

# DNA-directed assembly of Carbon Nanotube-Protein hybrids

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## Supplementary Information

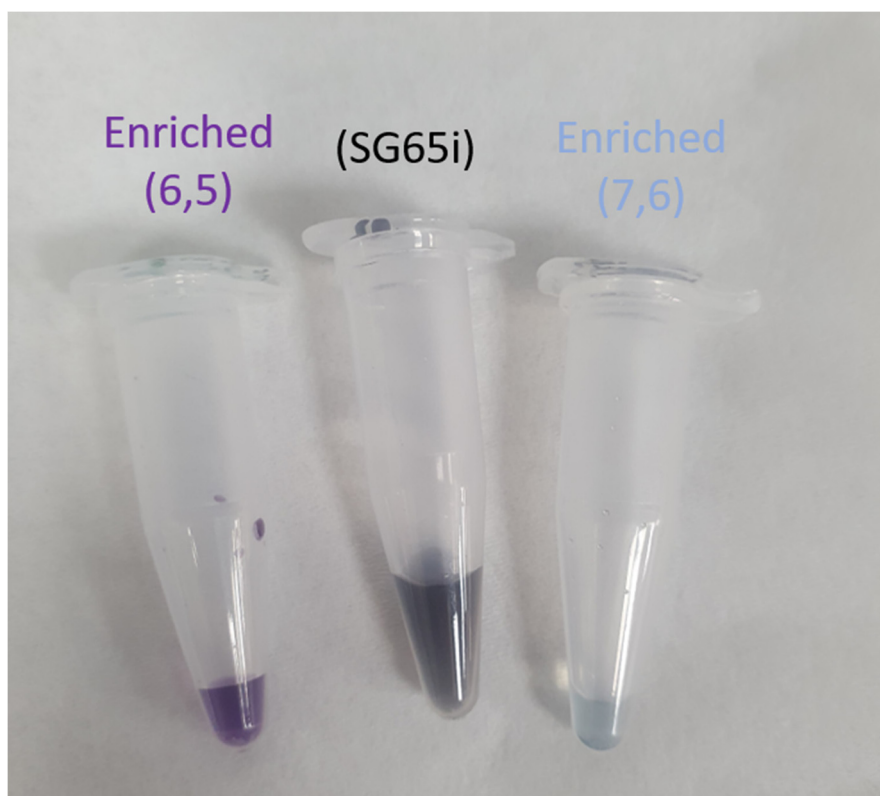


Figure S1. Image of the SWCNT species used.

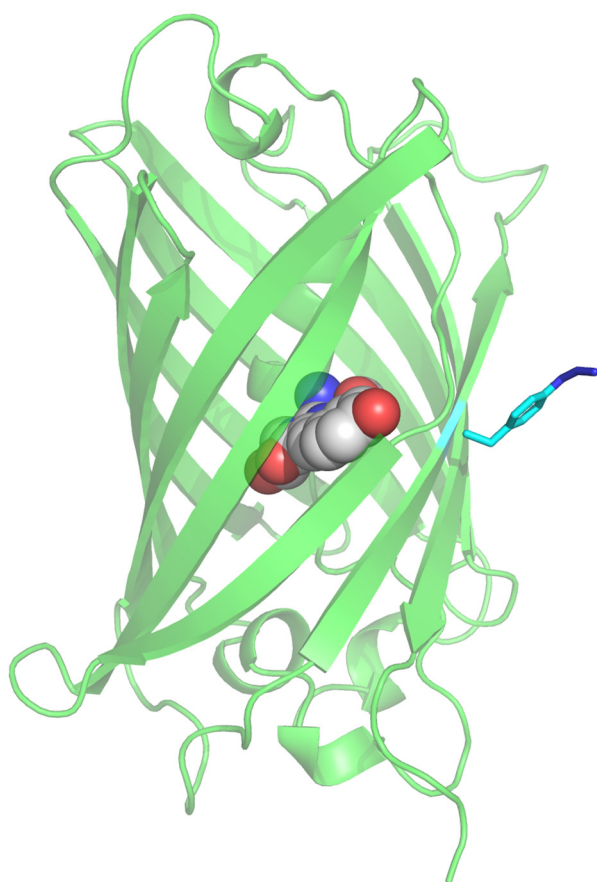


Figure S2. Representation of GFP<sup>204AzF</sup>. The chromophore is shown as spheres and 204AzF is shown in sticks and coloured cyan.

