Electronic Supplementary Material (ESI) for RSC Advances.

Self-assembly of thiolated graphene oxide onto gold surface and in the supramolecular order of discotic liquid crystals

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Supporting Information

1. IR Spectra

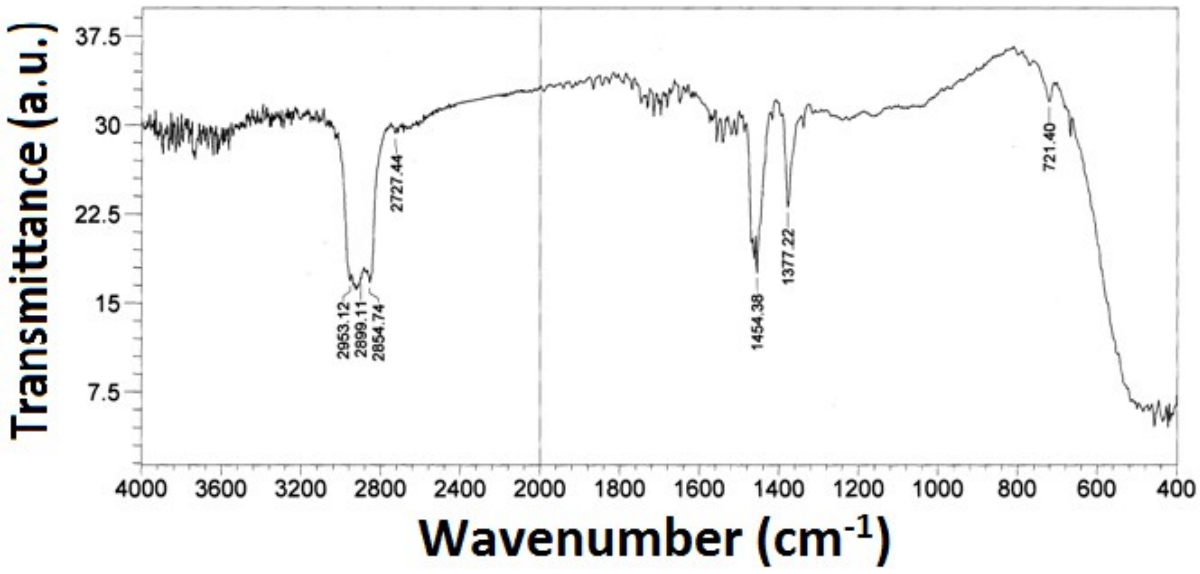

Fig. S1. IR Spectra of hexadecanethiol functionalized graphene oxide.

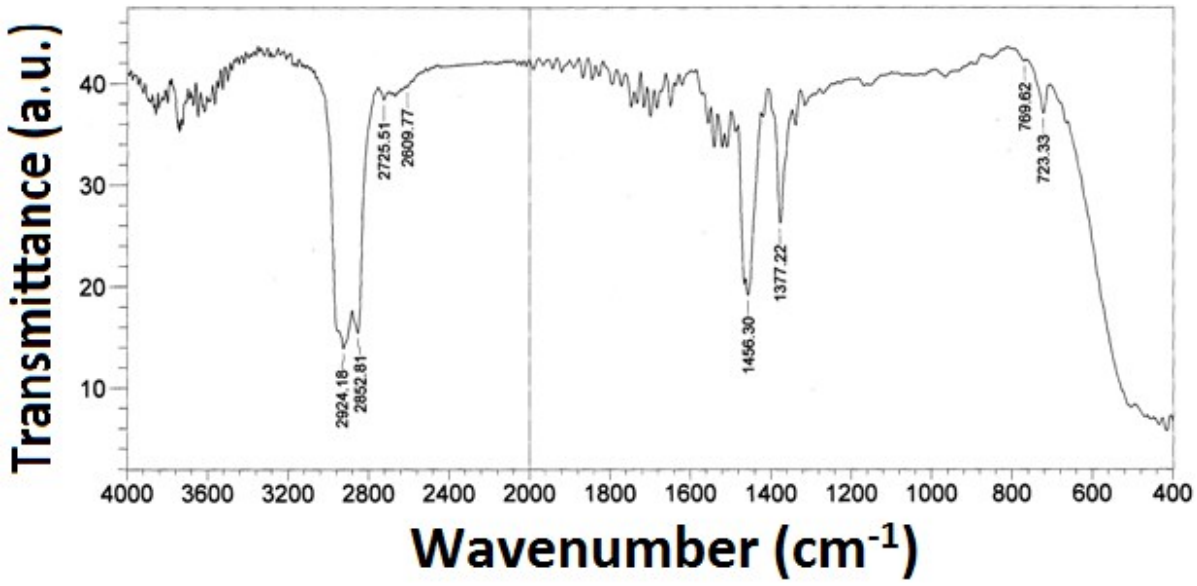

Fig. S2. IR Spectra of thiophenol functionalized graphene oxide.

