

Supplementary Materials

6. Groups of different CNTs Experiments

Length: 1.0 μ m, Diameter : 55 nm.

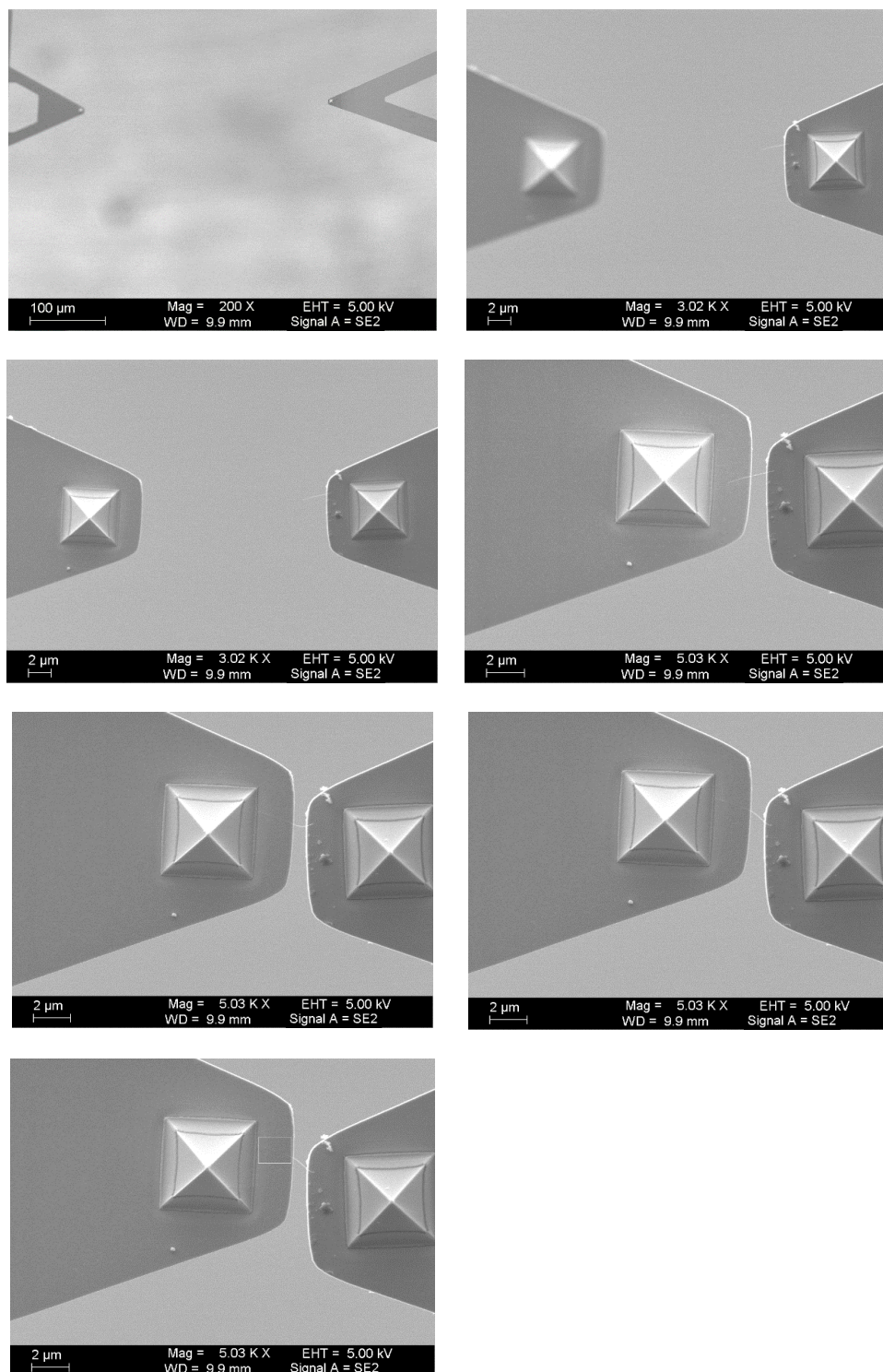


Figure S1. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 1.0 μ m, diameter : 55 nm.

