

Reaction of Hydroxyfullerene with Metal Salts: A Route to Remediation and Immobilization

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Supplementary Materials

Figure S1. Representative SEM image of Fe-cross linked fullerenol agglomerates formed from the reaction of $\text{Fe}(\text{NO}_3)_3$ and $\text{C}_{60}(\text{OH})_n$ in aqueous solution.

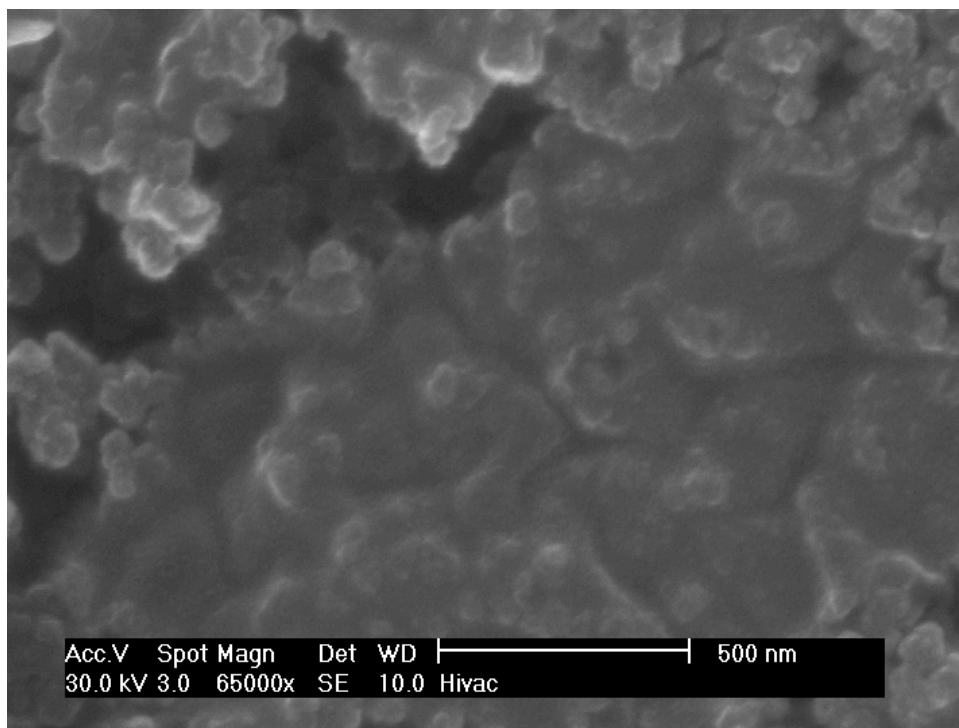


Figure S2. Representative TEM image of Fe-cross linked fulleranol agglomerates formed from the reaction of $\text{Fe}(\text{NO}_3)_3$ and $\text{C}_{60}(\text{OH})_n$ in aqueous solution.