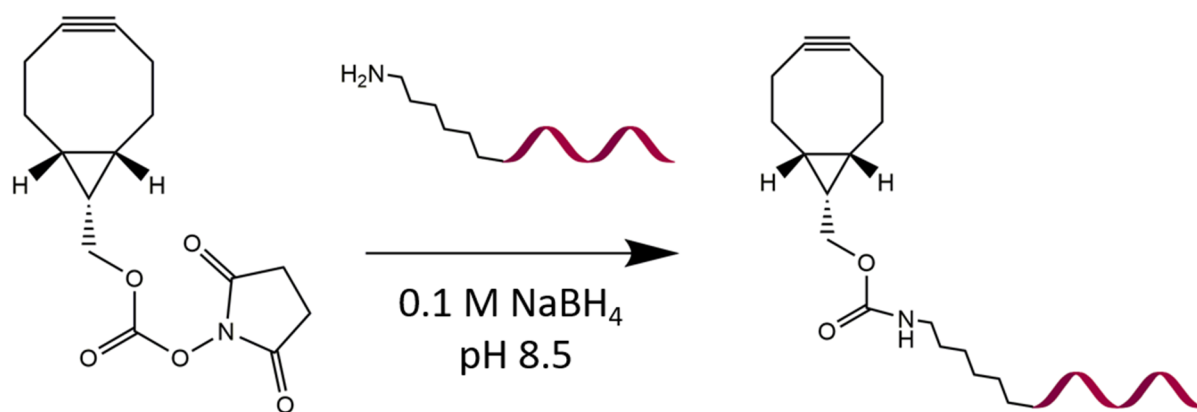


Figure S3. Scheme for the functionalisation of amine-modified oligonucleotide with BCN-NHS Ester.

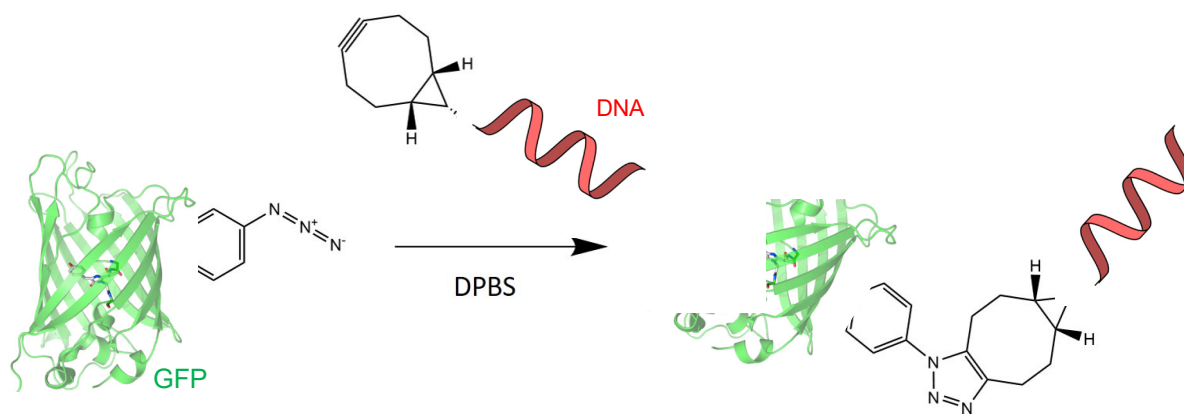


Figure S4. Scheme for the conjugation of BCN-DNA to azido-GFP.