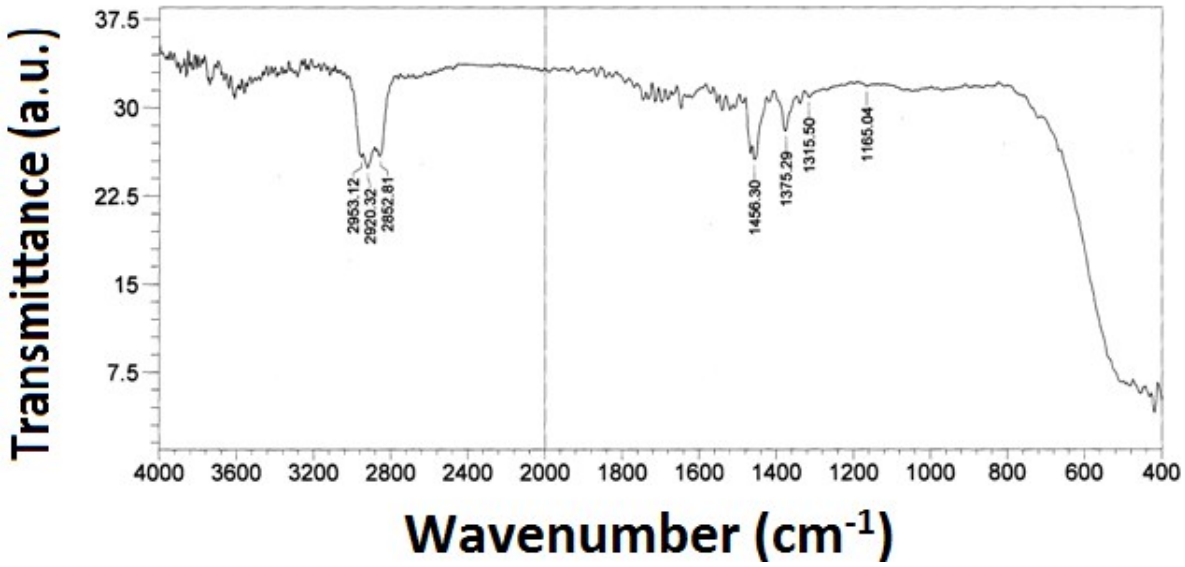

Fig. S3. IR Spectra of graphene oxide.

2. NMR spectra

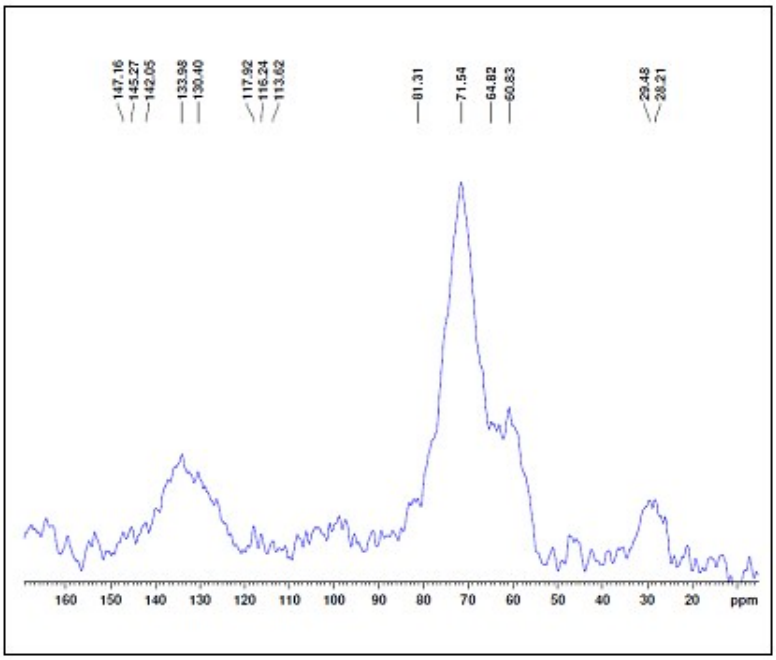

Fig. S4. Solid state ^{13}C NMR of hexadecanethiol functionalized graphene oxide.