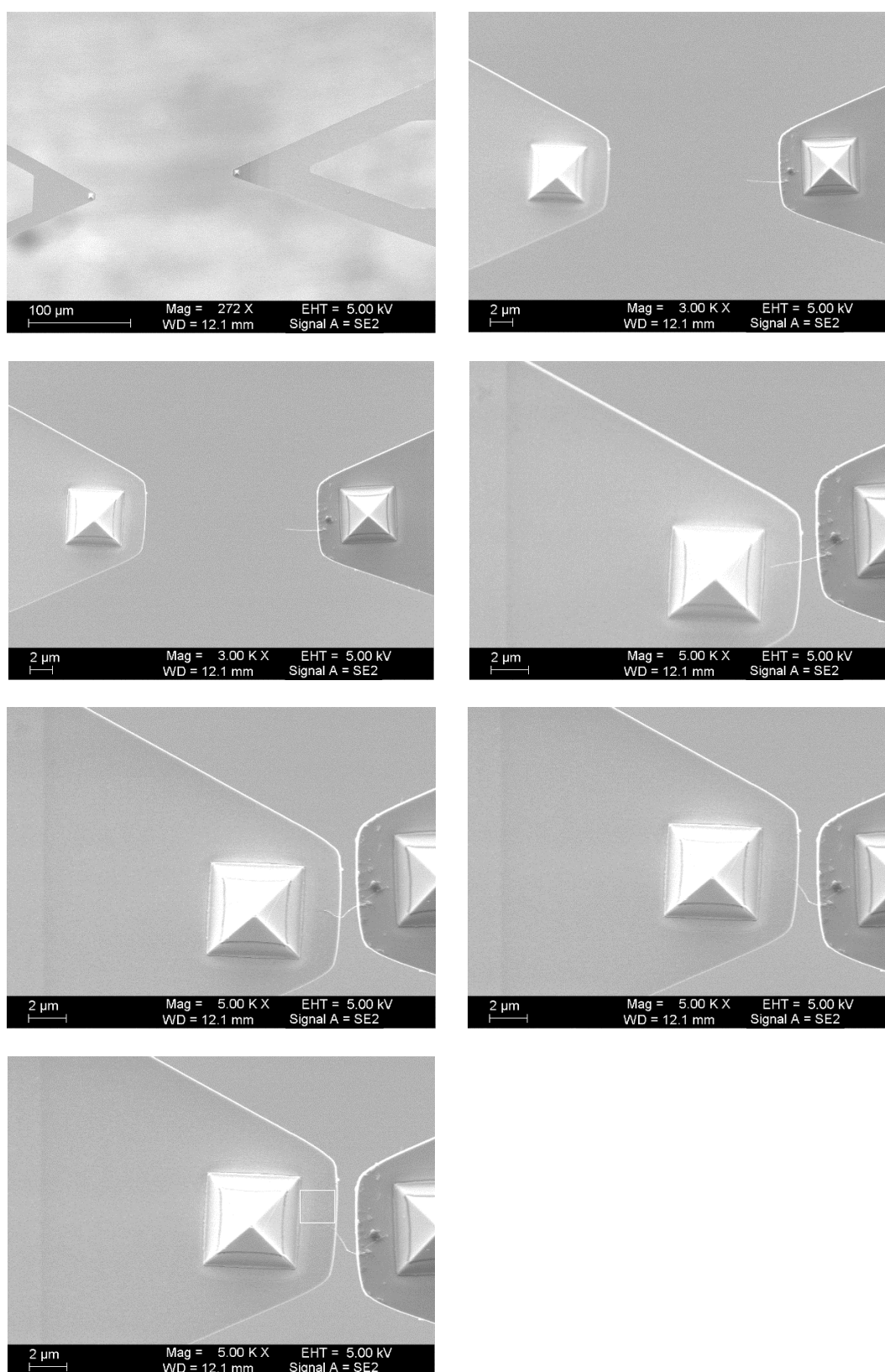


Figure S2. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 1.8 μm, diameter : 70 nm.

