

Supporting information for

Spontaneously Restored Electrical Conductivity of Bioactive Gel Comprising Mussel Adhesive Protein-Coated Carbon Nanotubes

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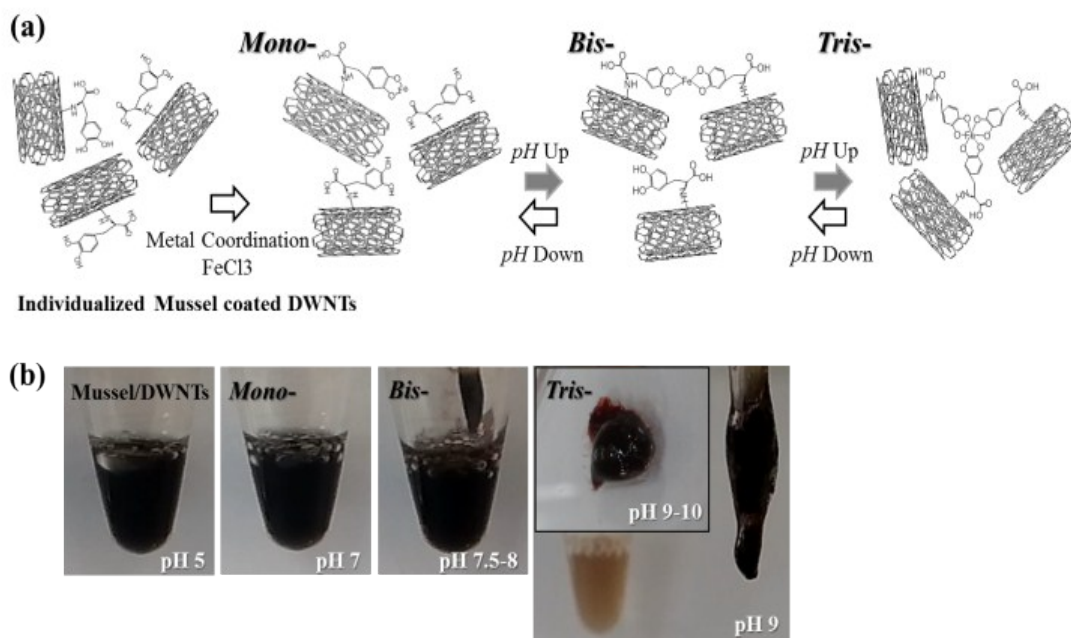


Figure S1 (a) Schematic diagram of DWNTs-MAP catechol (DOPA)- Fe^{3+} coordination bonding. (b) Digital images showing the sol-gel phase transition of the DWNTs-MAP solution with changes in the *pH*.

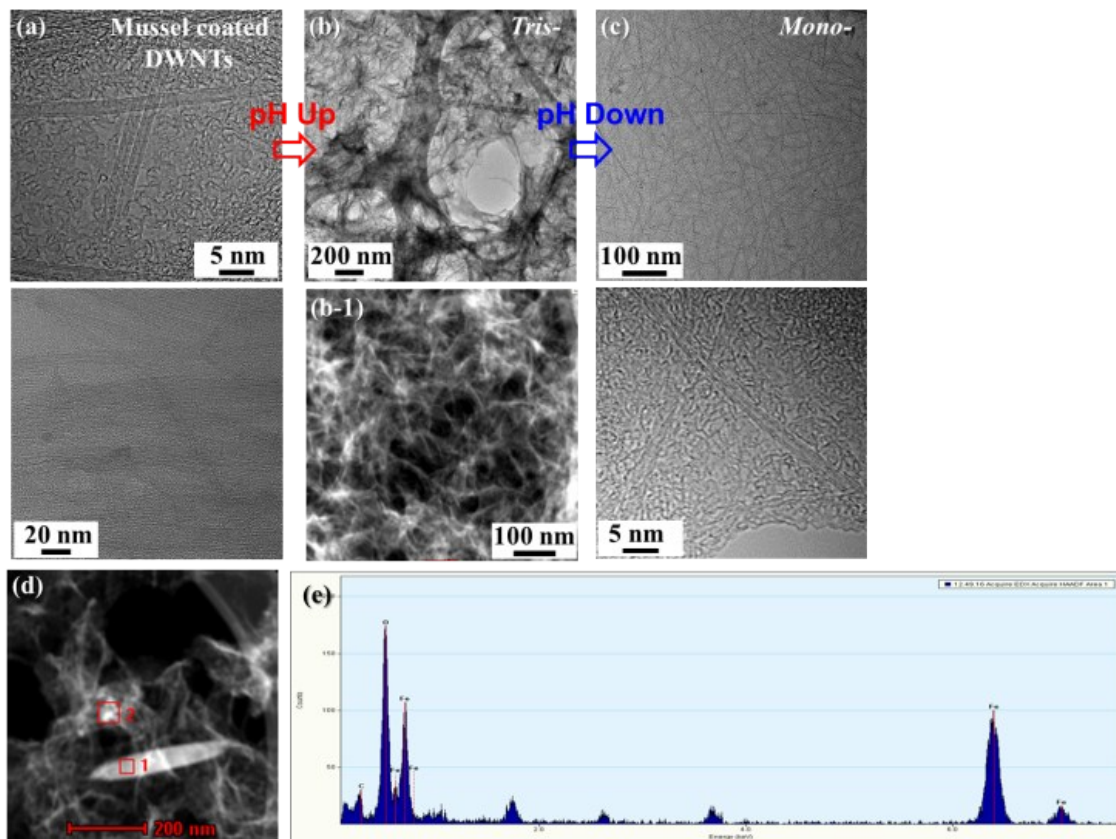


Figure S2 TEM and EDAX images; (a) DWNTs-MAPs hybrid solution, (b) *tris-* (*pH* 9~10) with (b-1) STEM mode, (c) *mono-* (*pH* 2) and (e) EDAX analysis of red box of insert of (d).

