Supporting Information

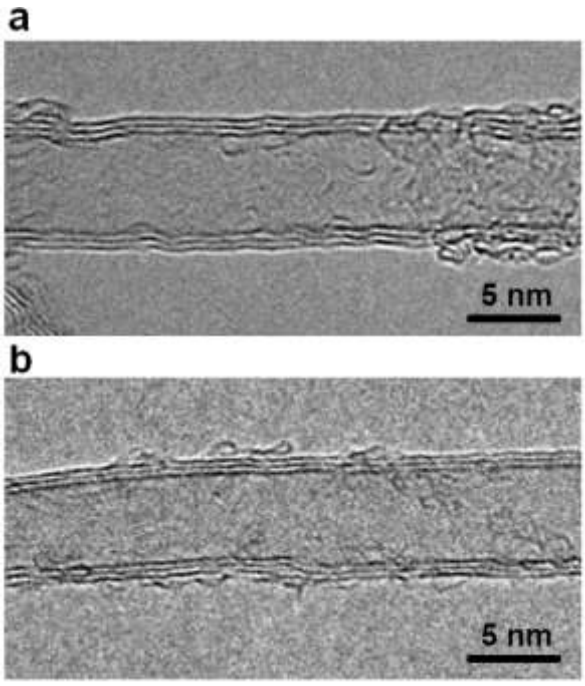

Fig. S1. TEM images of CNTs (a) before and after (b) heating treatments at 900 ^{o}C in argon.

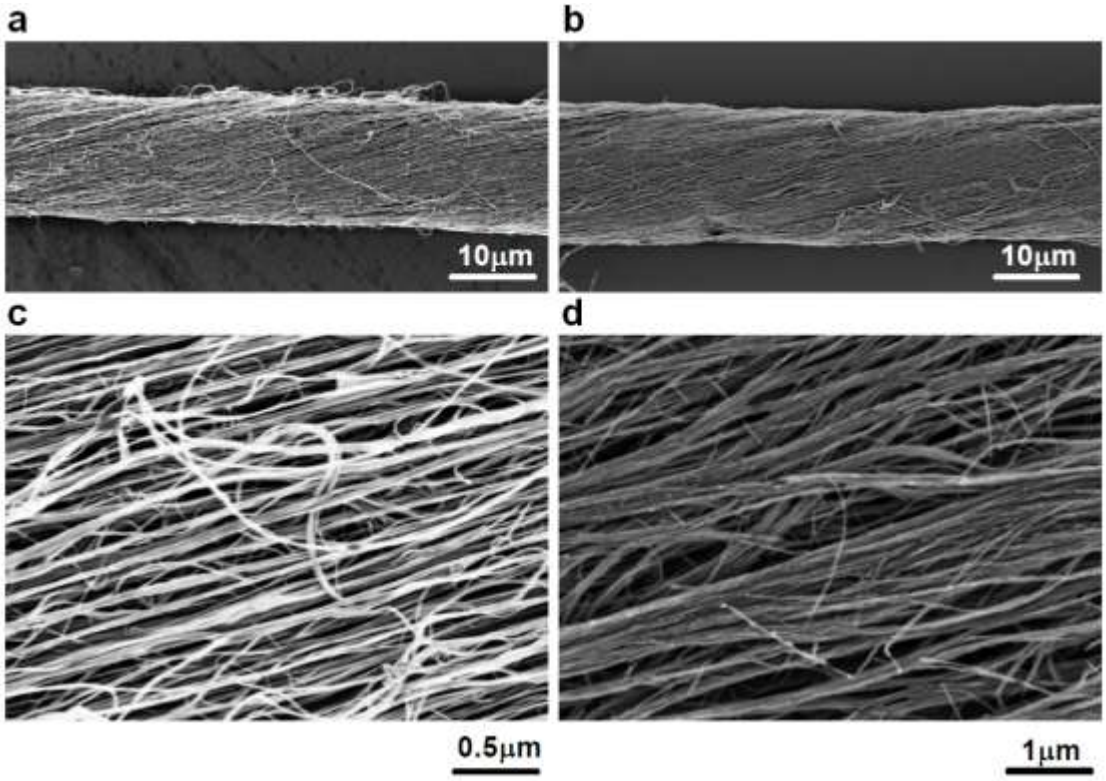

Fig. S2. A CNT fiber before and after heating treatment at 900 ^{o}C in argon. **a** and **c**, SEM images without heating treatment at low and high magnifications, respectively. **b** and **d**, SEM images after heating treatment at 900 ^{o}C at low and high magnifications, respectively.