3. XRD of graphene oxide and modified GO

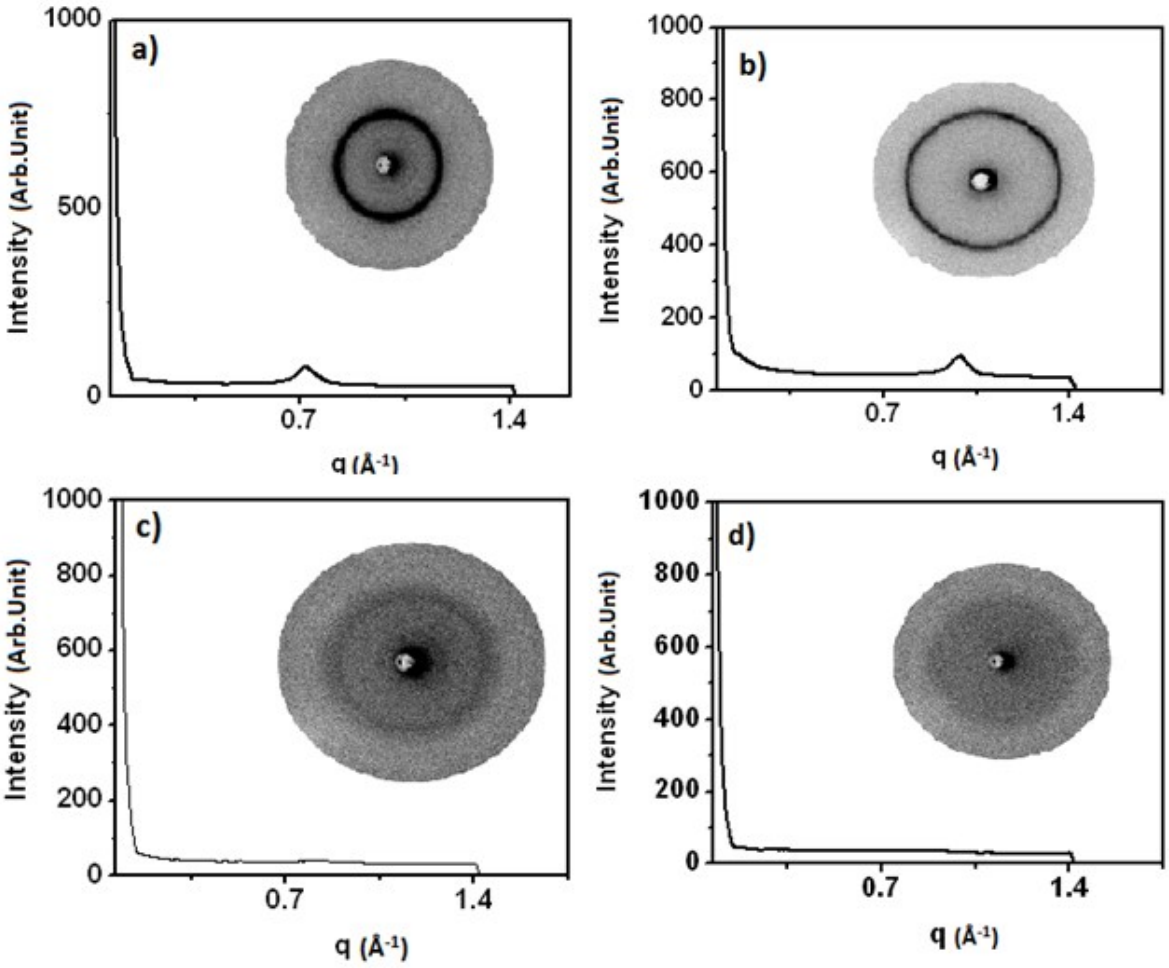

Fig. S5. XRD patterns of (a) graphene oxide, (b) graphene oxide at 110 ˚C, (c) hexadecanethiol functionalized graphene oxide, and (d) thiophenol functionalized graphene oxide.

