

Supporting Information

Electrogenerated Chemiluminescence of Aromatic Hydrocarbon Nanoparticles in Aqueous Solution

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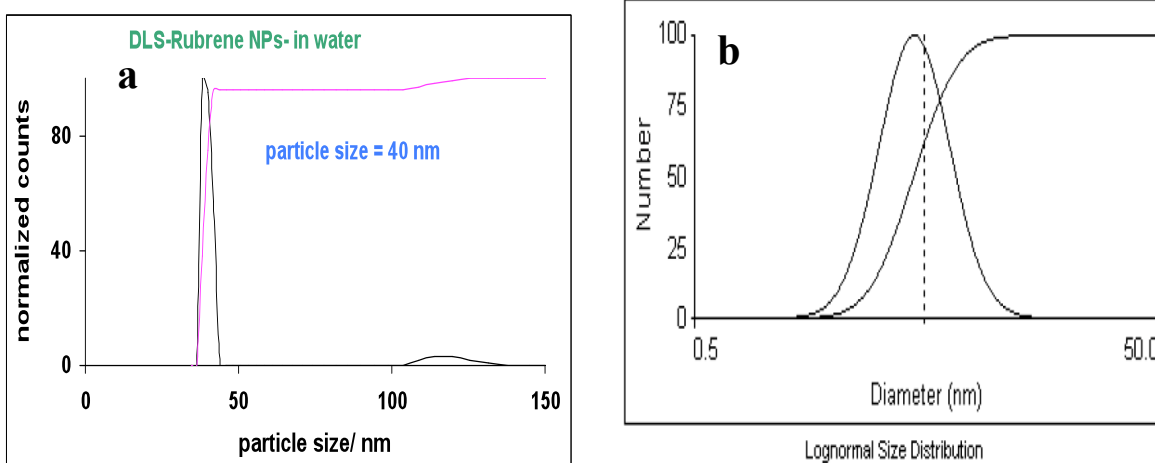


Figure S1. (a) Dynamic light scattering (DLS) measurement of rubrene NPs in water, (b) in the presence of Triton X-100