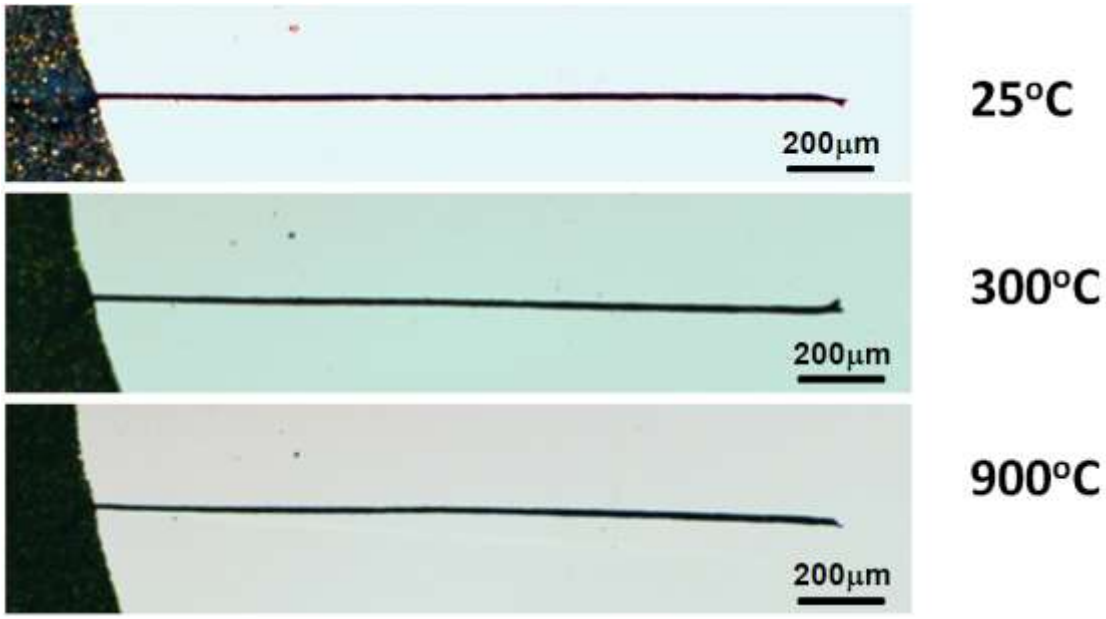

Fig. S3. Optical images of a CNT fiber before and after heating treatments at 300 and 900 ^{o}C in argon.

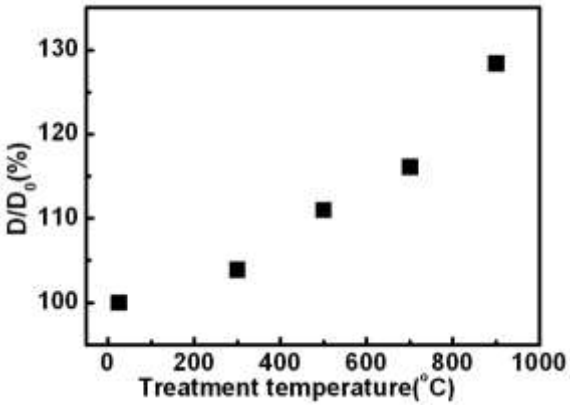

Fig. S4. Diameter changes of CNT fibers after heating treatments at different temperatures in argon. D and D_0 correspond to the diameters before and after heating treatment.