4. TEM images of GO, HDT-GO and TP-GO

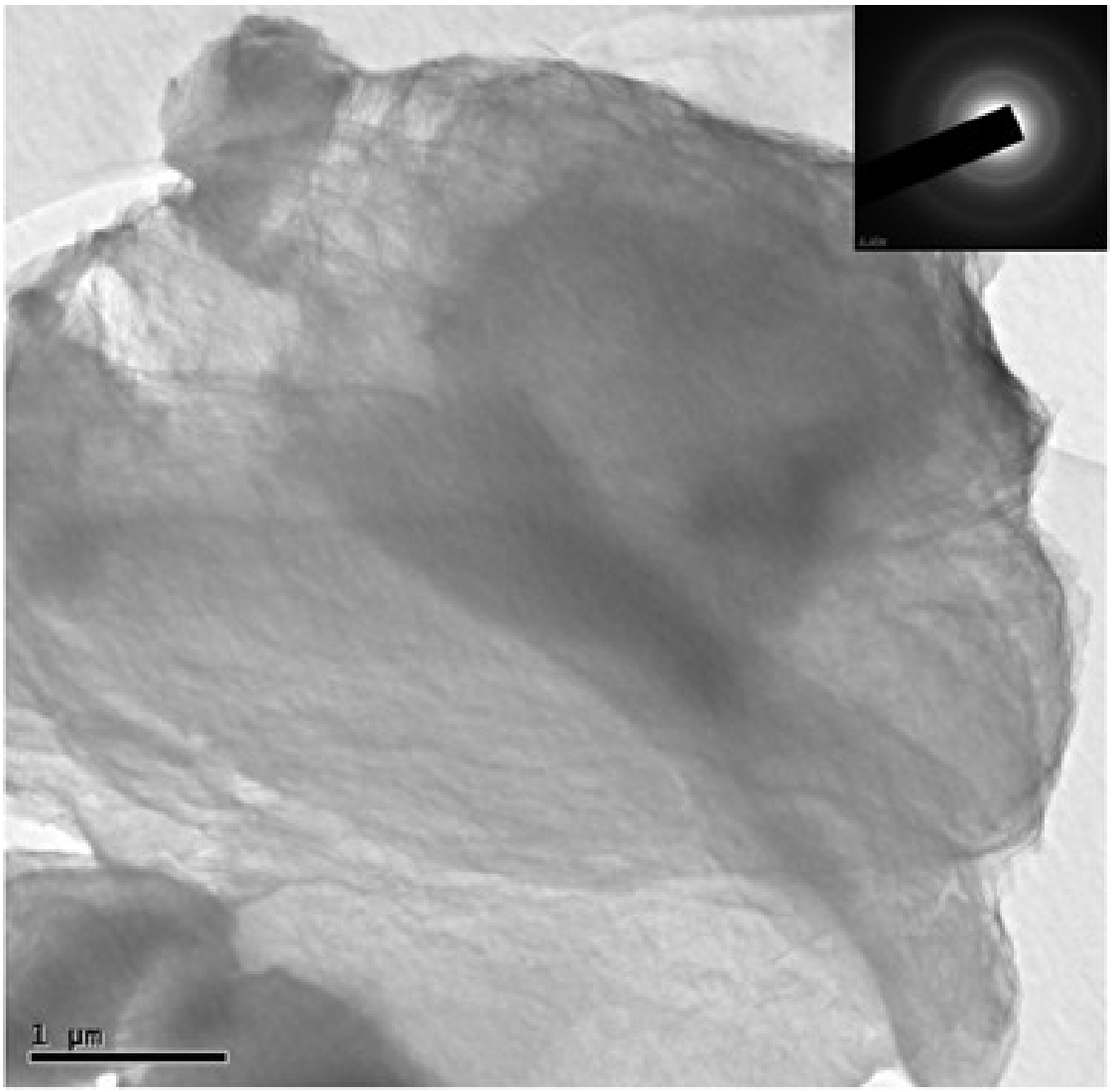

Fig. S6: TEM image of graphene oxide