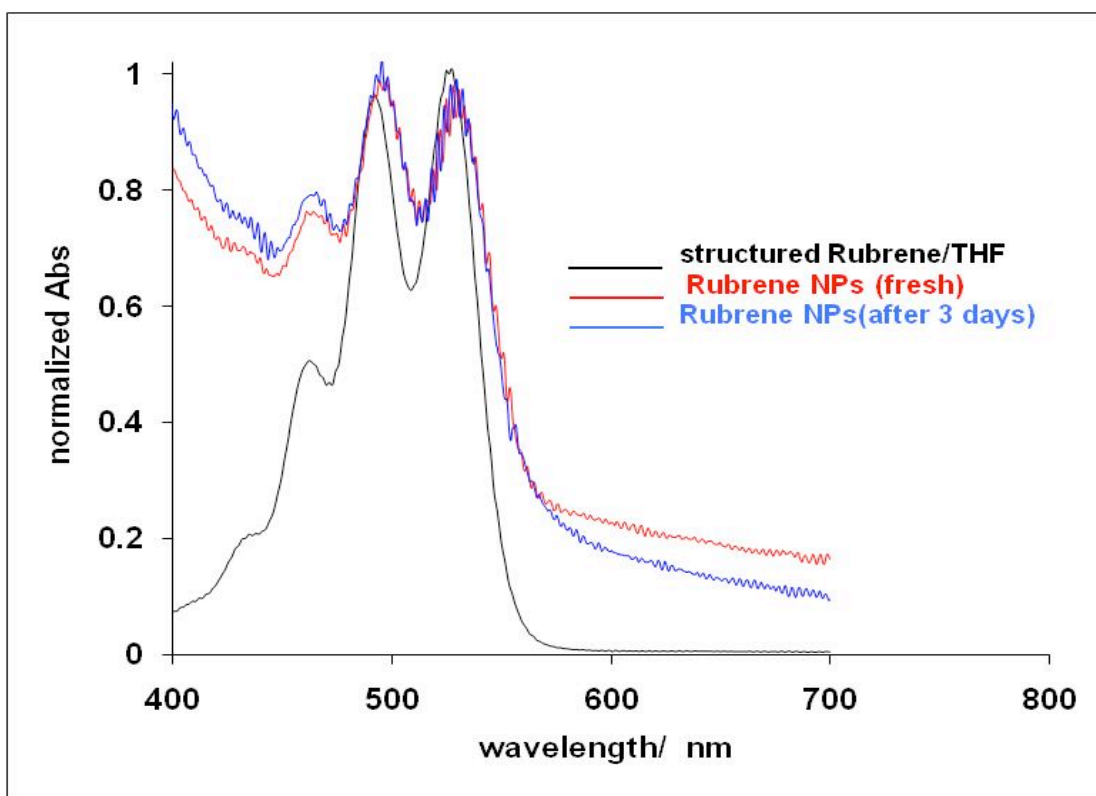


Figure S2. Absorption spectra of rubrene molecules in THF (bulk) and rubrene NPs in water.

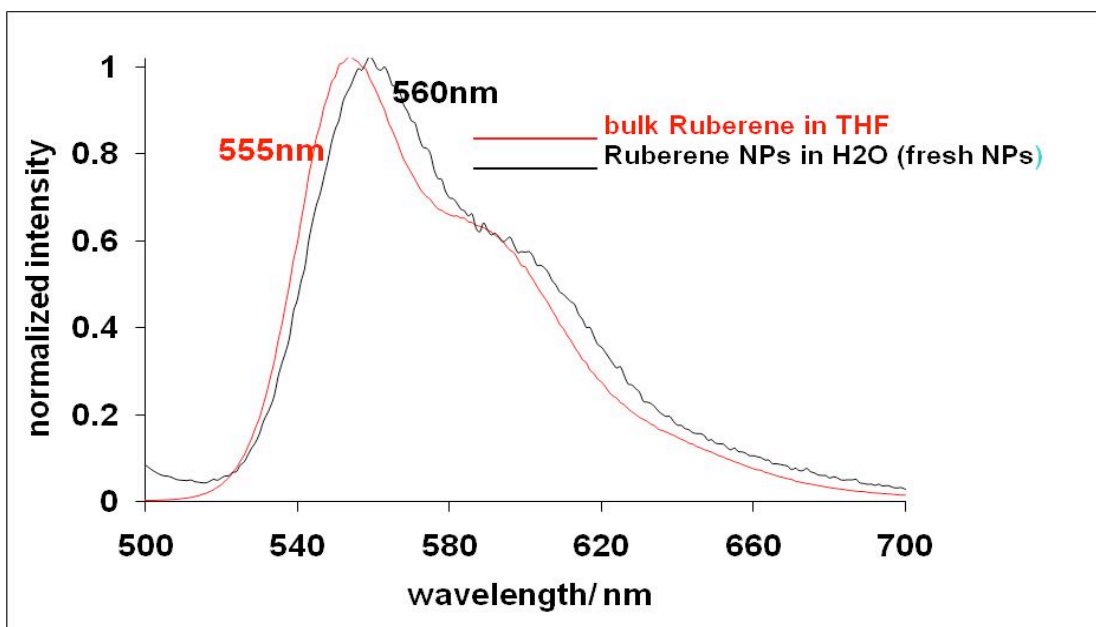


Figure S3. Fluorescence spectra of rubrene molecules in THF and rubrene NPs in water.

