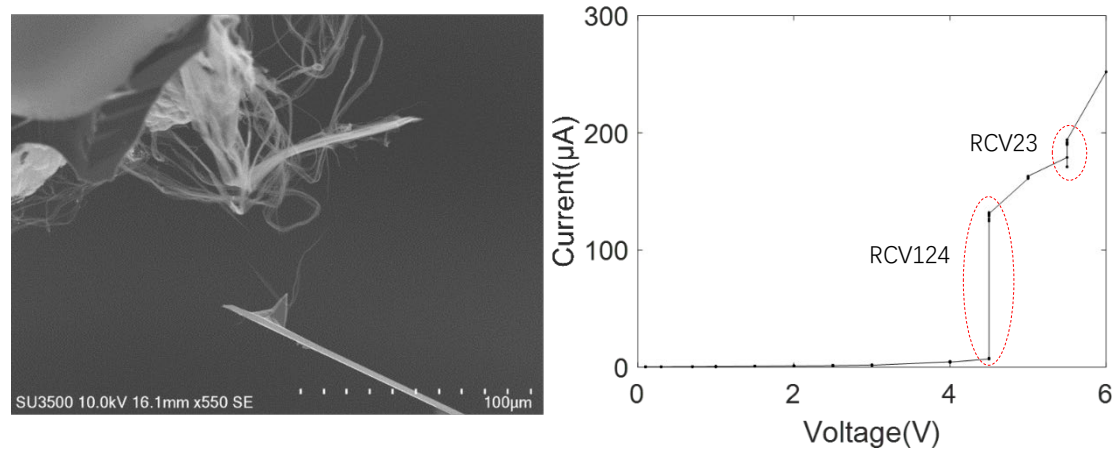


Figure S1 AFM cantilever contacting with MWCNT bundle and the current voltage curve

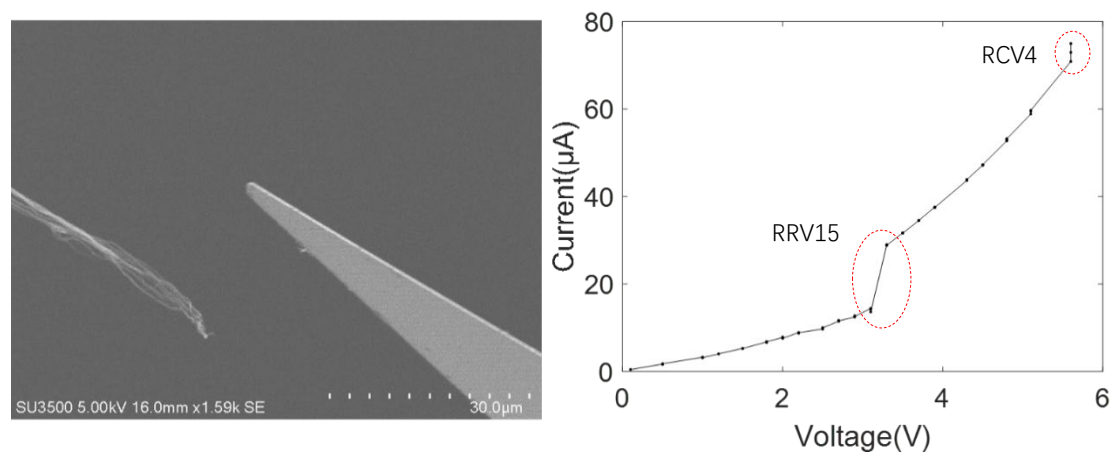


Figure S2 Tip-less AFM cantilever contacting with MWCNT bundle and the current voltage curve