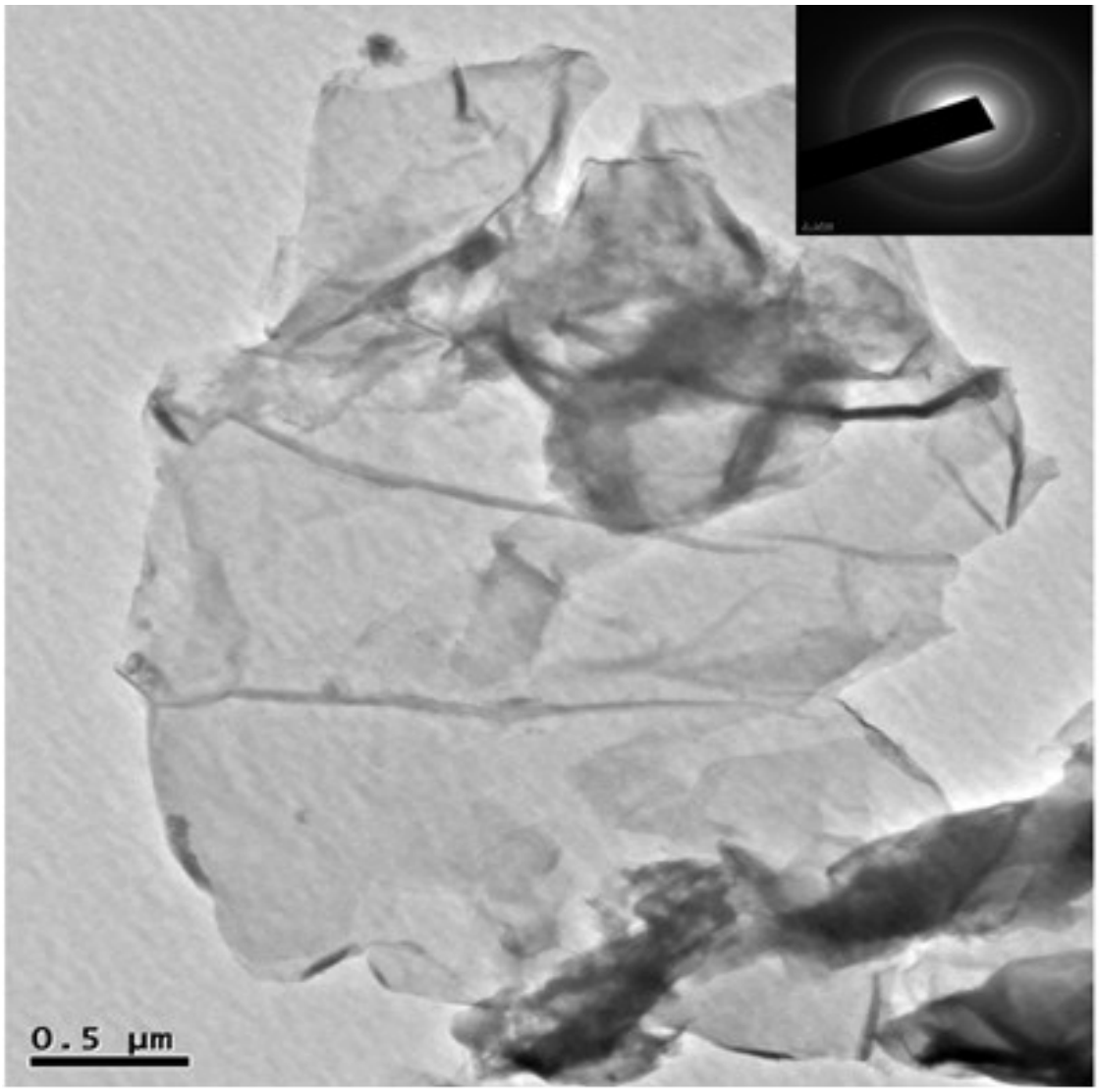

Fig. S7: TEM image of hexadecane thiol functionalize graphene oxide.

