Electronic Supplementary material-

Dual Photoluminescence and Charge Transport in alkoxy biphenyl benzoate ferroelectric liquid crystalline−Graphene Oxide Composite

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Figure S1: FTIR spectrum of pure FLC material.

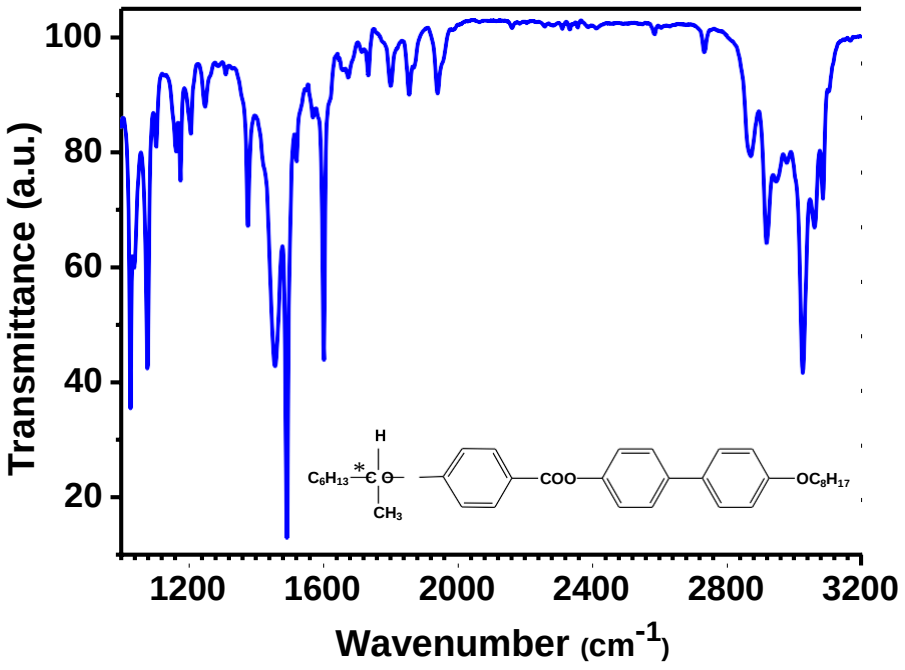
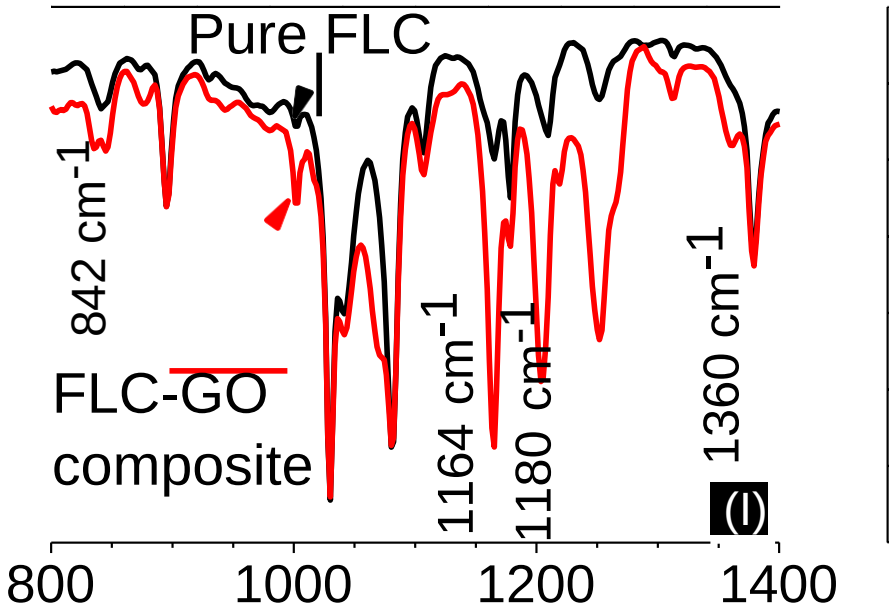


Figure S2: Enlarge FTIR spectra of FLC-GO composite between the intervals of (I) 800-1400 $cm^{-1}$and (II) 1635-1785 cm^{-1}.



