Electronic Supplementary Material (ESI) for Faraday Discussions.

Supporting Information

Chiral self-assembly of fullerene clusters on CT-DNA templates

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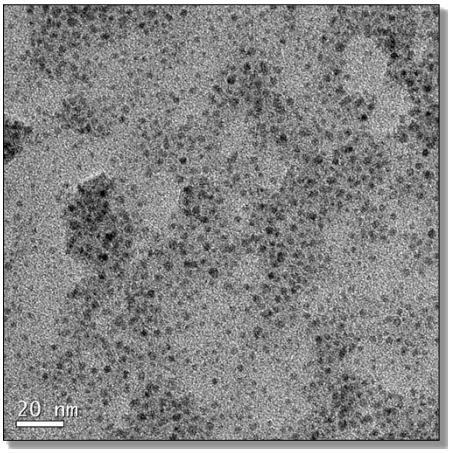

Figure S1. TEM image of **F-An** nanoclusters in 10% DMSO-PBS showing more or less uniform, 3-5 nm sized spherical nanoclusters.

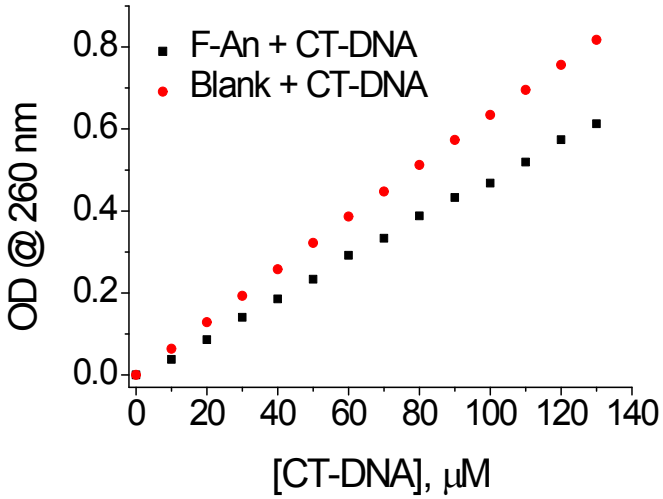

Figure S2. Absorption changes at 260 nm in the presence and absence of **F-An** with increasing concentration of [CT-DNA]. CT-DNA was added in small aliquots to a 10% DMSO-PBS solution of **F-An** nanoclusters or to a 10% DMSO-PBS solution blank.

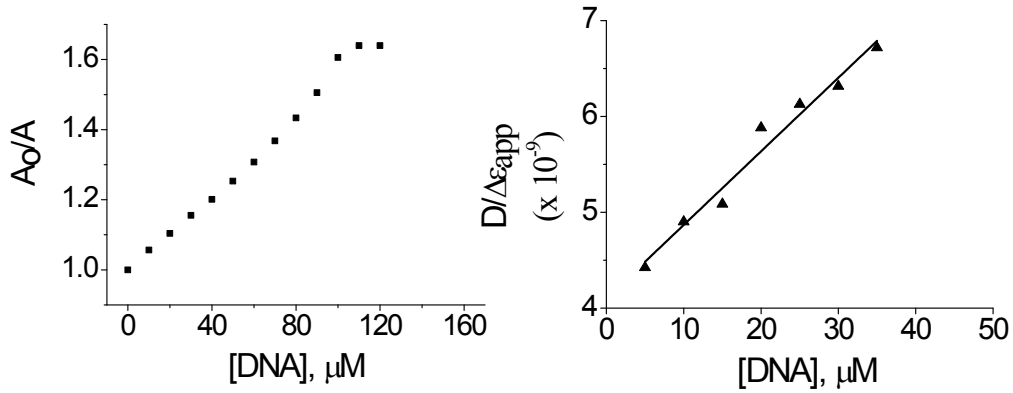

Figure S3. a) Saturation plot of absorption changes at 336 nm upon addition of CT-DNA to **F-An** (3 μM) and b) corresponding half reciprocal plot with increase in [CT-DNA].

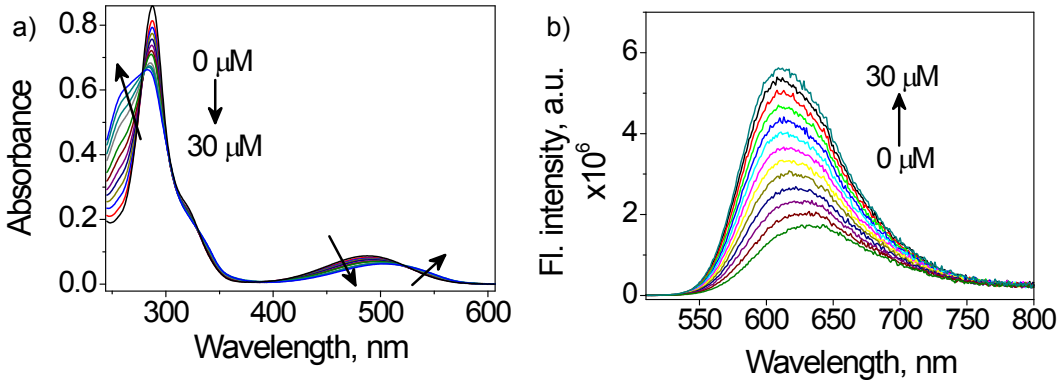

Figure S4. Changes in the a) absorption spectra and b) emission spectra of ethidium bromide (30 μM) in the presence of increasing concentrations of CT-DNA.