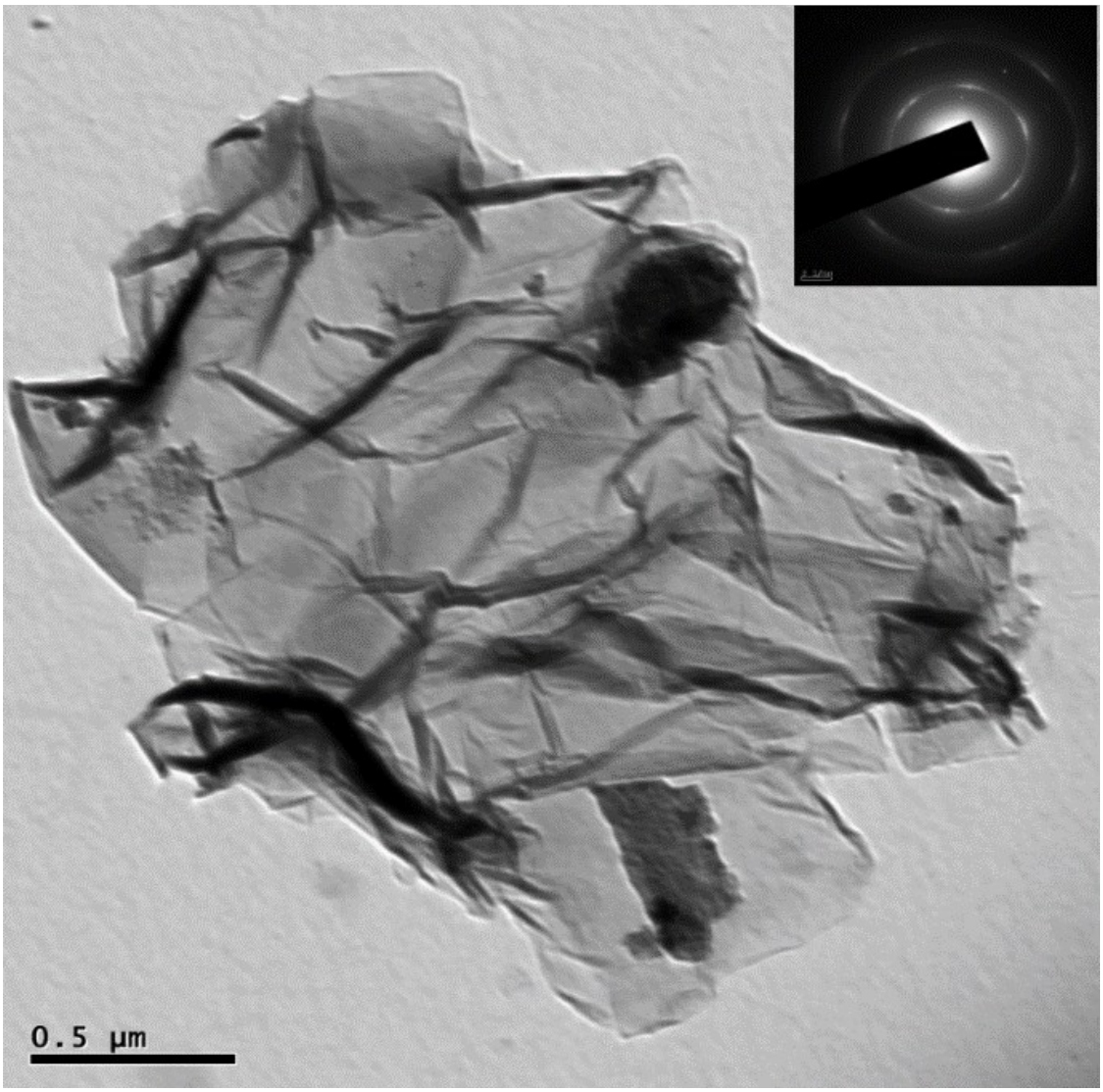

Fig. S8: TEM image of thiophenol functionalized graphene oxide.