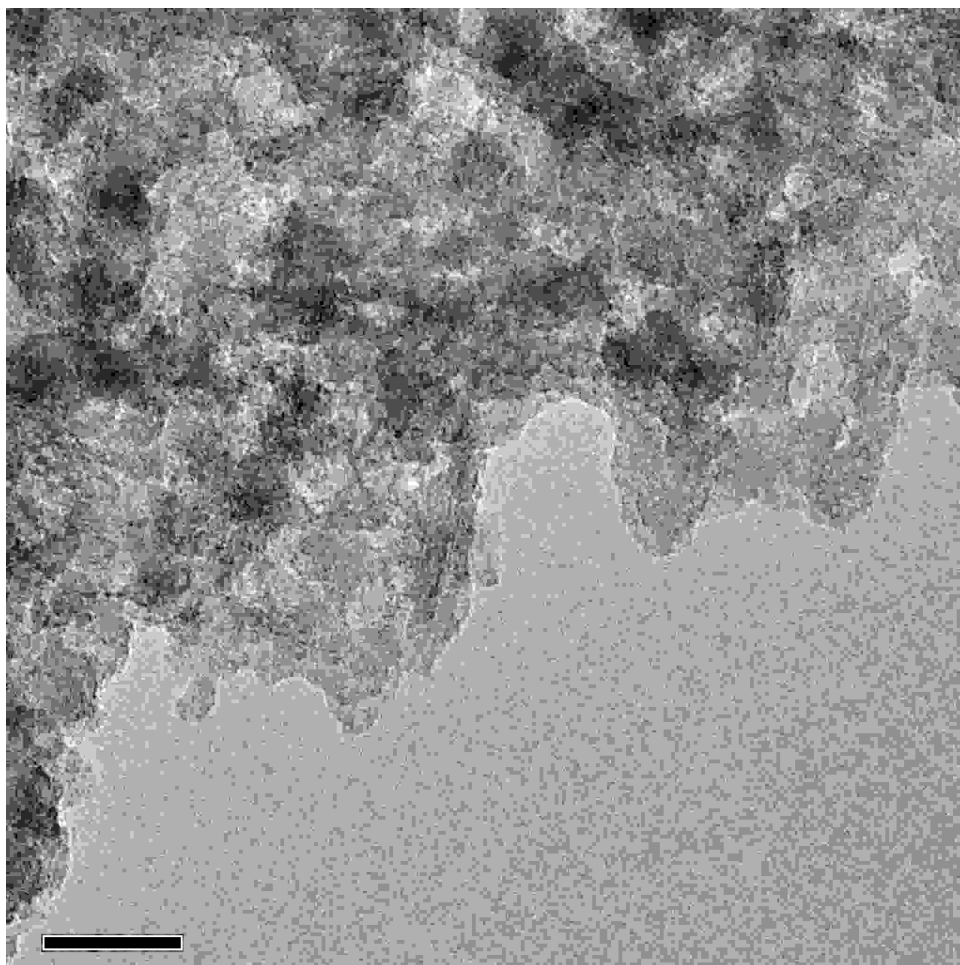


Figure S3. UV-visible spectra of (a) $\text{Fe}(\text{NO}_3)_3$ (50 mM) in water, (b) $\text{C}_{60}(\text{OH})_n$ (50 mM) in water, and (c) soluble fraction after reaction between $\text{Fe}(\text{NO}_3)_3$ and $\text{C}_{60}(\text{OH})_n$ in water.

