

Electronic Supplementary Information

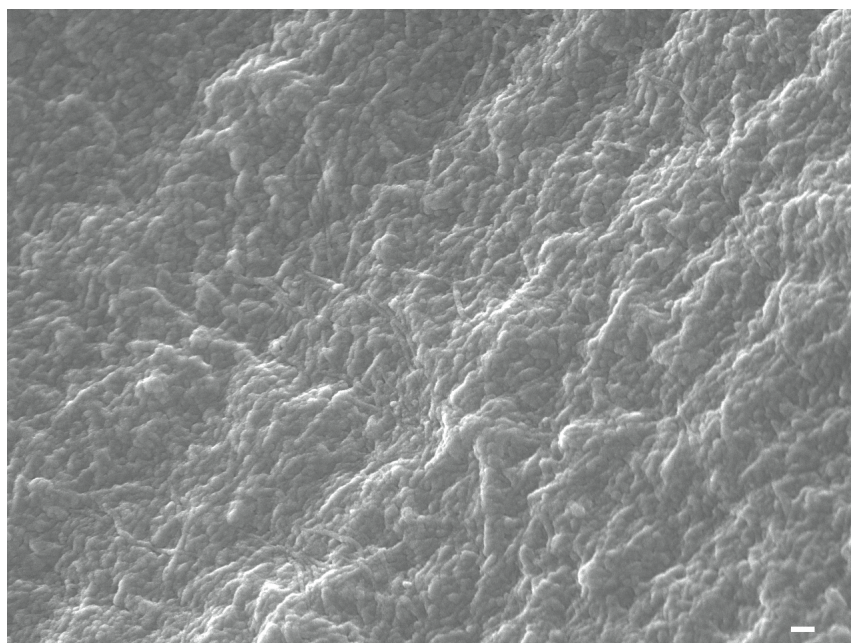


Figure S1. FESEM micrograph of SWCNTs non-specifically binding to pure phage fibers after several iterations of washing. The scale bar is 100 nm.

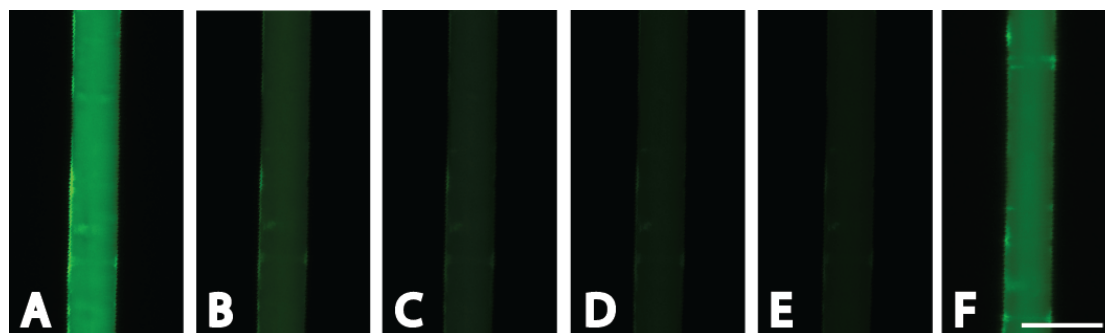


Figure S2. Photobleaching of pure phage fibers exposed to a 70W mercury lamp over a period of A) 0 min; B) 15 min; C) 30 min; D) 45min; E) 60 min at an exposure time of 400 ms. F) Fiber in E at an exposure time of 2 s, which is usually used for cell imaging. In all the fluorescence images, the scale bar is 50 μm .

Table S1. Mechanical properties of pure phage fibers with respect to the concentration of glutaraldehyde.

[Glutaraldehyde] (%)	Tensile Strength (MPa)	Young's Modulus (GPa)	Failure strain (%)
1	36.7 ± 17.8	2.1 ± 0.7	2.9 ± 1.0
2	37.3 ± 15.3	1.8 ± 0.5	2.8 ± 1.3
4	37.4 ± 19.0	2.3 ± 1.9	2.6 ± 2.0
6	36.6 ± 20.0	1.5 ± 0.9	2.0 ± 0.9
8	36.7 ± 16.6	1.5 ± 1.0	2.0 ± 1.7

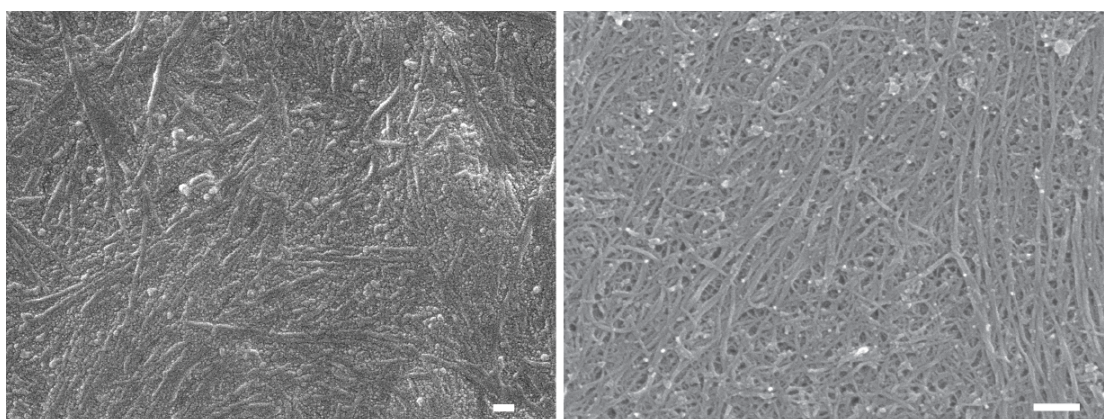


Figure S3. The isotropic topography of SWCNTs prior to fabrication of phage composite fibers despite some unidirectional alignment. Left: SWCNTs well dispersed in Tween-20. Right: SWCNTs after filtration and washing by DI water. The scale bars in both the FESEM images are 100 nm.

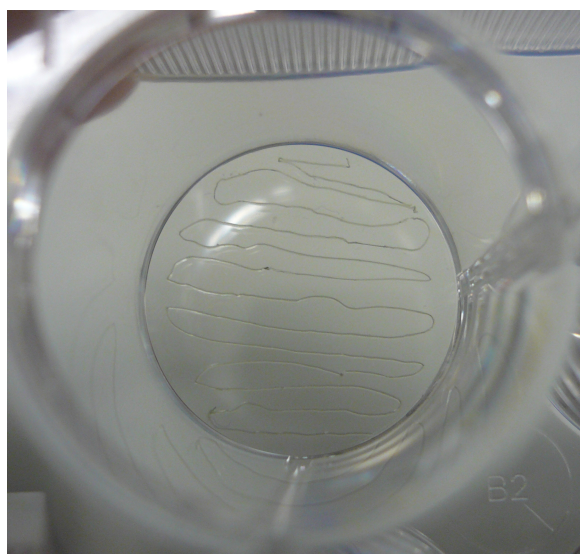


Figure S4. Photograph of fibrous scaffold for cell culture. SWCNT-blended fibers are placed in parallel and dried in a well of a 24-well plate.