Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.

Supplementary material for

Orientation of 4-n-octyl-4'-cyanobiphenyl molecules on graphene oxide surface via electron-phonon interaction and its application in nonlinear electronics†

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Fig. S1 (i) Polarized optical micrographs of 8CB+GO hybrid materials along with the schematic representation of the change in LC molecular orientation. Yellow dots on GO surface represent the binding sites (defects) on which CN is proposed to attach.

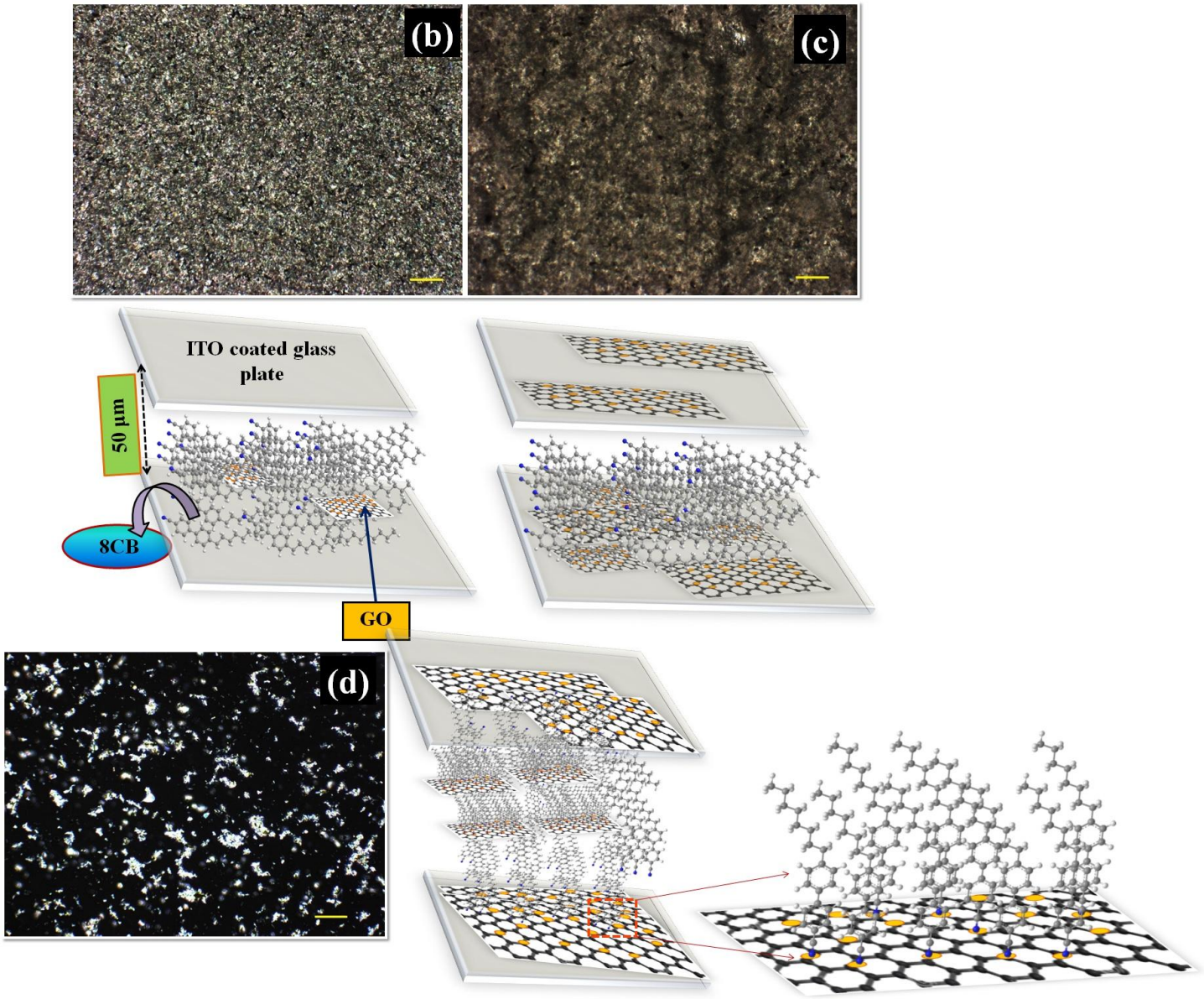

Fig. S1 (ii) Long range GO network that leads to the bulk orientation of 8CB molecules.