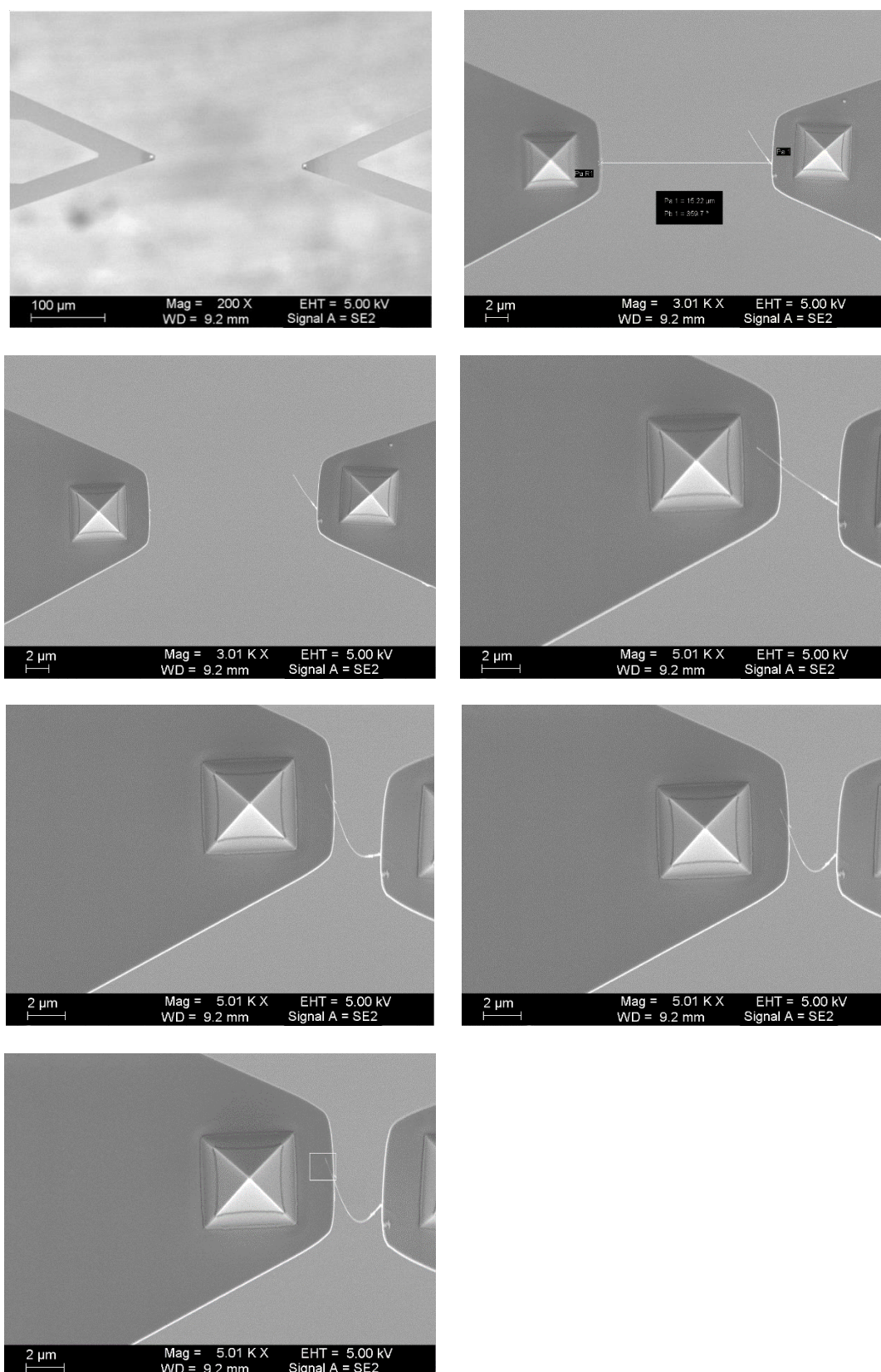


Figure S3. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 3.2μm, diameter : 65 nm.