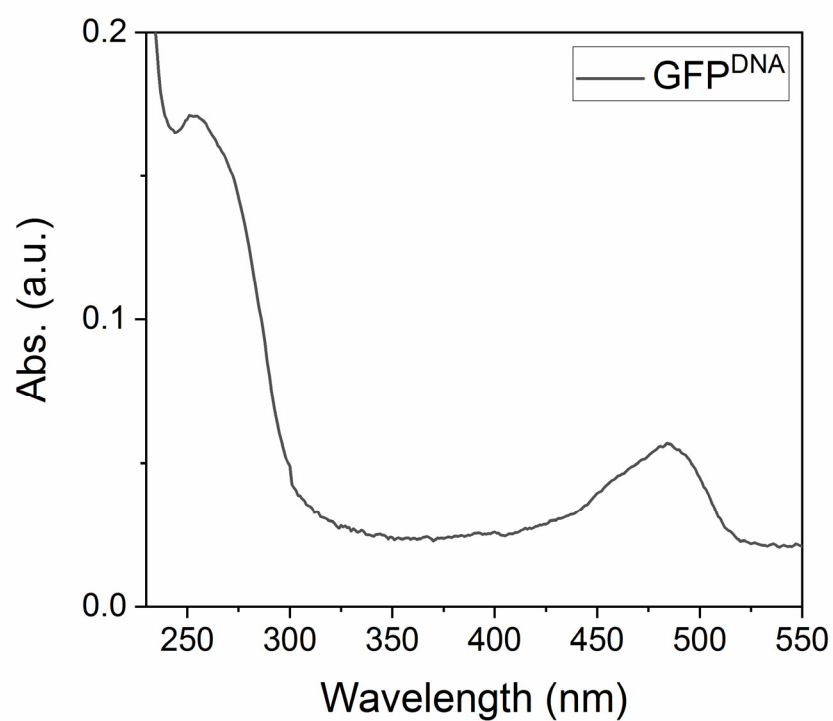


Figure S5. UV-vis spectrum of GFP-DNA conjugate.

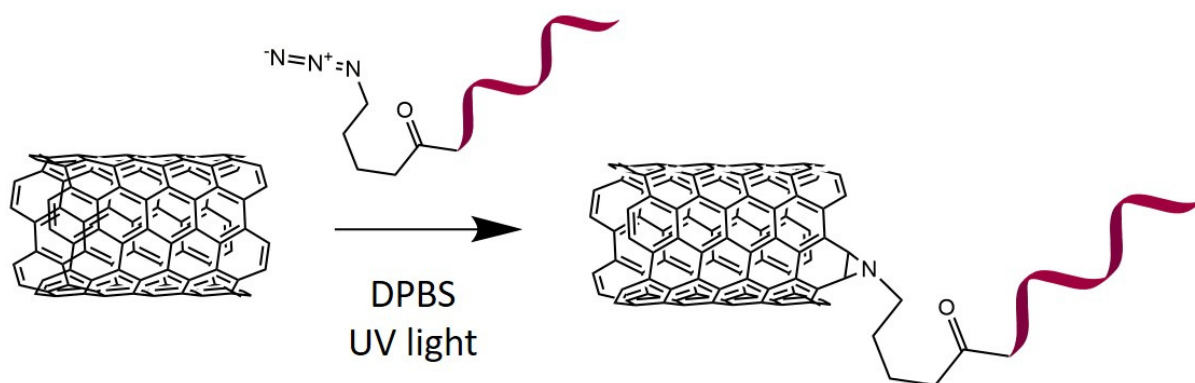


Figure S6. Scheme for the functionalisation of CNTs with azide-DNA via a UV-initiated reaction.