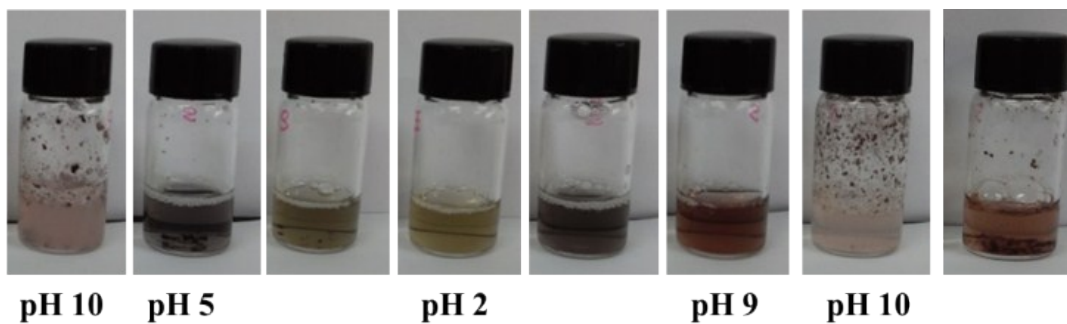


Figure S3 Photos showing DWNTs-MAPs solutions at different dispersion states: original, mussel wrapped DWNTs solution *bis-* (*pH* 7), *tris-* (*pH* 9~10), *mono-* (*pH* 2), 2nd *tris-* (*pH* 9~10), and 3th *tris-* (*pH* 9~10), of digital images of color transition of DWNTs in mussel solution according to *pH* switching, respectively.

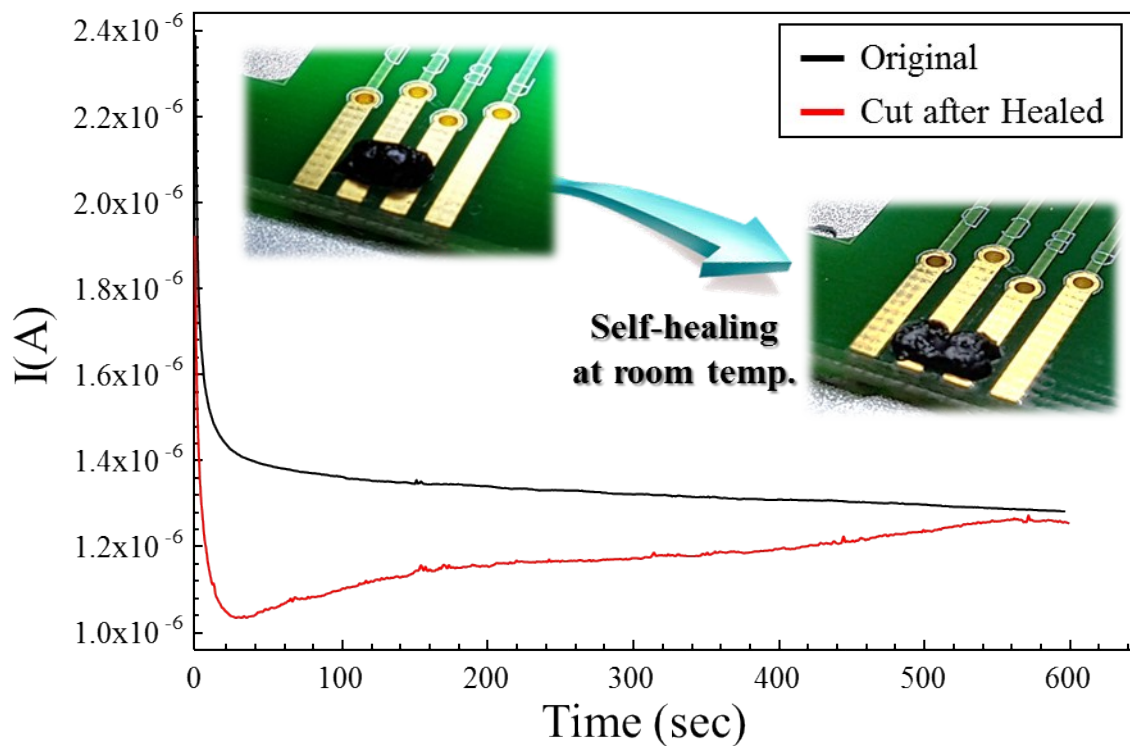


Figure S4. The time-dependent changes in the electrical conductivity of the hybrid gel. Note that the current value of the mechanically cut sample was back to that of the original one within 600 seconds.