

Solution based methods for the fabrication of carbon nanotube modified atomic force microscopy probes

Ashley D. Slattery^{1,2}, Cameron J. Shearer^{1,*}, Joseph G. Shapter¹, Jamie S. Quinton¹
and Christopher T. Gibson^{1,*}

¹ Flinders Centre for NanoScale Science and Technology, College of Science and Engineering,
Flinders University, Bedford Park, SA 5042, Australia; Ashley.slattery@adelaide.edu.au (A.D.S.);
joe.shapter@flinders.edu.au (J.G.S.); jamie.quinton@flinders.edu.au (J.S.Q.)

² Adelaide Microscopy, The University of Adelaide, Adelaide, SA 5005, Australia

* Correspondence: cameron.shearer@flinders.edu.au (C.J.S.); christopher.gibson@flinders.edu.au (C.T.G.);
Tel.: +61 8 8201 2372 (C.J.S); Tel.: +61 8 8201 7978 (C.T.G); Fax: +61 8 8201 2905(C.T.G.)

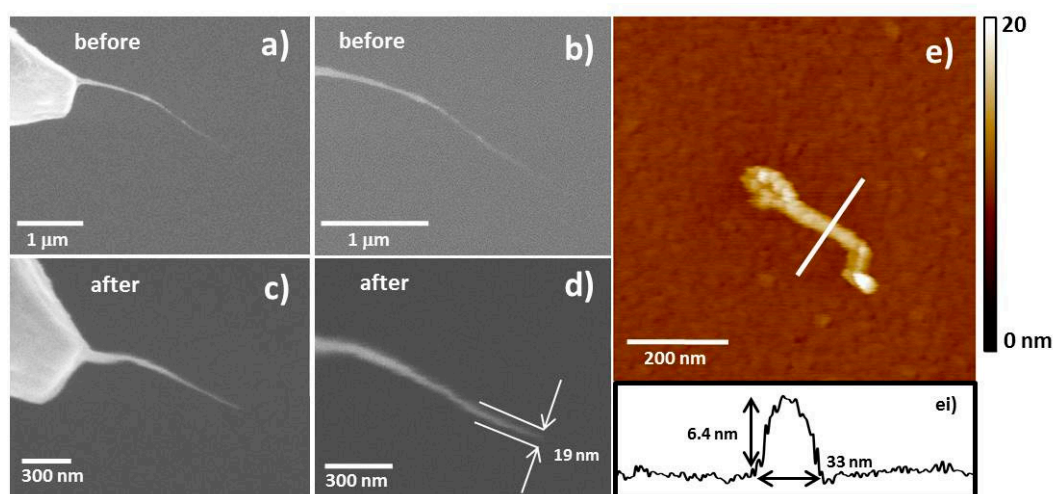


Figure S1: SEM images of tip 1 from figure 1 before processing (a and b) and after processing (c and d). Figure S1e is an AFM image of a CNT on a CNT covered silicon surface using tip 1 after processing with figure S1ei showing a cross section which corresponds to the white line in figure S1e. Comparing the before and after SEM images indicates there has been some change in the position of the CNT fibre which indicates some slight straightening.

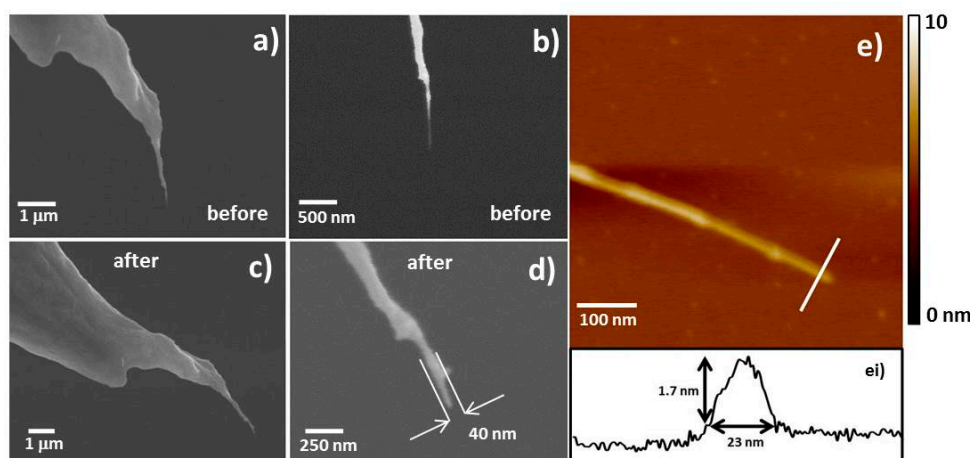


Figure S2: SEM images of tip 3 from figure 1 before processing (a and b) and after processing (c and d). Figure S2e is an AFM image of a CNT on a CNT covered silicon surface using tip 3 after processing with figure S2ei showing a

cross section which corresponds to the white line in figure S2e. Comparing the before and after SEM images indicates there has been a shortening of the CNT fibre.

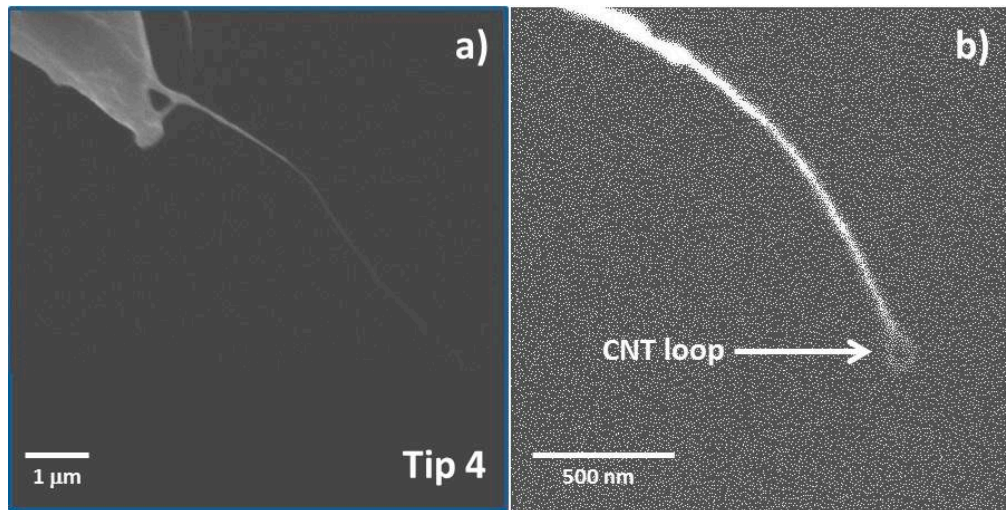


Figure S3: SEM images of tip 4 from figure 1 before processing (a) and after processing (b). No stabilisation of the CNT fibre was possible indicating that the high-force tapping method is not 100% effective. Interestingly the CNT fibre seems to be looped at the very end, as can be seen in figure S3b, which is most likely the reason that stabilisation was not possible.