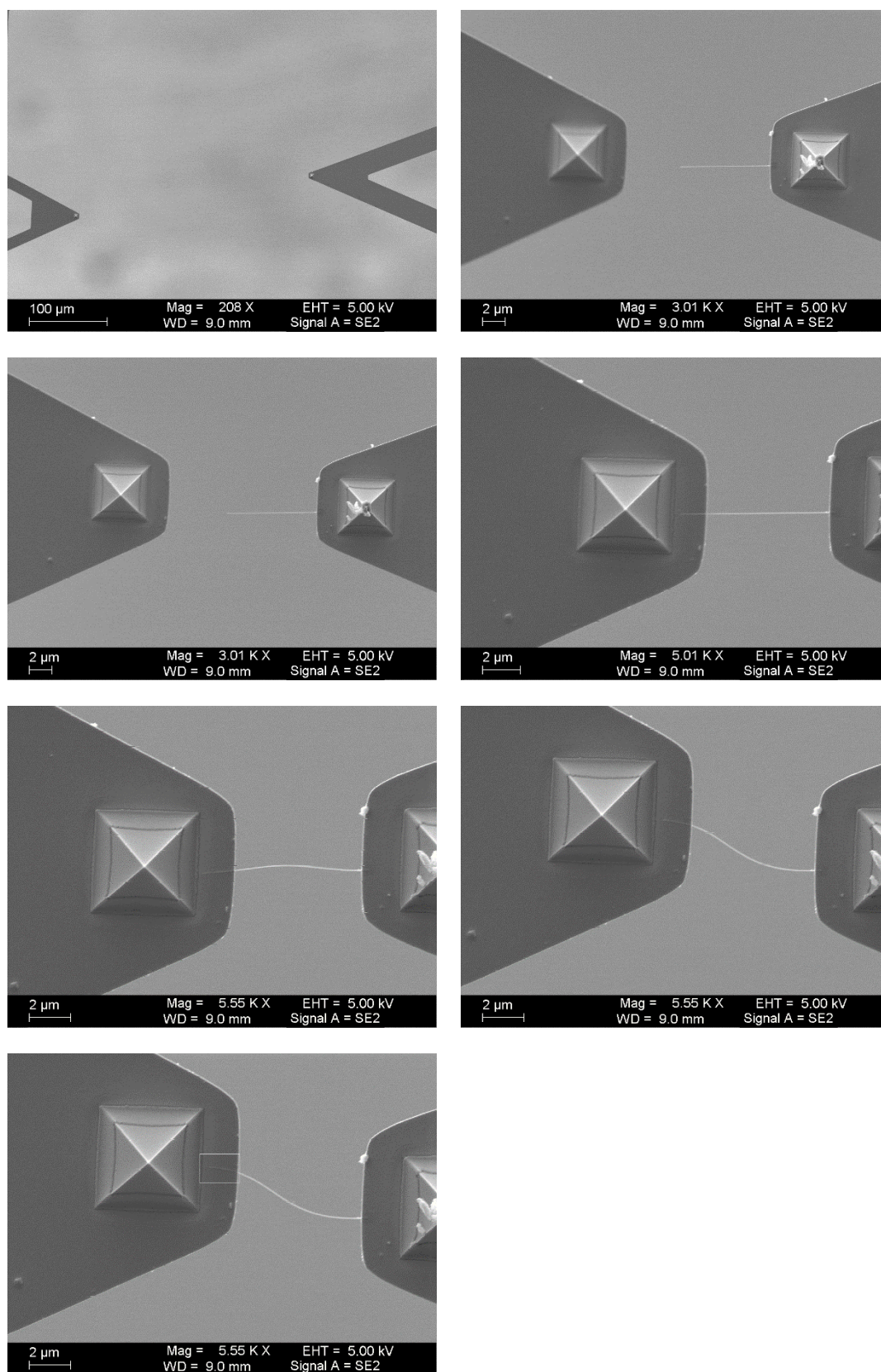


Figure S4. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 6.3 μm, diameter : 74 nm.

