## Doping of Polyaniline with 6-Cyano-2-Naphthol

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Cross-sectional image



**Figure. S1.** Cross-sectional FEGSEM image of PANI-ES-6CN2 showing the thickness of the film deposited on glass.



**Figure. S2.** (a) UV-Vis spectra of PANI-EB, PANI-ES-6CN2 in the ratio 6CN2:aniline ::: 0.2:1.0, 0.5:1.0. Inset showing the absorption in 700-1000 nm region in the difference spectrum (obtained from PANI-ES-6CN2 from that of PANI-EB denoted in the figure as PANI-ES-6CN2–PANI-EB). (b) Normalized UV-Vis spectra of PANI-EB and PANI-ES-6CN2 displaying red shift of 20 nm on protonation indicating formation of PANI-ES from PANI-EB (c) Absorption of 6CN2 in water, basic (1M NaOH), NMP solutions compared with (PANI-ES-6CN2–PANI-EB). Fluorescence spectra of (d) 6CN2, PANI-ES-6CN2 and (e) PANI-EB and PANI-ES-6CN2 (excited at 310 nm).



Figure. S3. Absorption of PANI at different pH