4. RAMAN spectra of GO and thiolated GO

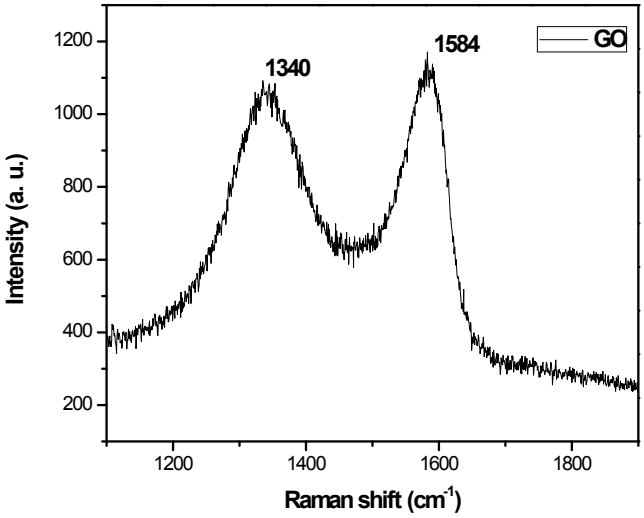

Figure S9a

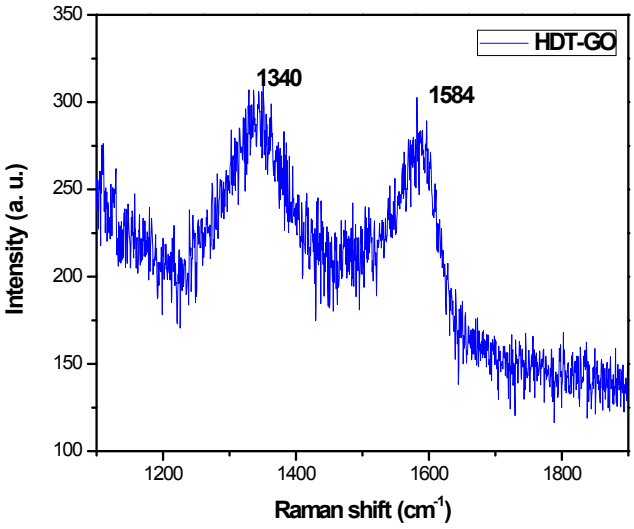

Figure S9b

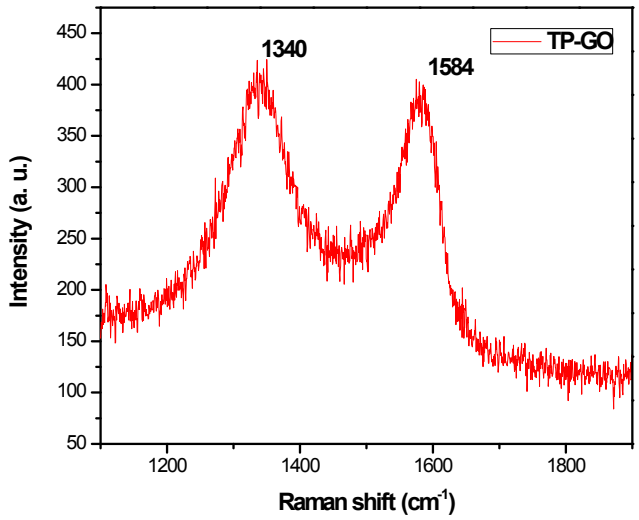

Figure S9c

Figure S9. Raman spectra of a) graphene oxide, b) hexadecanethiol functionalized graphene oxide, c) thiophenol functionalized graphene oxide.

5. IR Spectra of Bare Au electrode

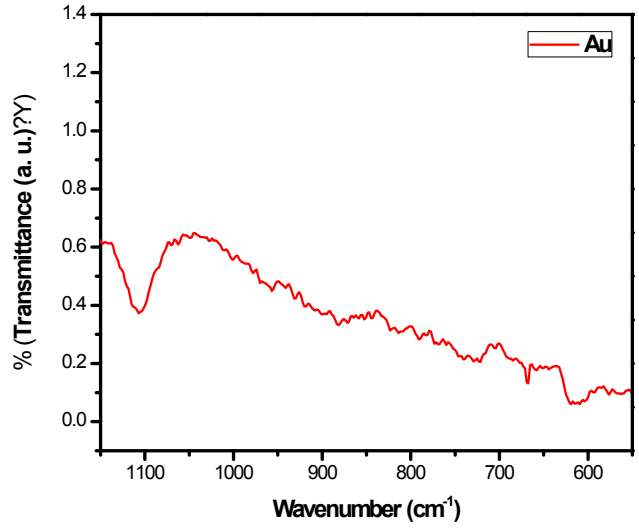

Figure S10. IR spectra of bare gold electrode.

6. Polarized optical microscopy

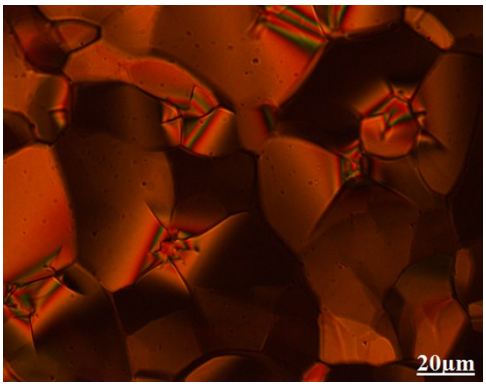

Figure S11. Polarized optical microscopy of pure AQ discotic liquid crystal (at 50 ºC crossed polarizers).