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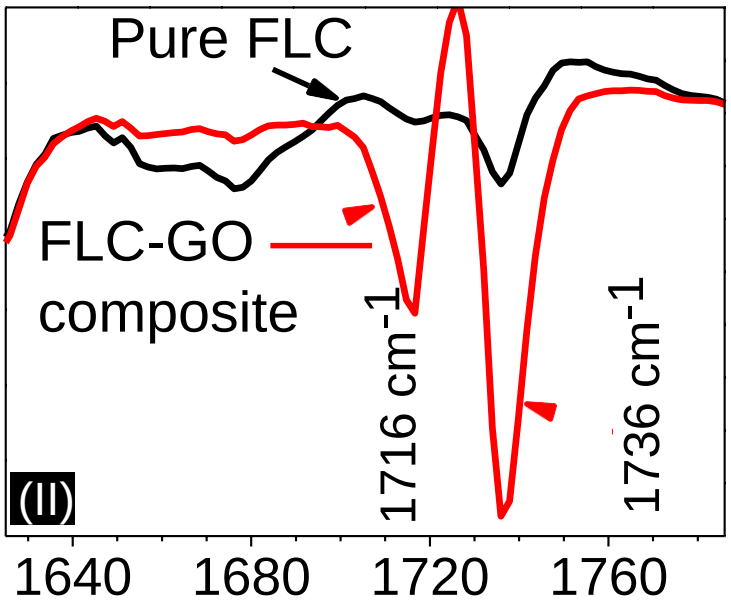
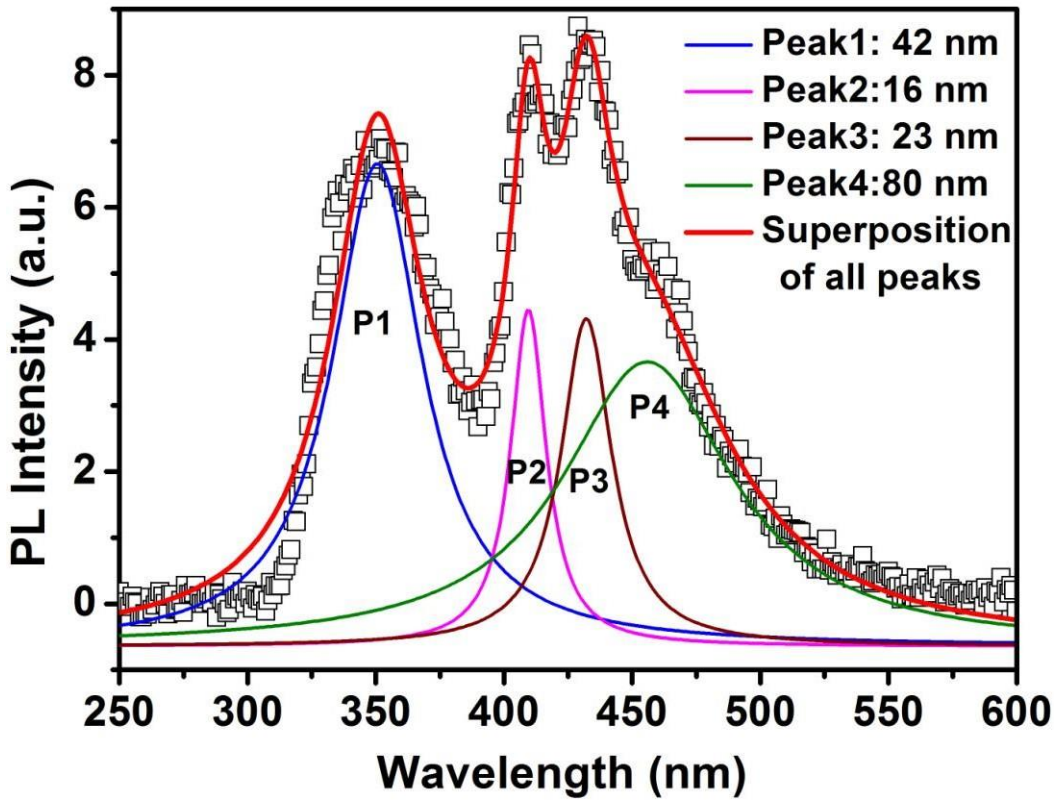


Figure S3: Deconvoluted PL emission of FLC material.



Peak- 1: FWHM- 42.67 nm; Peak position- 350.5 nm

Peak- 2: FWHM- 16.82 nm; Peak position- 409.5 nm

Peak- 3: FWHM- 23.97 nm; Peak position- 432.1 nm

Peak- 4: FWHM- 80.59 nm; Peak position- 455.9nm

Figure S4: Spectral overlap between PL spectrum of GO (red circle) and absorbance spectrum of FLC (black square) at room temperature.