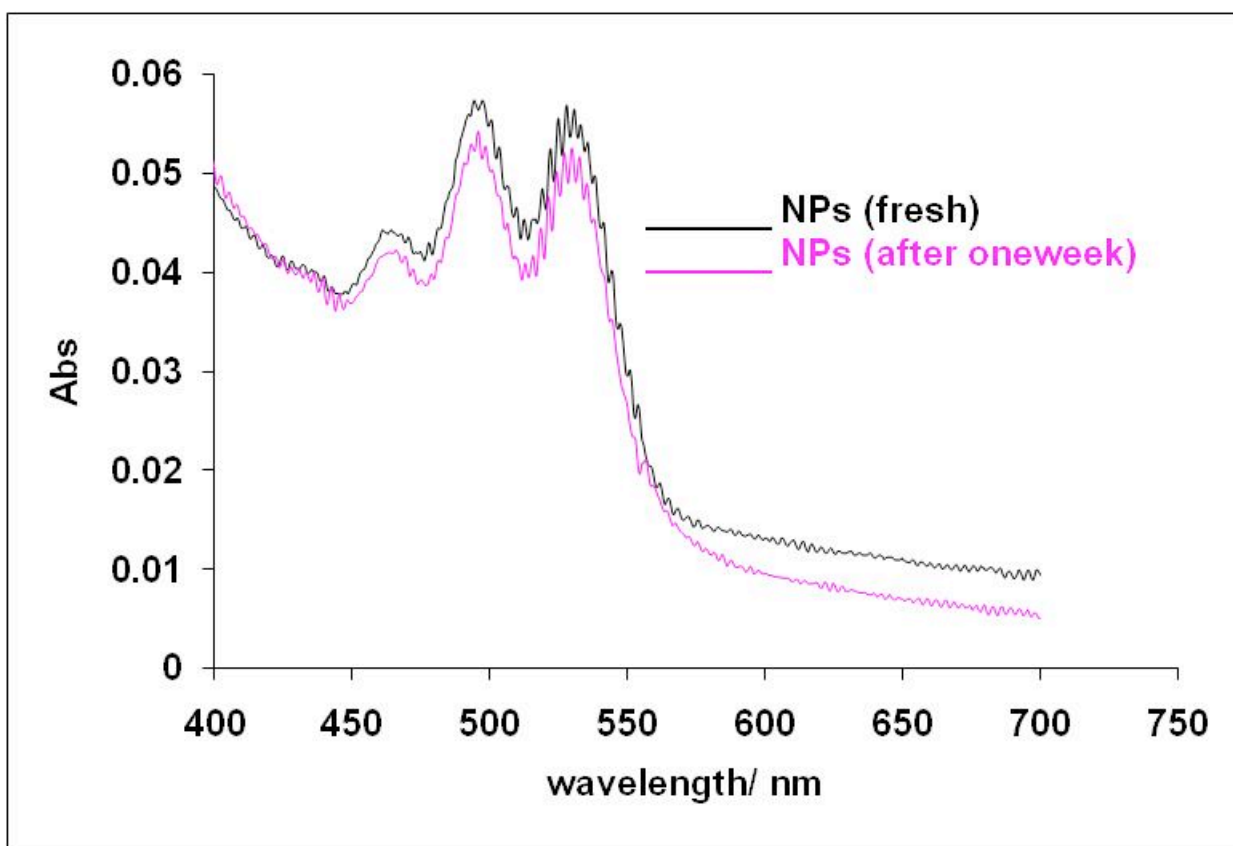


Figure S4. Comparison of absorption spectra of rubrene NCs fresh and after one week (without normalization).