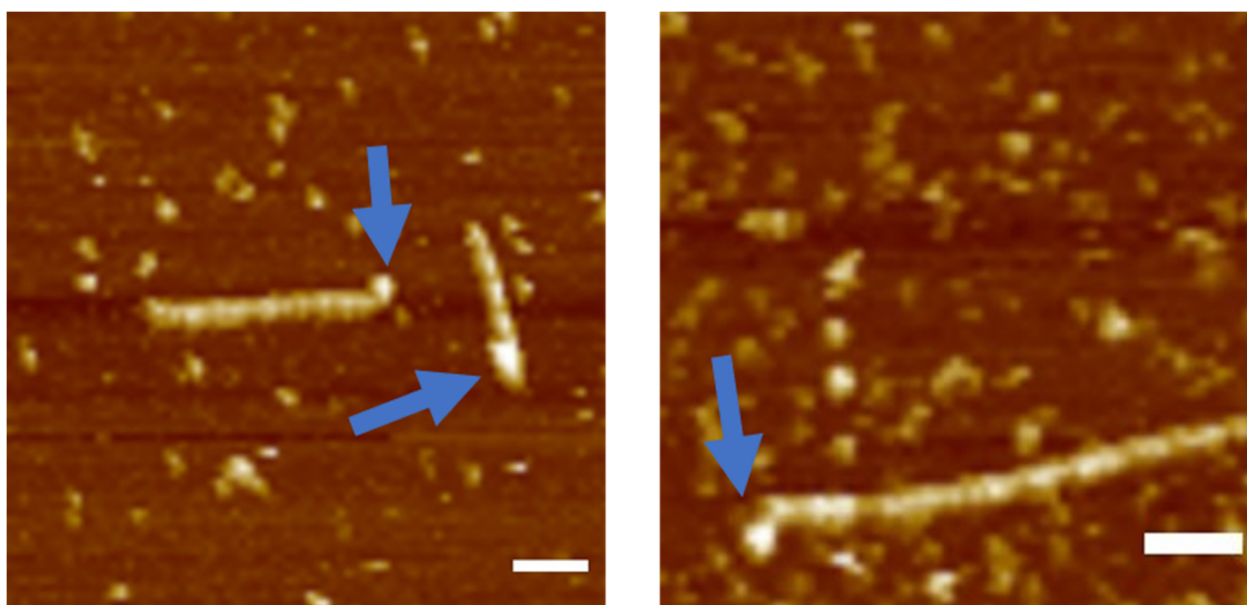


Figure S7. Additional AFM images of SWCNT-protein conjugates. Scale bar = 100 nm

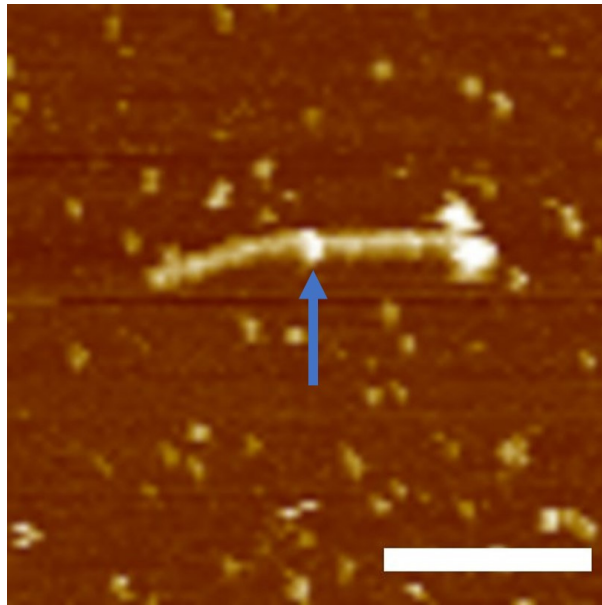


Figure S8. AFM image of protein attached to sidewall of SWCNT. Scale bar = 100 nm.