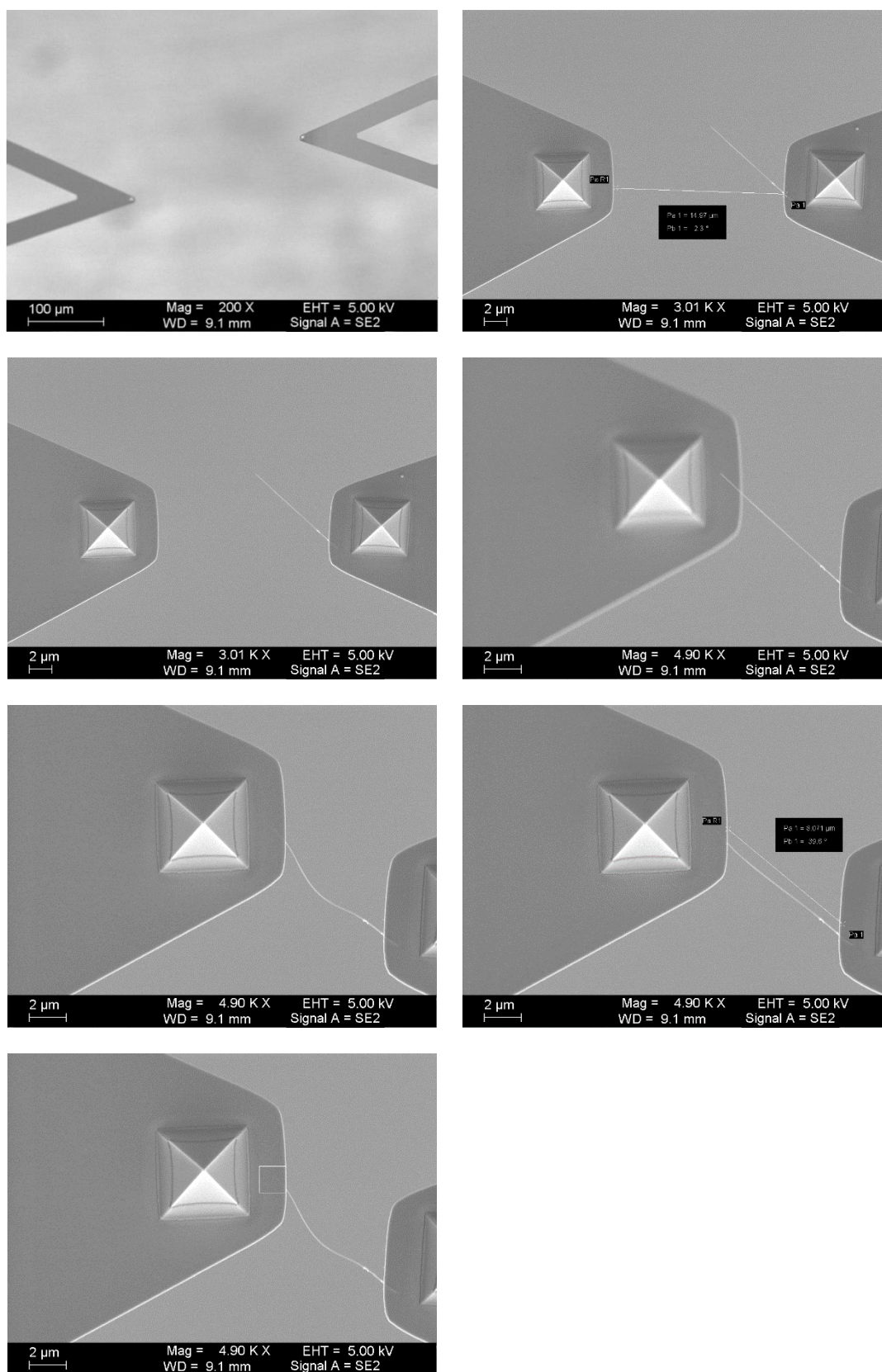


Figure S5. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 8.0 μm , diameter : 57 nm.