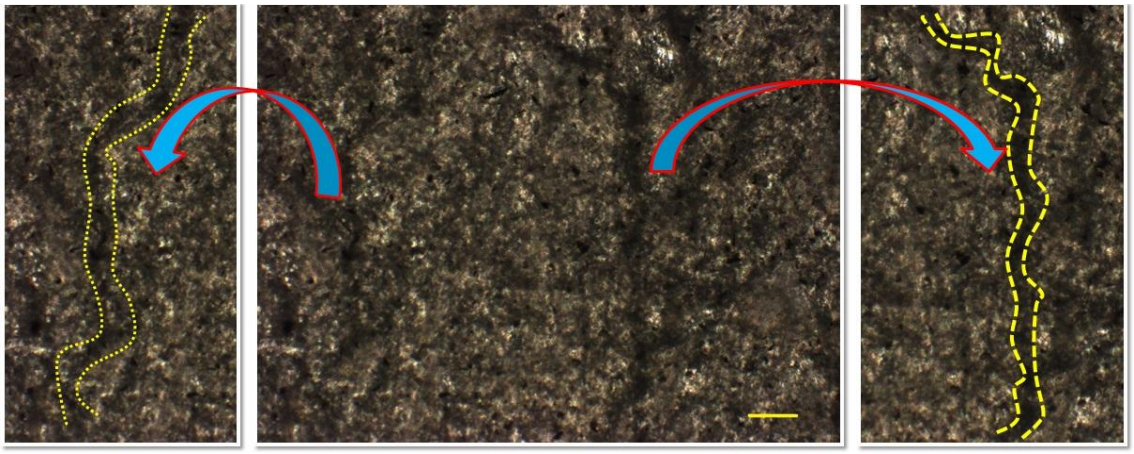

Fig. S2. Fourier-transform Infrared (FTIR) spectra of 4-n-octyl-4'-cynobiphenyl (8CB) and GO+8CB hybrid materials for the wave number interval of 1550-2275 cm^{-1}.

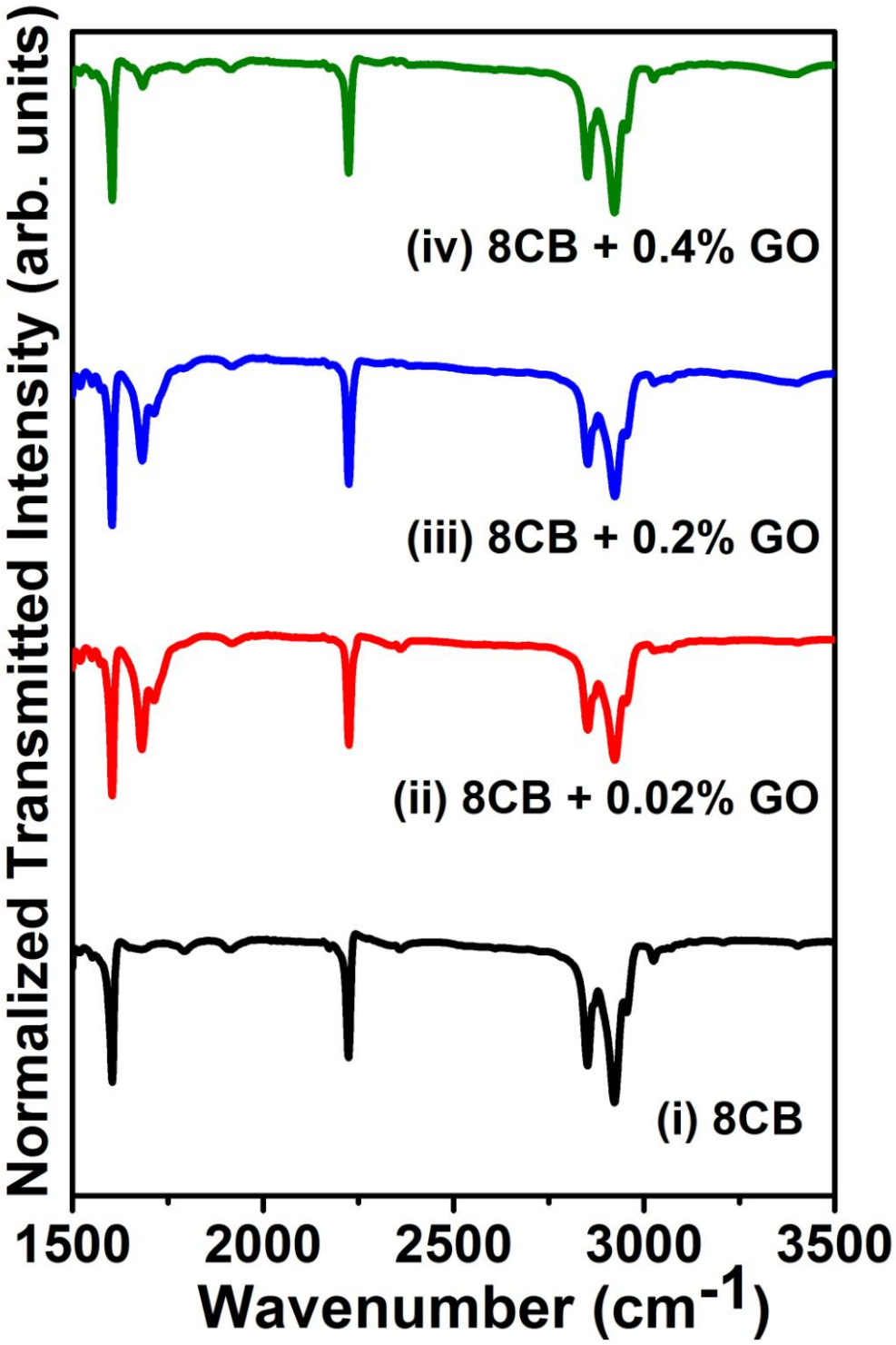

Fig. S3. Raman spectra of 8CB and 8CB+GO hybrid material. These spectra are used to calculate orientational order parameter by taking the change in scattering intensity in nematic and isotropic phase.