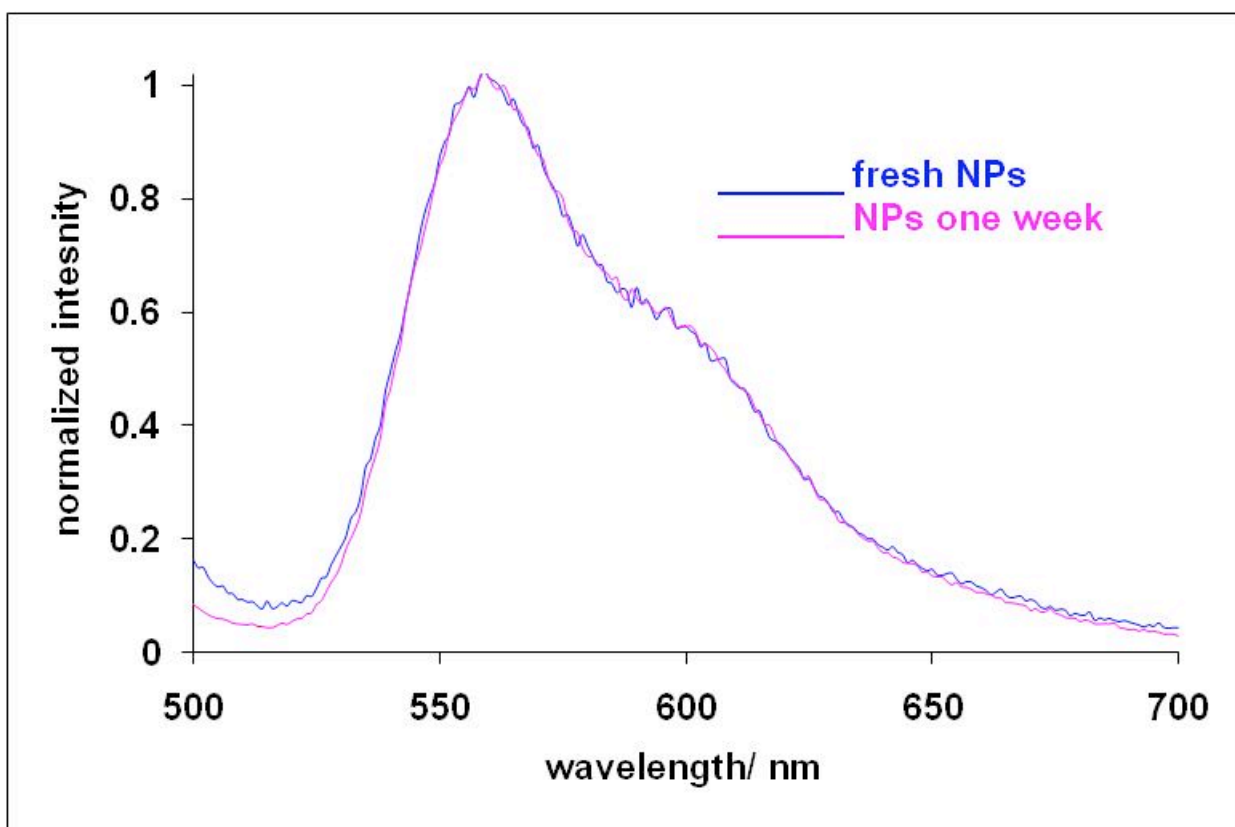


Figure S5. Comparison of fluorescence spectra of nanocrystals (NCs) of rubrene, fresh and after one week.