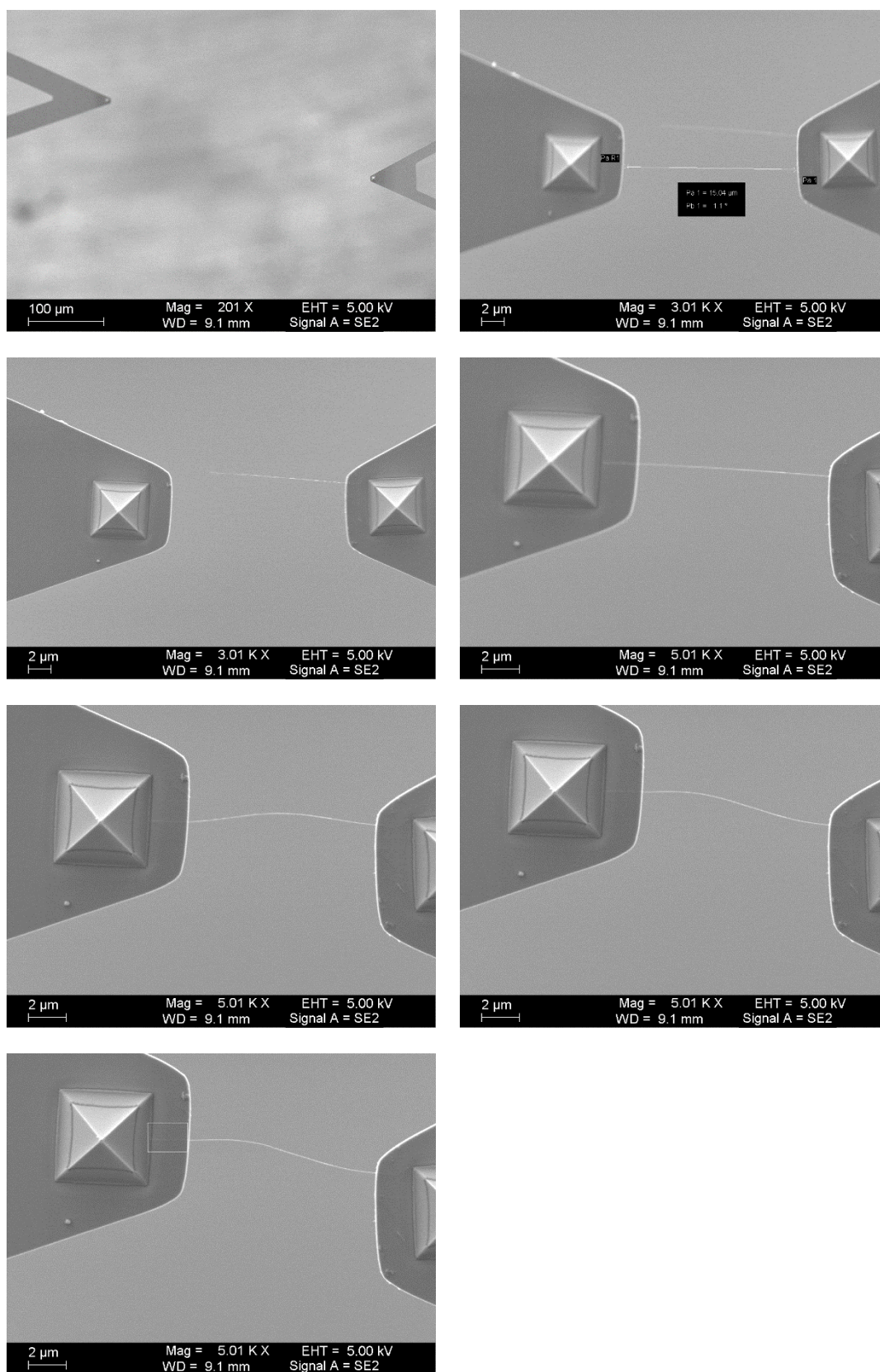


Figure S6. The procedure of automated measurement of individual CNT by visual recognition. Group 1 CNT with length: 11 μm, diameter : 48 nm.

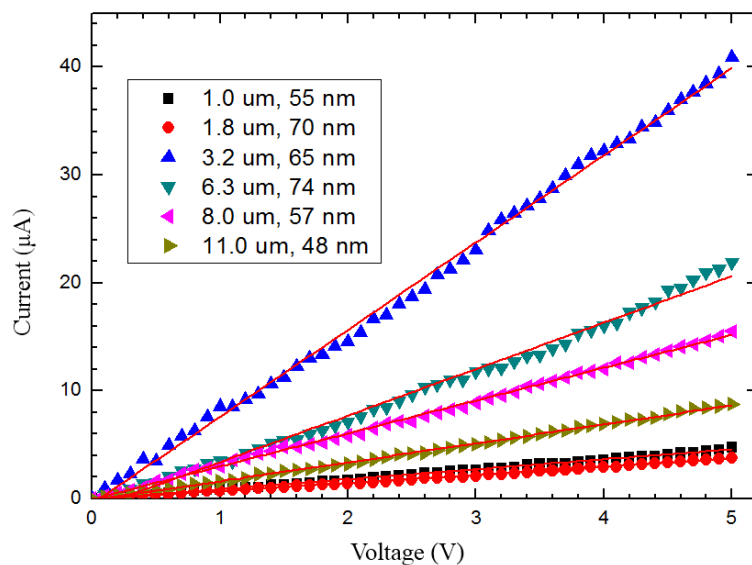


Figure S7. I-V curve of 6 groups of CNTs.

Table S1. Resistance and resistivity of 6 groups of CNTs.

CNT size	1.0μm	1.8μm	3.2μm	6.3μm	8.0μm	11.0μm
Resistance (KΩ)	1080 ± 34.2	1350 ± 56.5	123 ± 5.2	232 ± 22.6	328 ± 11.9	569 ± 16.7
Resistivity (Ω·m)	2.57×10^{-3}	5.18×10^{-3}	1.18×10^{-4}	1.58×10^{-4}	1.05×10^{-4}	0.94×10^{-4}



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