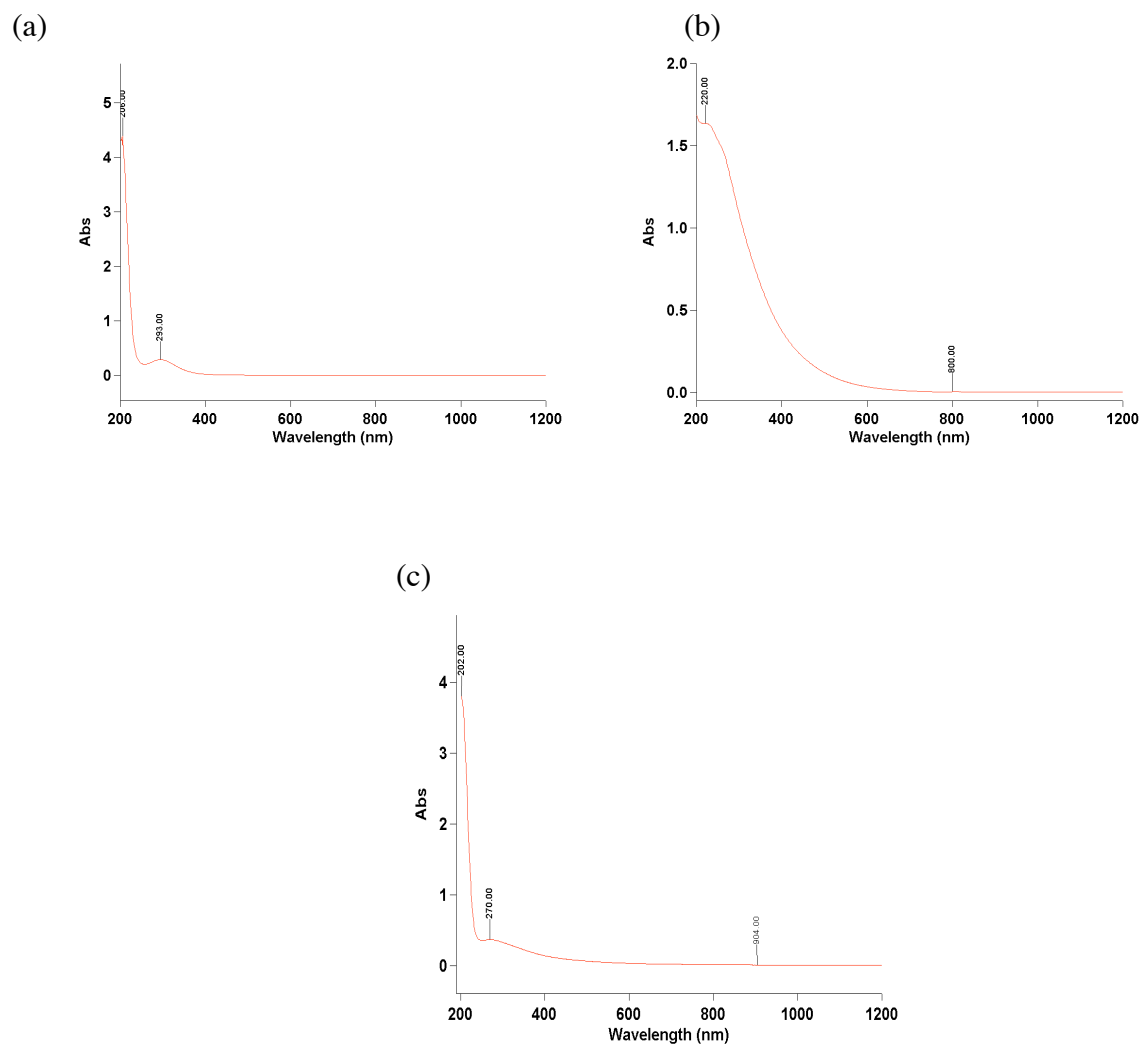
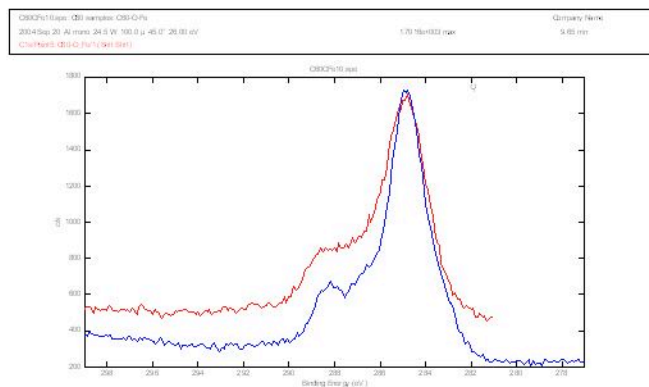


Figure S4. The C 1s (a) and Fe 2p (b) X-ray photoelectron spectral components of fullerenol (blue line) and the product from the reaction of $\text{Fe}(\text{NO}_3)_3$ and $\text{C}_{60}(\text{OH})_n$ (red line).

(a)



(b)

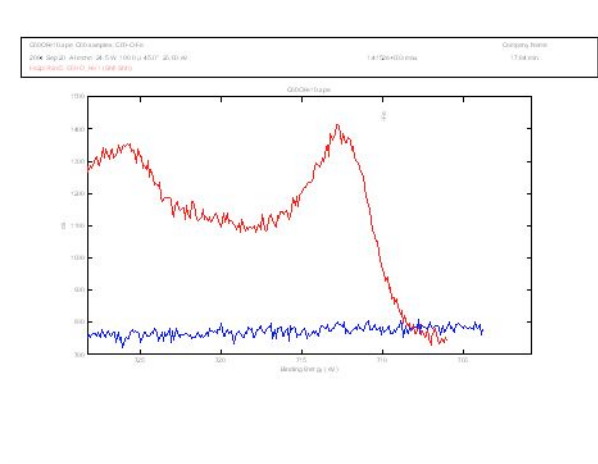


Figure S5. Computer generated structures of $[\text{Fe}(\text{C}_{60}\text{O}_2)_2]$ unit, showing the steric accessibility of the cross-linked unit. Atoms are color coded as follows: carbon (grey), oxygen (red), and iron (green).