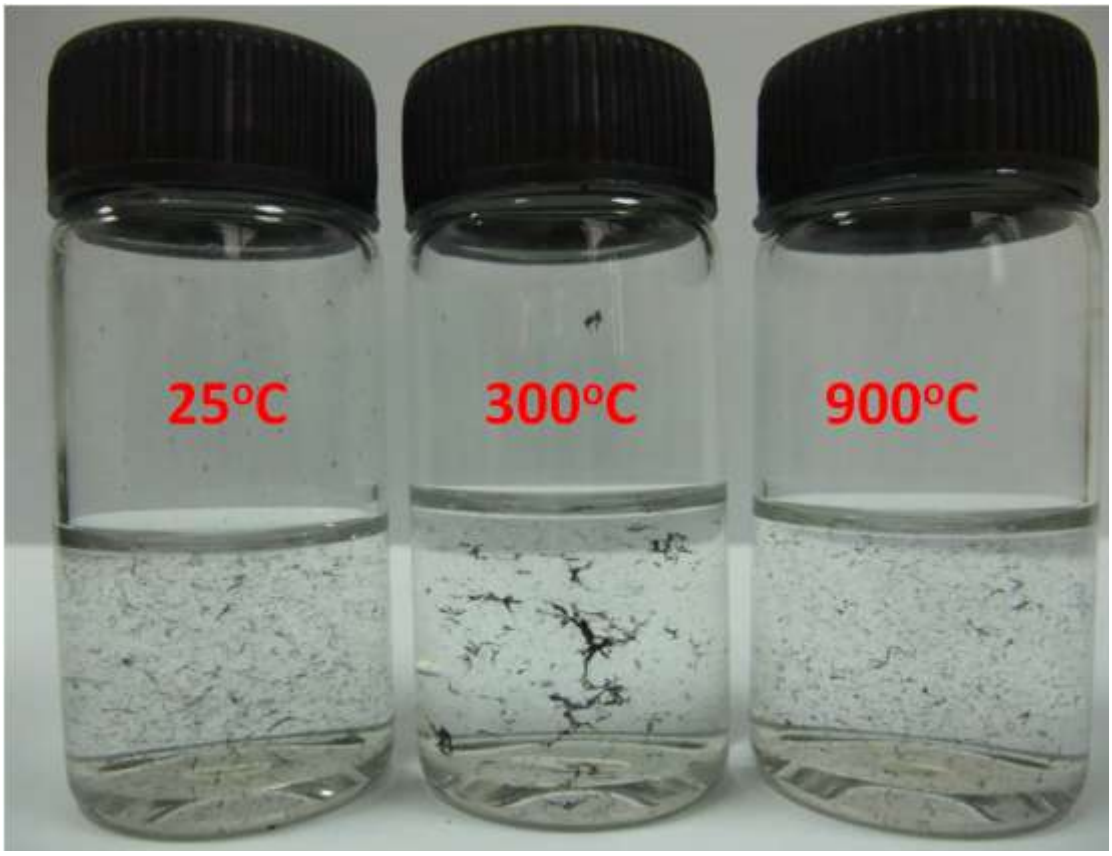

Fig. S5. Optical images of CNTs dispersed in ethanol after ultrasonic treatment for an hour. CNTs were obtained from the fibers before and after heating treatment at 300 and 900 ^{o}C in argon.