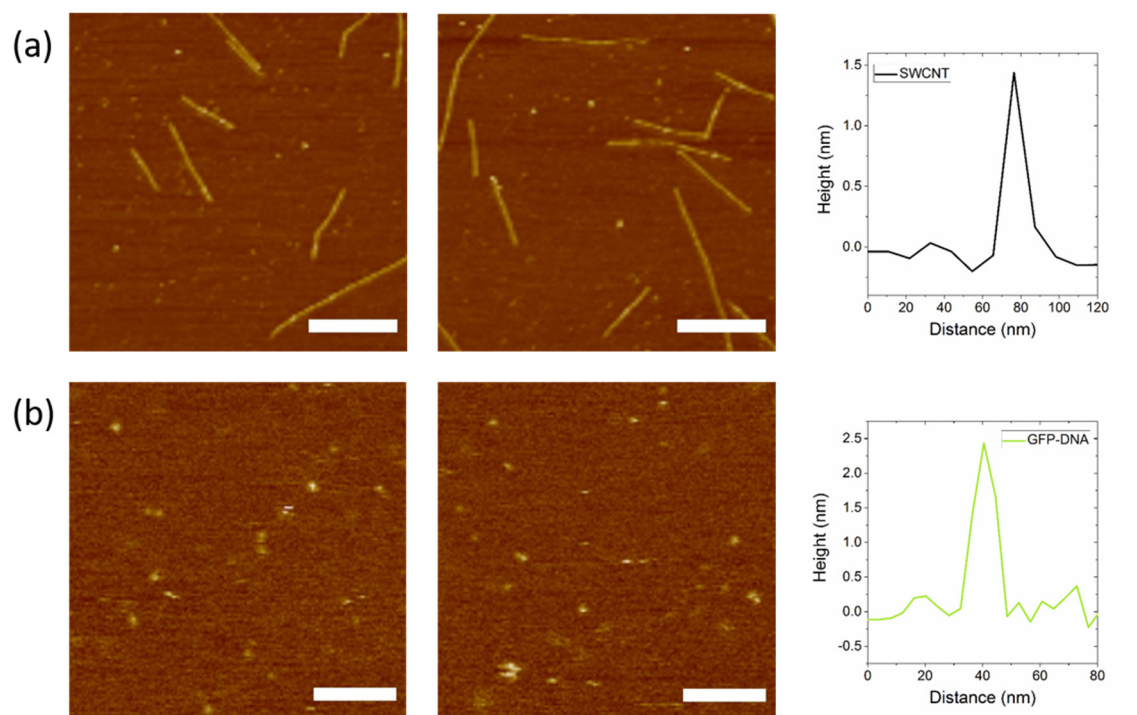


Figure S9. Fluid-mode AFM images of (a) unfunctionalized SWCNTs (scale bar = 250 nm) and (b) GFP-DNA (scale bar = 100 nm) with representative height profiles of each.