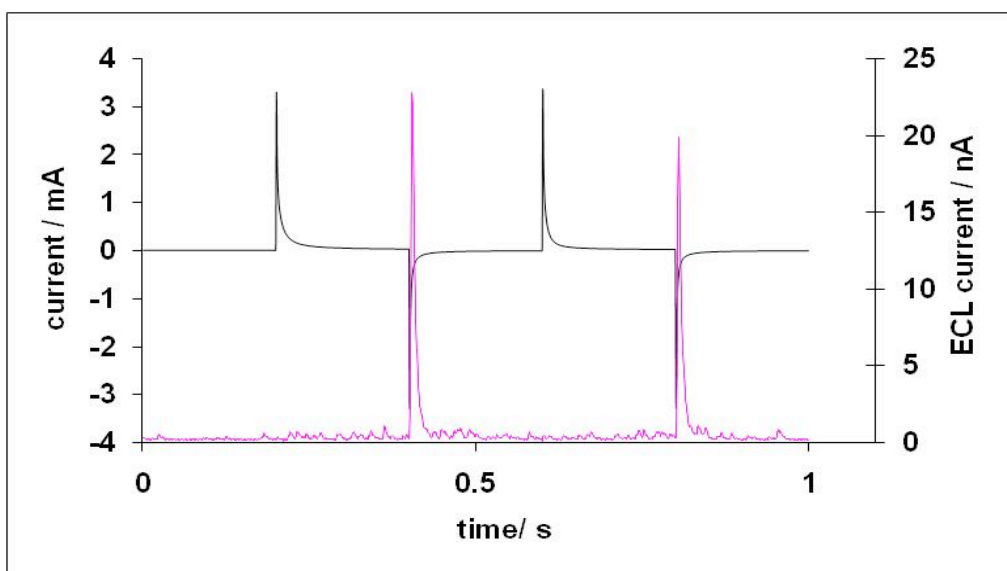


Figure S6. Rubrene NPs, (100mL of 5×10^{-3} M Rubrene/THF solution into water) Current (black curves) and ECL (magenta curves) transients of rubrene NPs in 0.1 M TPrA and 0.1 M NaClO_4 aqueous solution. 0.5 s pulse width and 0 to 0.9 V potential step vs Ag/AgCl.

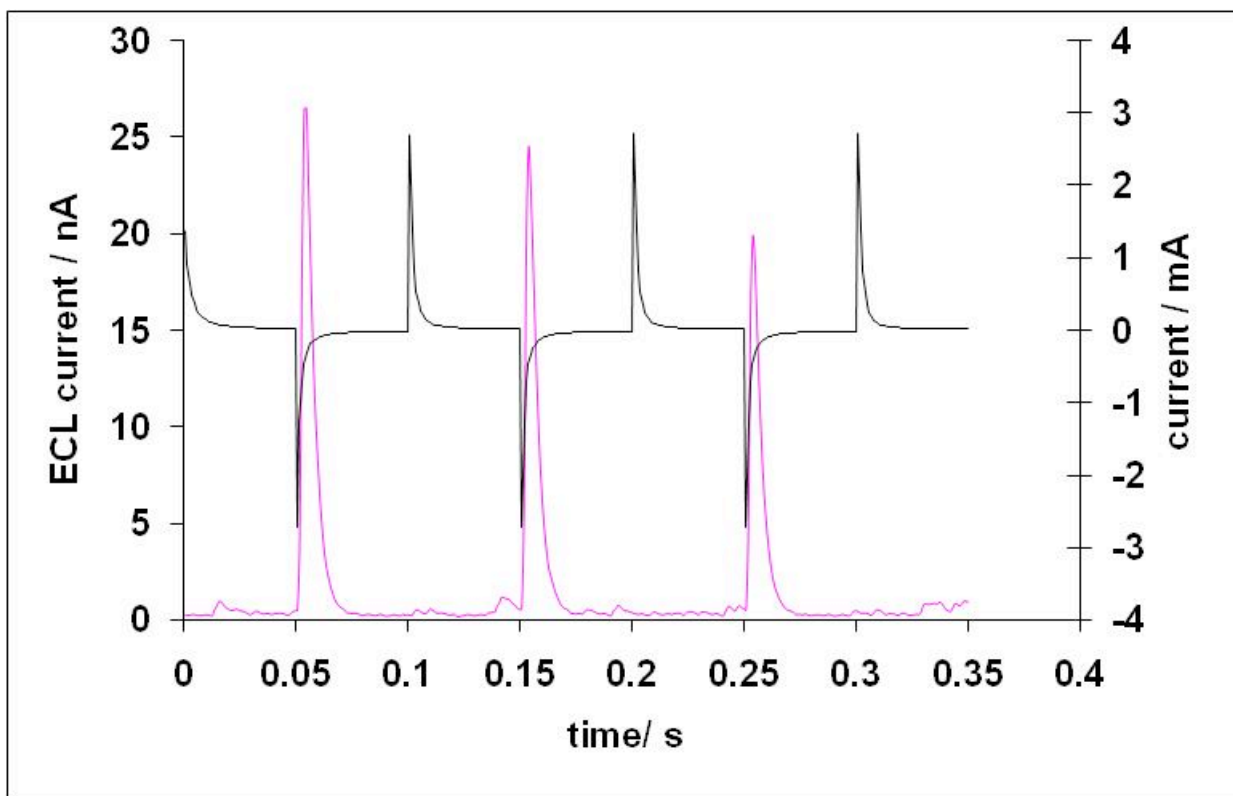


Figure S7. Rubrene NPs, 100mL of 5×10^{-3} M Rubrene/THF solution into water, 0.05 s pulse width (up to 0.9 V s Ag/AgCl), 0.1M NaClO₄, 0.1M TPrA, ECL (magenta line), electrochemical current (black line)