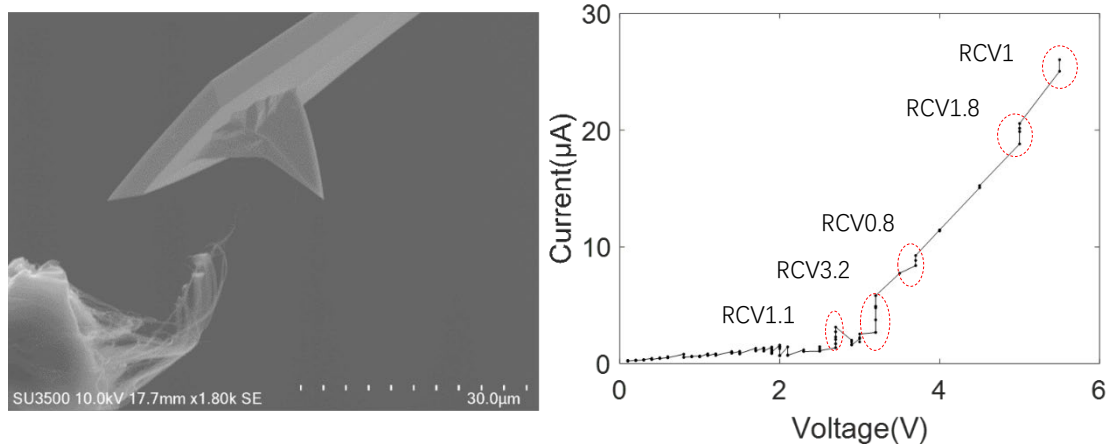


Figure S3 AFM cantilever contacting with MWCNT bundle and the current voltage curve

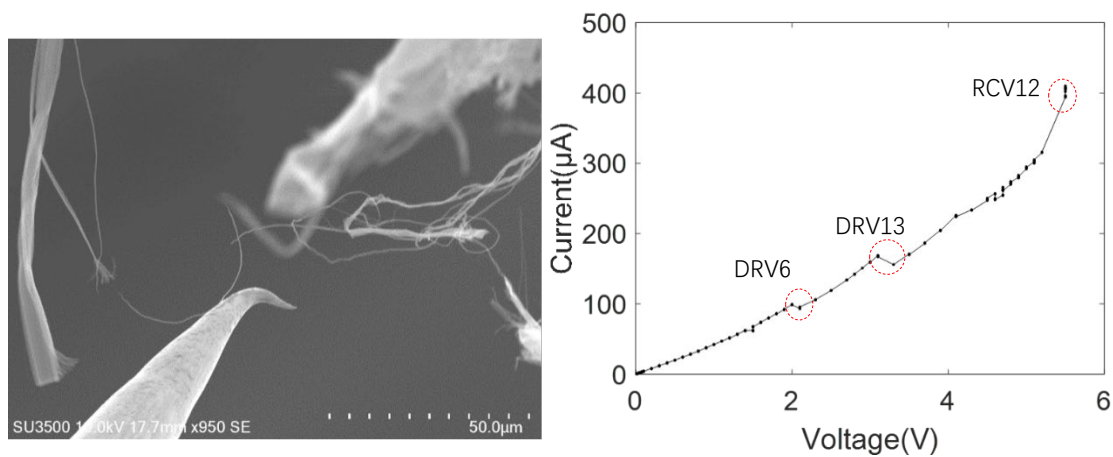


Figure S4 Tungsten probe contacting with MWCNT bundle and the current voltage curve