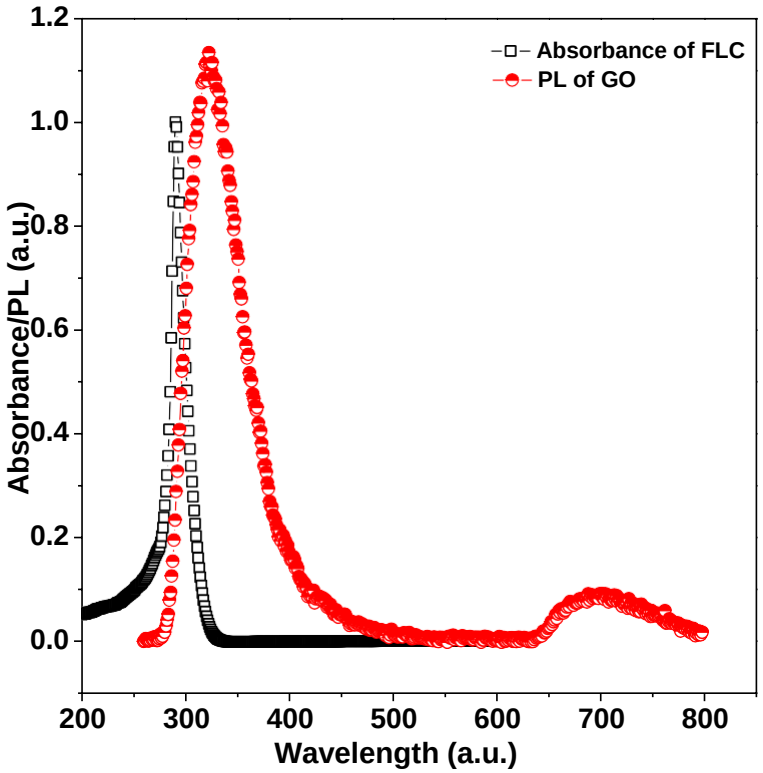


Figure S5: Schematic representation of transitions during absorbance and fluorescence in FLC, GO and FLC-GO composite.

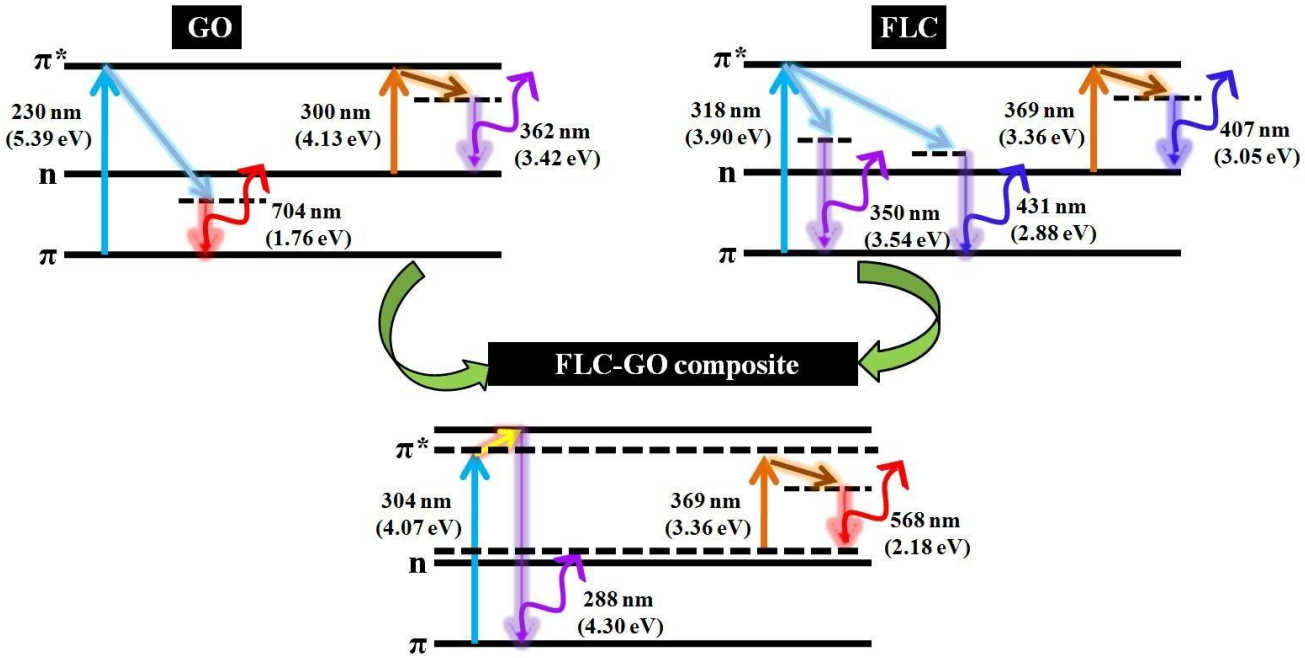


Figure S6: 2D AFM image and height profile of pristine GO flakes. GO flakes were deposited over the Quartz substrate by the same method. The thickness of GO flakes was found to be between 0.5 to 1.5 nm.