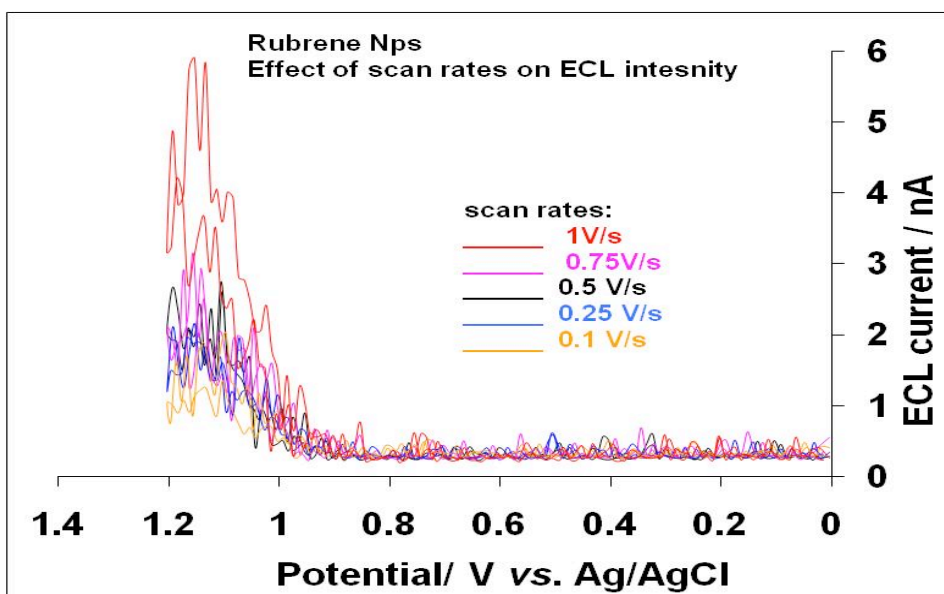


Figure S8. Dependence of ECL emission versus scan rate of potential of the rubrene NPs in aqueous solution containing 0.1 M TPrA in 0.1 M NaClO₄.