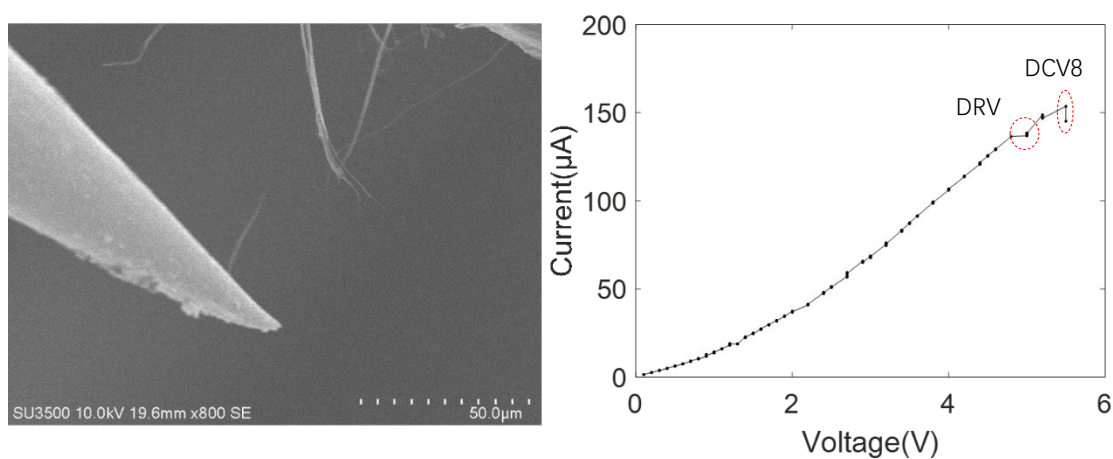


Figure S5 Pt-coated Tungsten probe contacting with MWCNT bundle and the current voltage curve

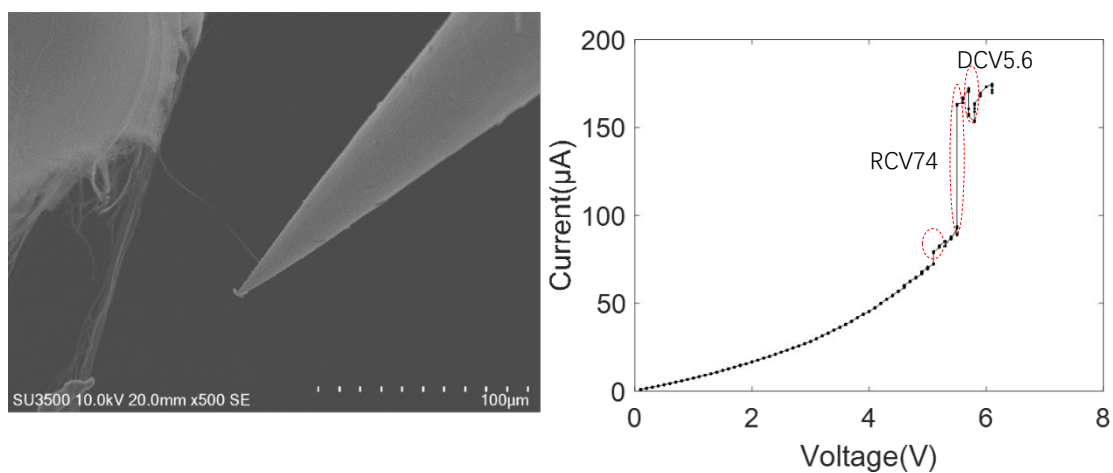


Figure S6. Pt-coated tungsten probe contacting with MWCNT bundle and the current voltage curve.

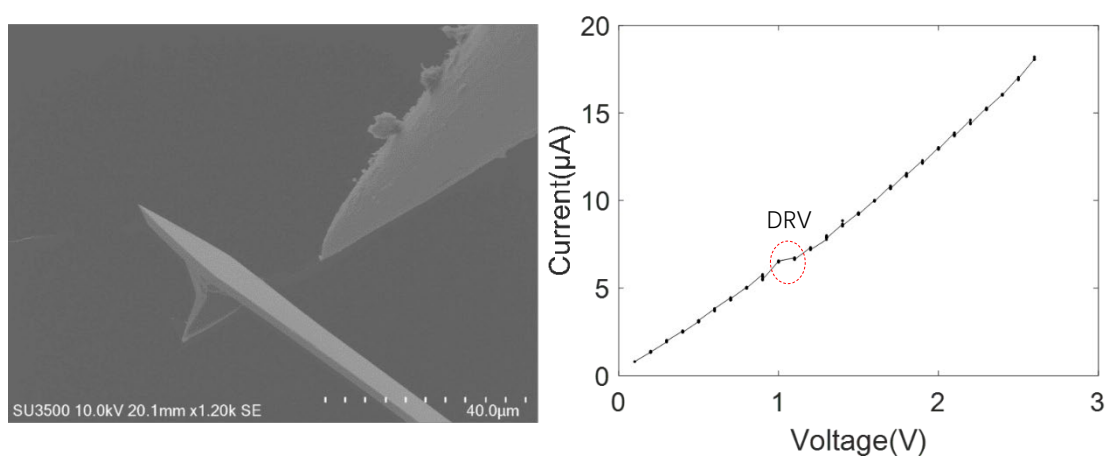


Figure S7. Pt-coated tungsten probe-MWCNT bundle-AFM cantilever and the current voltage curve.