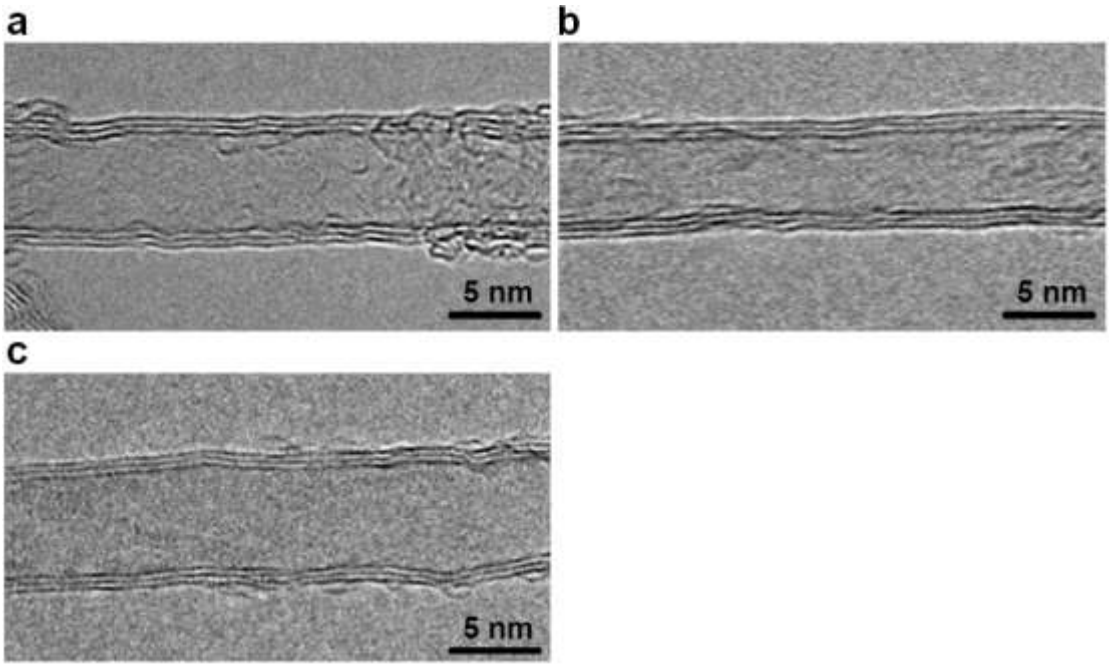

Fig. S6. TEM images of CNTs (a) before and after heating treatments at (b) 100 and (c) 300 ^{o}C in air.

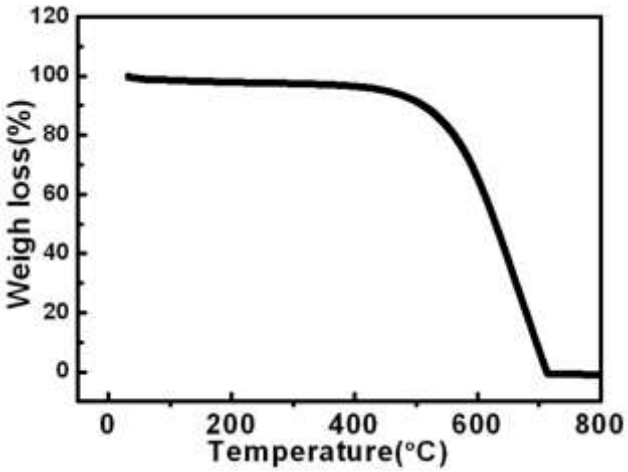

Fig. S7. A typical thermogravimetric analysis of CNTs.