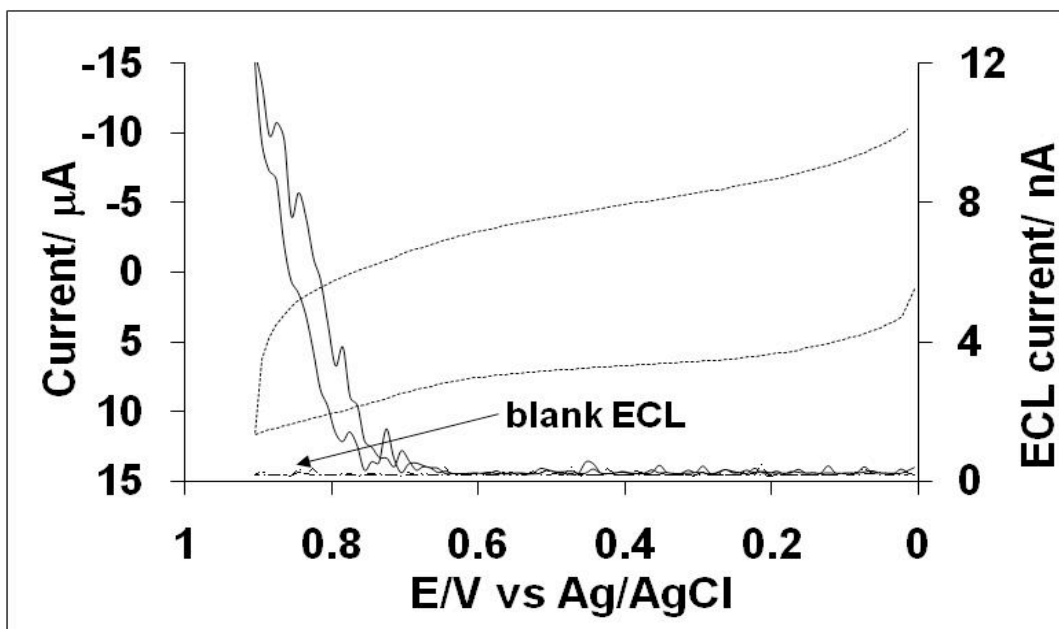


Figure S9. Cyclic voltammogram of rubrene NCs at scan rate of 500 mV/s, blank experiment: 0.1 M TPra in 0.1 M NaClO₄.

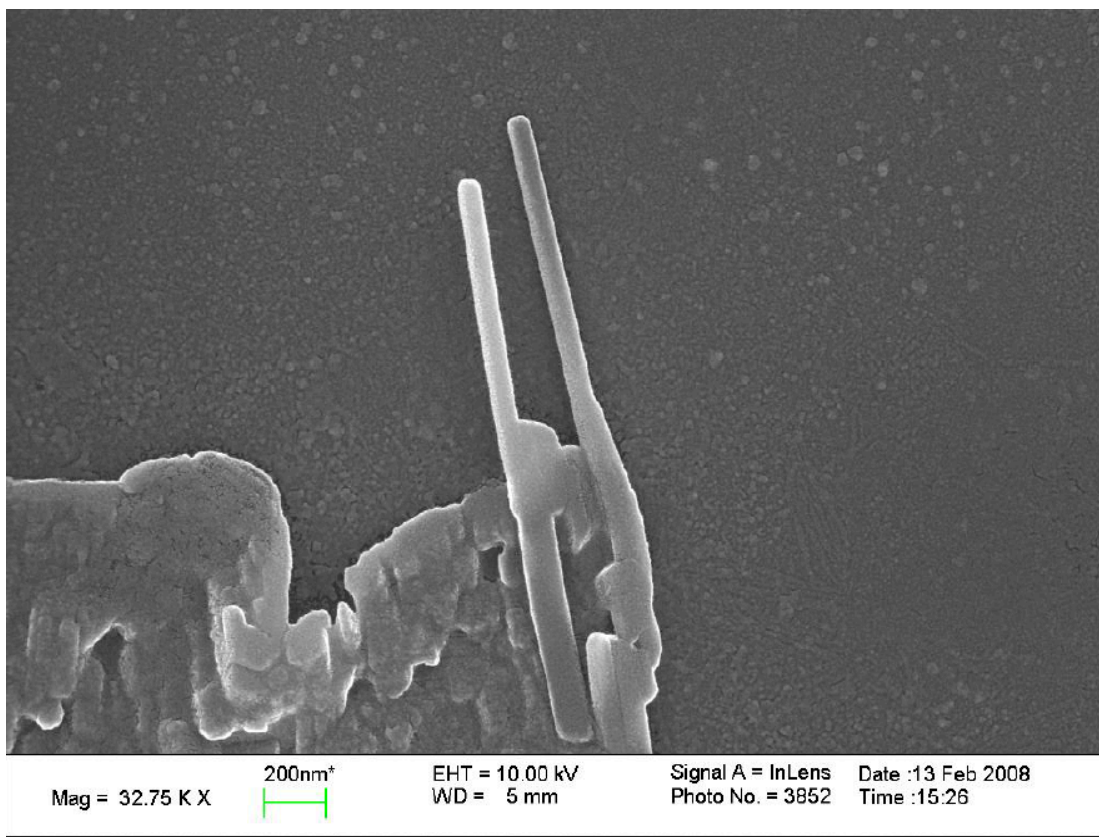


Figure S10. SEM image of DPA NCs (prepared by dissolving DPA in DMF and injected the DMF solution into water).