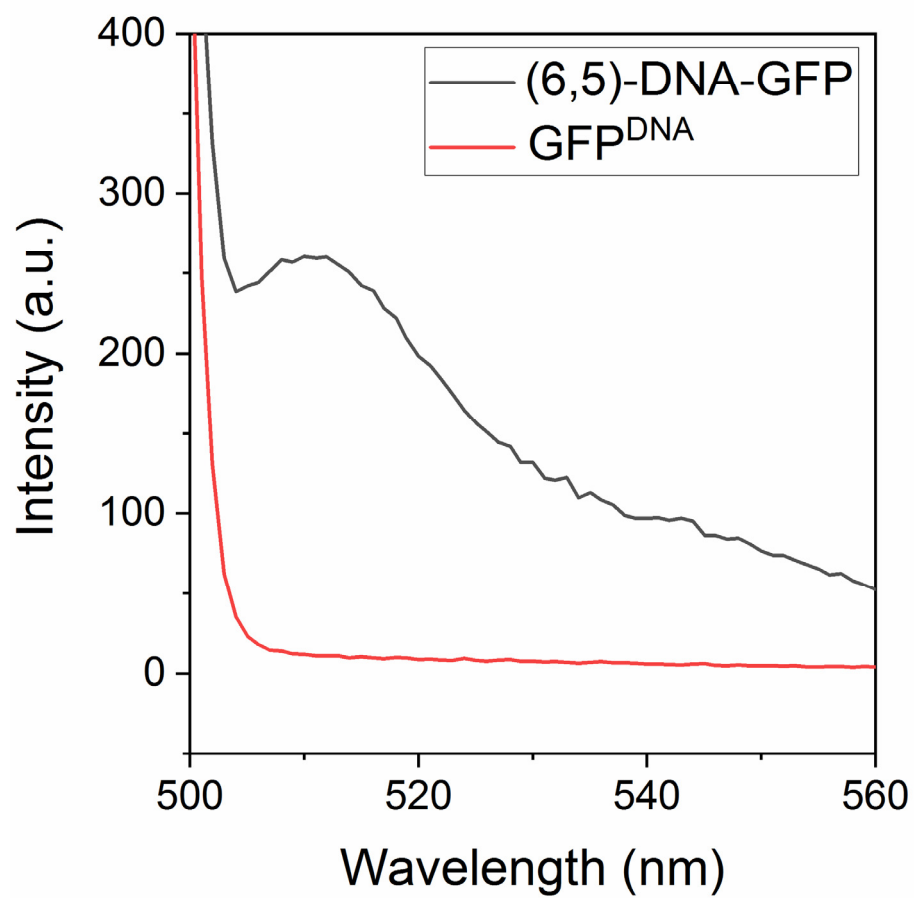


Figure S10. Comparison of the in-solution emission of SWCNT-GFP hybrids assembled with the DNA-functionalized (6,5) variant (black line) against GFP alone (red line), as measured by fluorescence spectroscopy.

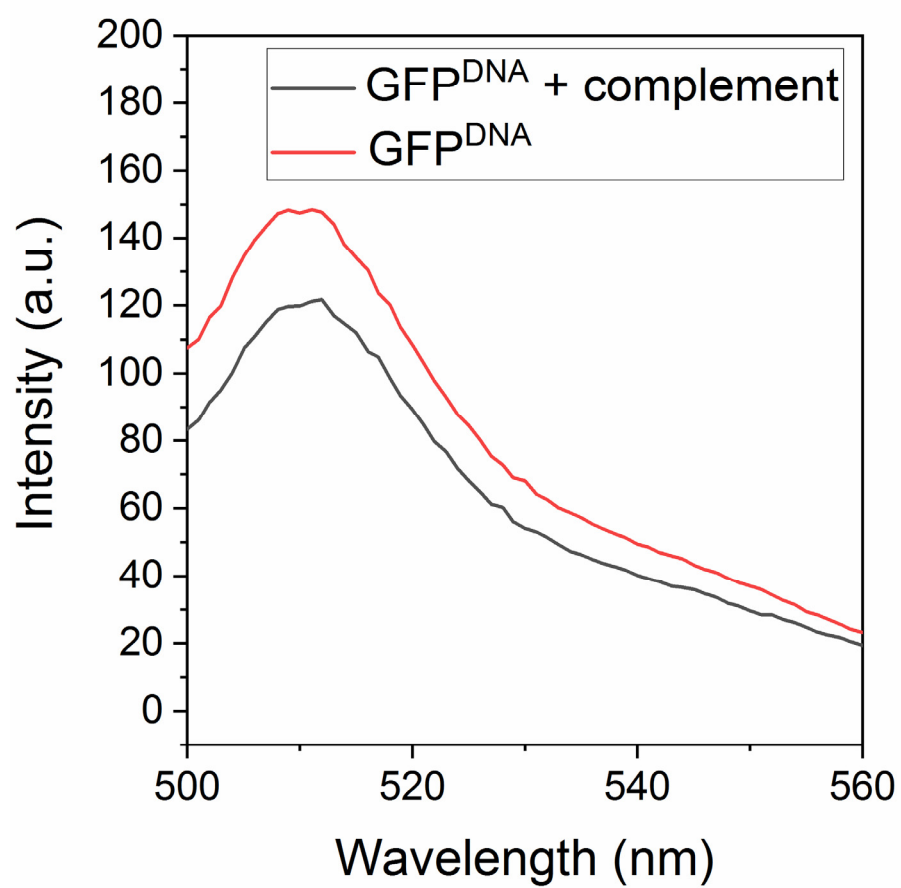


Figure S11. Fluorescence spectrum of GFP-DNA alone (50 nM) and with complementary DNA (500 nM).