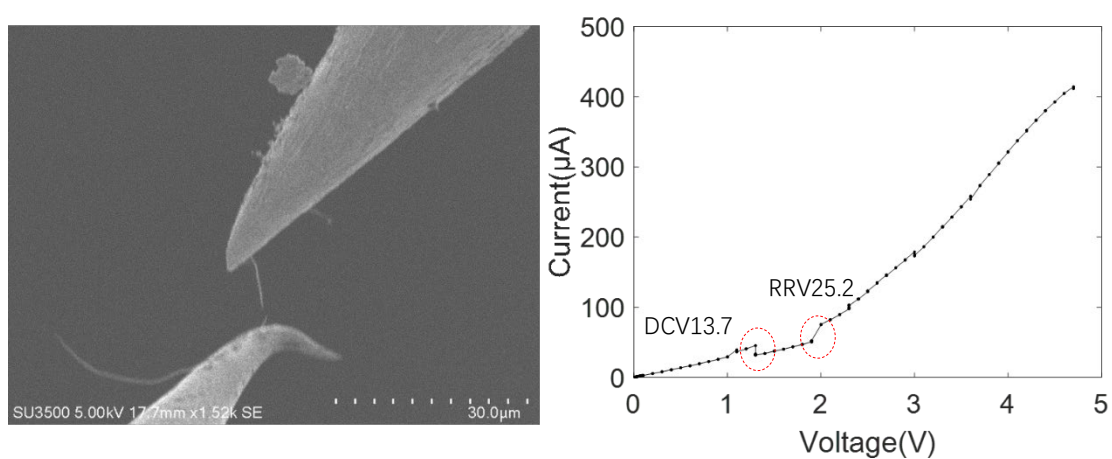


Figure S8. Pt-coated tungsten probe-MWCNT bundle-tungsten probe and the current voltage curve.

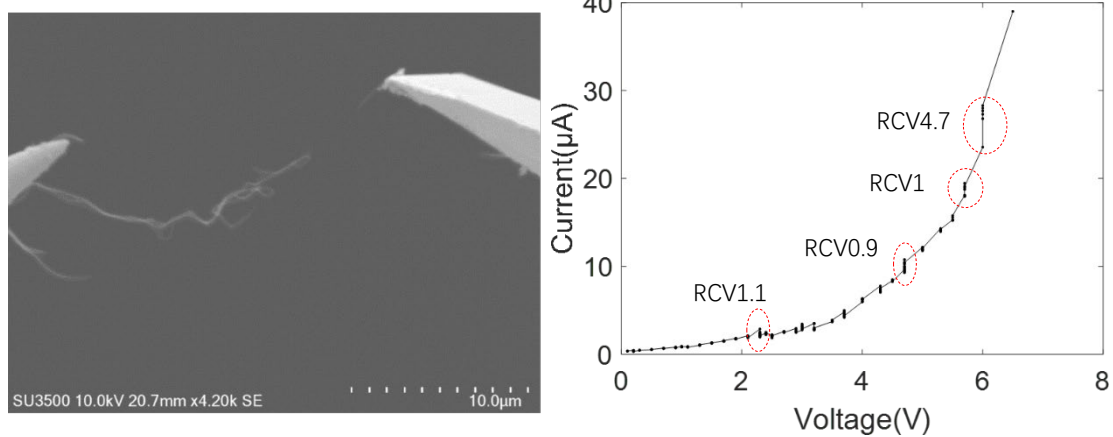


Figure S9. Tungsten probe- MWCNT bundle- AFM cantilever and the current voltage curve.