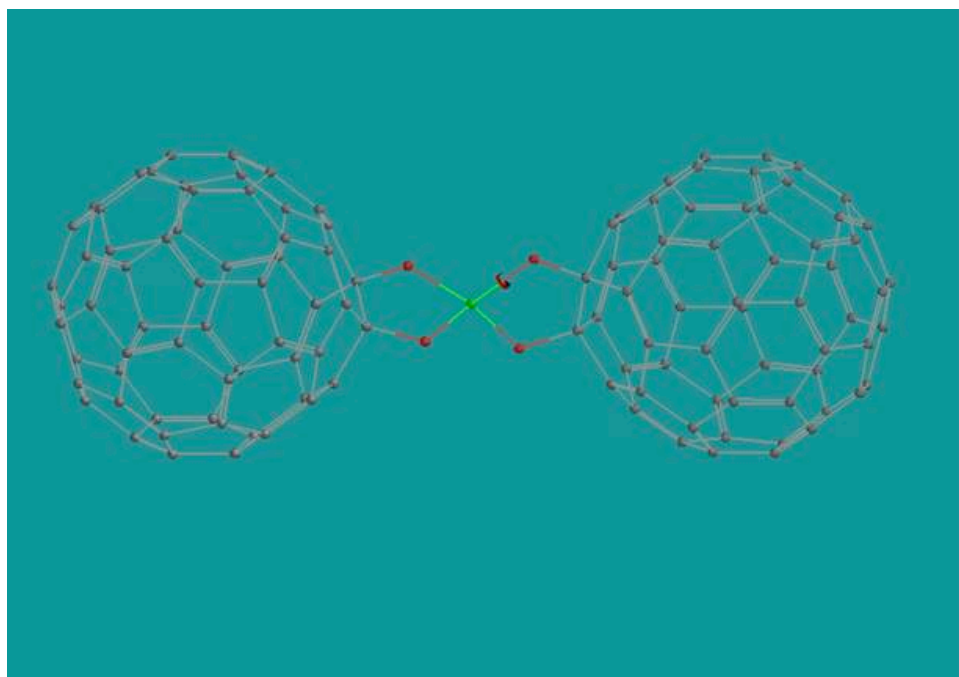


Figure S6. Computer generated structures of $[\text{Fe}(\text{C}_{60}\text{O}_2)_3]$ unit, showing the steric accessibility of the cross-linked unit. Atoms are color coded as follows: carbon (grey), oxygen (red), and iron (green).

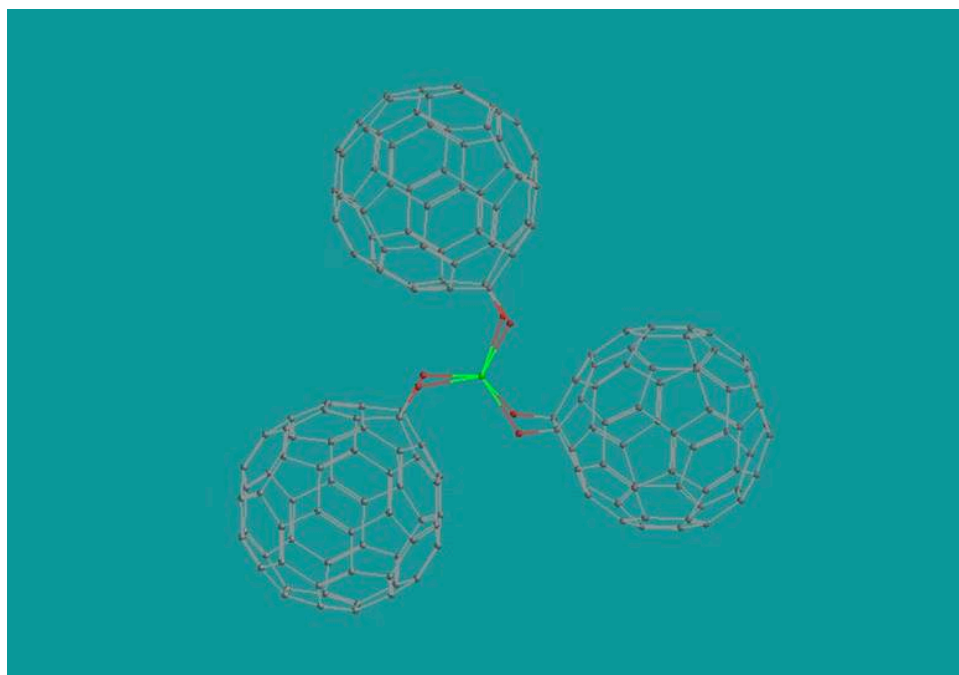


Figure S7. AFM image of Fe-fullerenol showing the particulate nature of the aggregates.