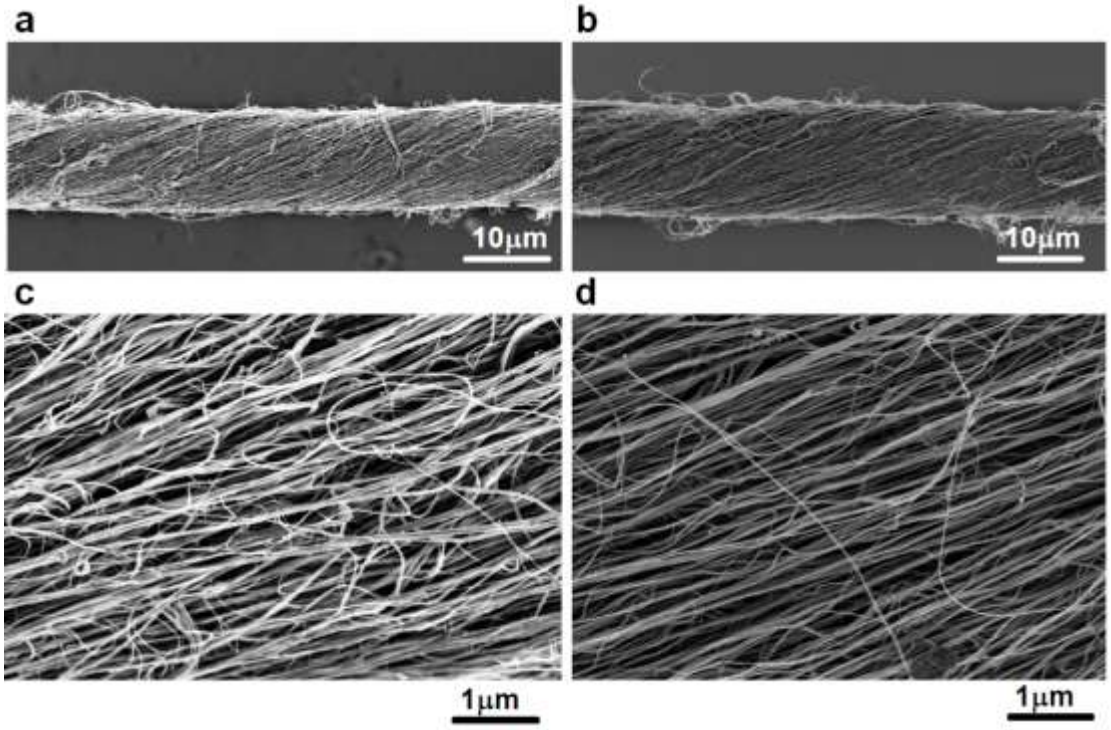

Fig. S8. A CNT fiber before and after heating treatment at 400 ^{o}C in air. **a** and **c**, SEM images without heating treatment at low and high magnifications, respectively. **b** and **d**, SEM images after heating treatment at 400 ^{o}C at low and high magnifications, respectively.

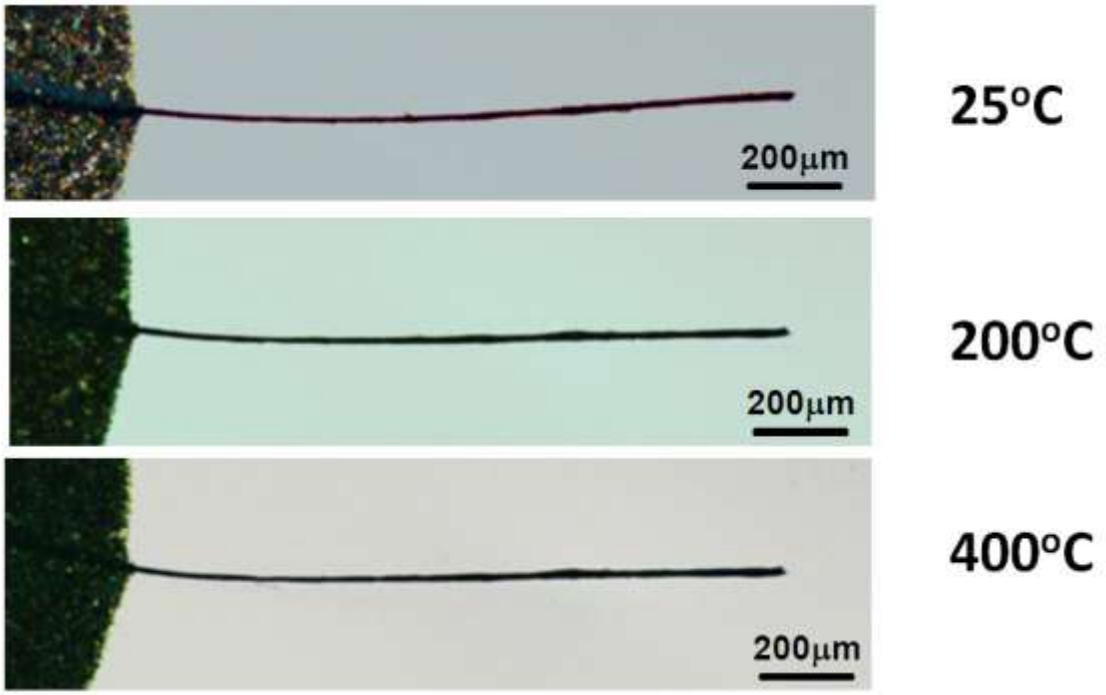

Fig. S9. Optical images of a CNT fiber before and after heating treatments at 200 and 400 ^{o}C in air.