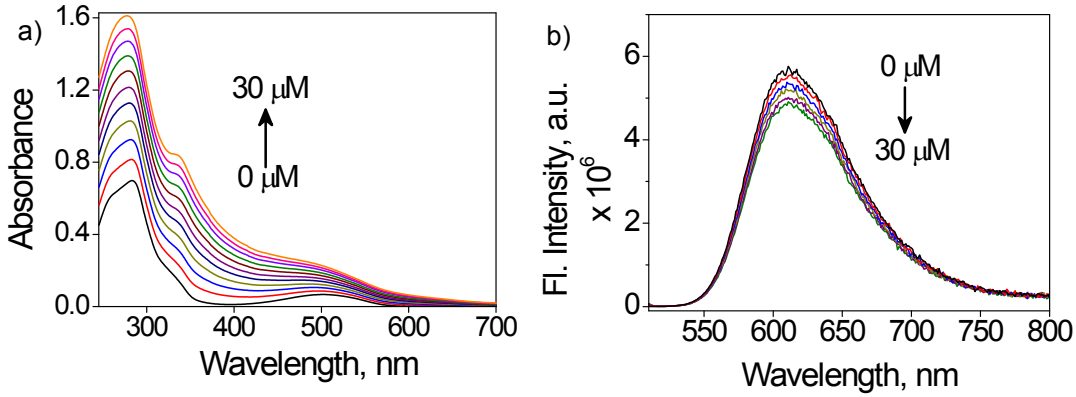

Figure S5. Changes in the a) absorption spectra and b) emission spectra of CT-DNA/ethidium bromide complex (30 μM/ 30 μM, 1:1) in the presence of increasing concentrations of **F-An**.

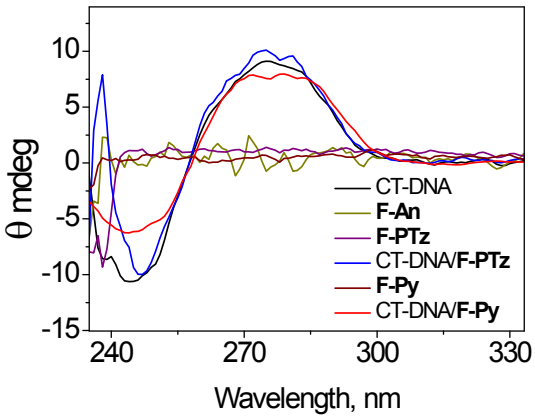

Figure S6. Circular dichroism spectra of **F-Py**, **F-An, F-PTz,** CT-DNA/**F-Py** (1:1) and CT-DNA/**F-PTz** (1:1) in 10% DMSO-PBS. These control experiments confirm that only **F-An** with unique cluster size can undergo templated self-assembly with CT-DNA.

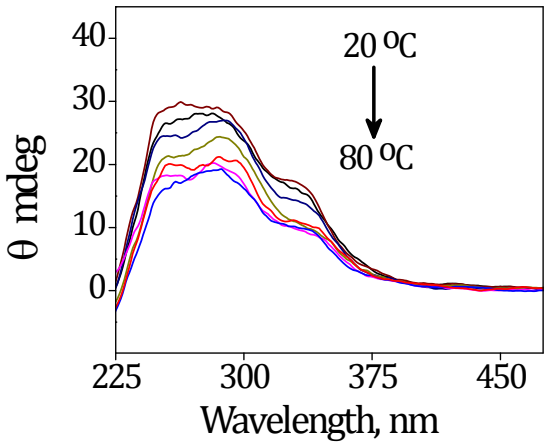

Figure S7. Temperature dependent CD spectral profile of CT-DNA/**F-An** (1:1) from 20 °C to 80 °C.

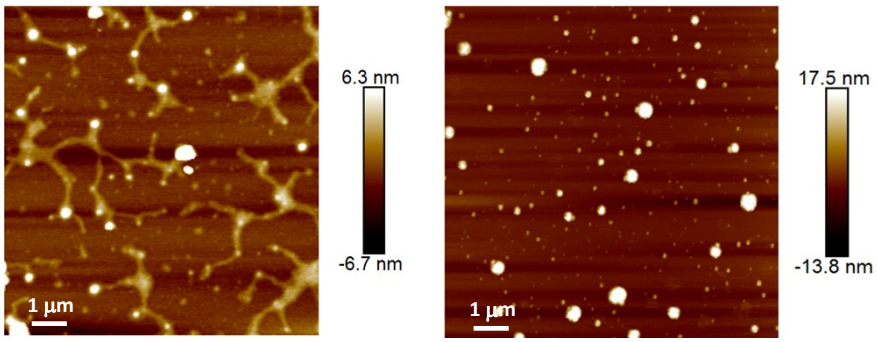

Figure S8. AFM height image of a) CT-DNA/**F-An** and b) **F-PTz** alone.

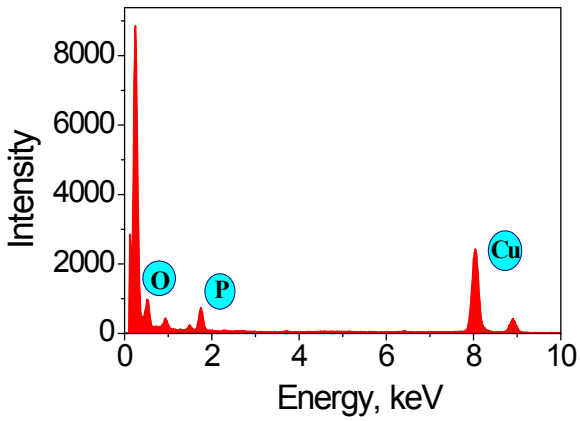

Figure S9. EDAX measured over nanonetwork from dsDNA/**F-An** (1:1) showing corresponding peaks arising from the phosphorous and oxygen atoms of CT-DNA backbone.