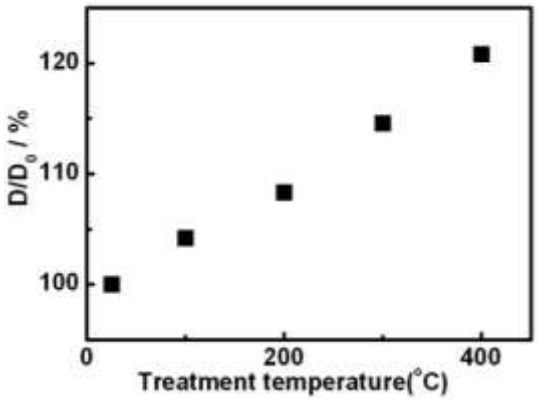

Fig. S10. Diameter changes of CNT fibers after heating treatments at different temperatures in air. D and D_0 correspond to the diameters before and after heating treatment.

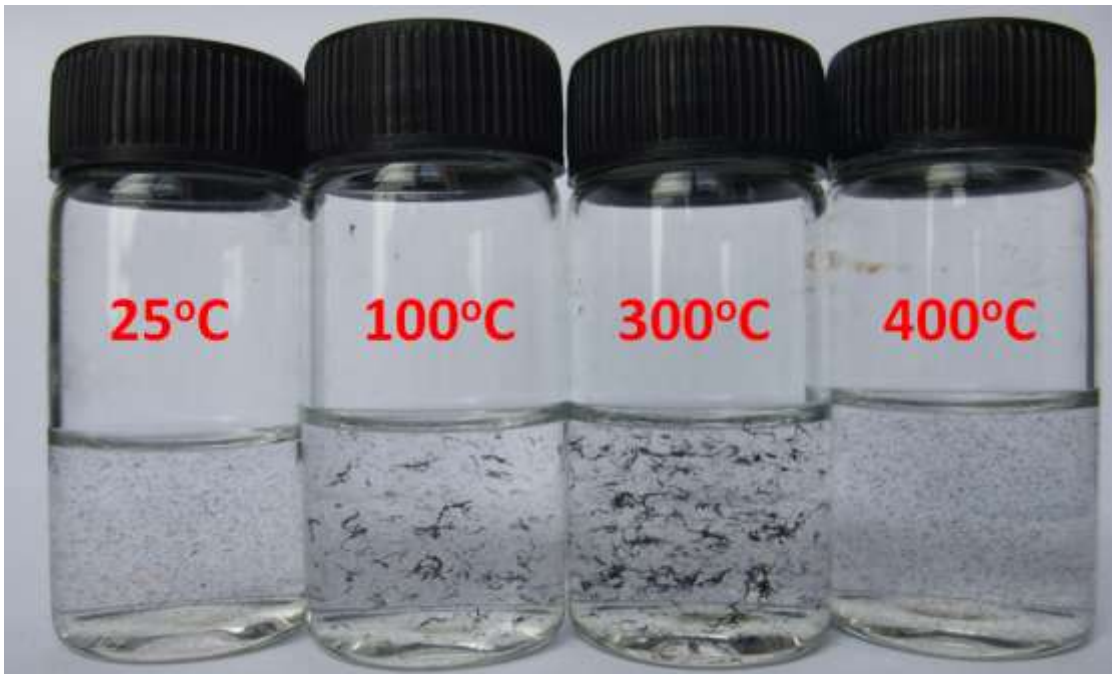

Fig. S11. Optical images of CNTs dispersed in ethanol after ultrasonic treatment for an hour. CNTs were obtained from the fibers before and after heating treatments at 100, 300, and 400 ^{o}C in air.