

## Supporting Information

### Novel Blue-Emitting Carboxyl-Functionalized Poly(Arylene Ether Nitrile)s with Excellent Thermal and Mechanical Properties

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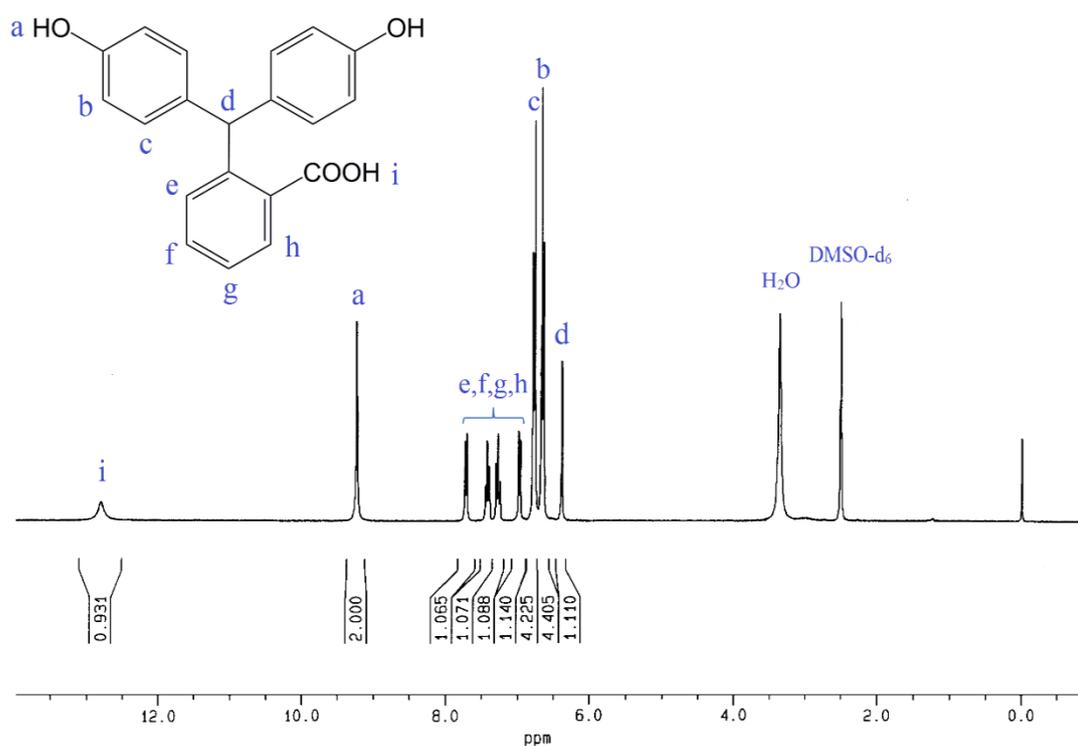
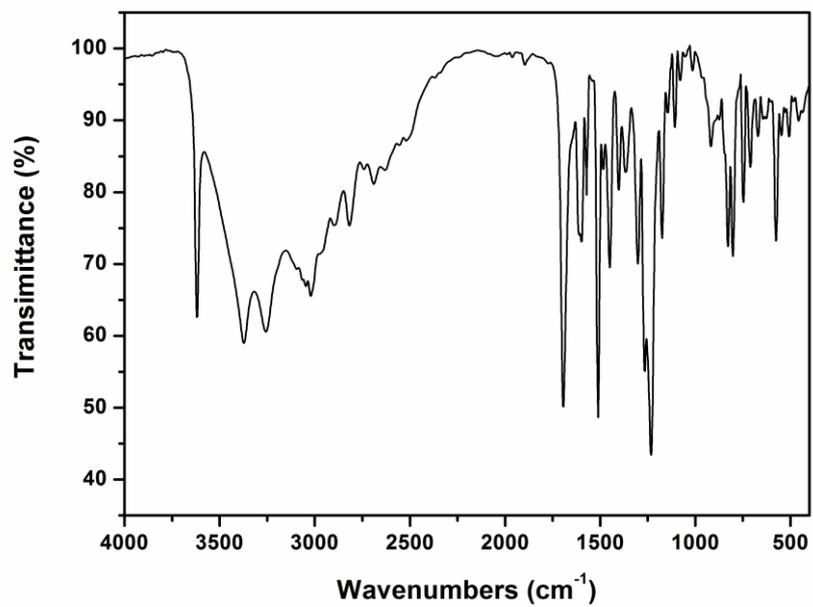
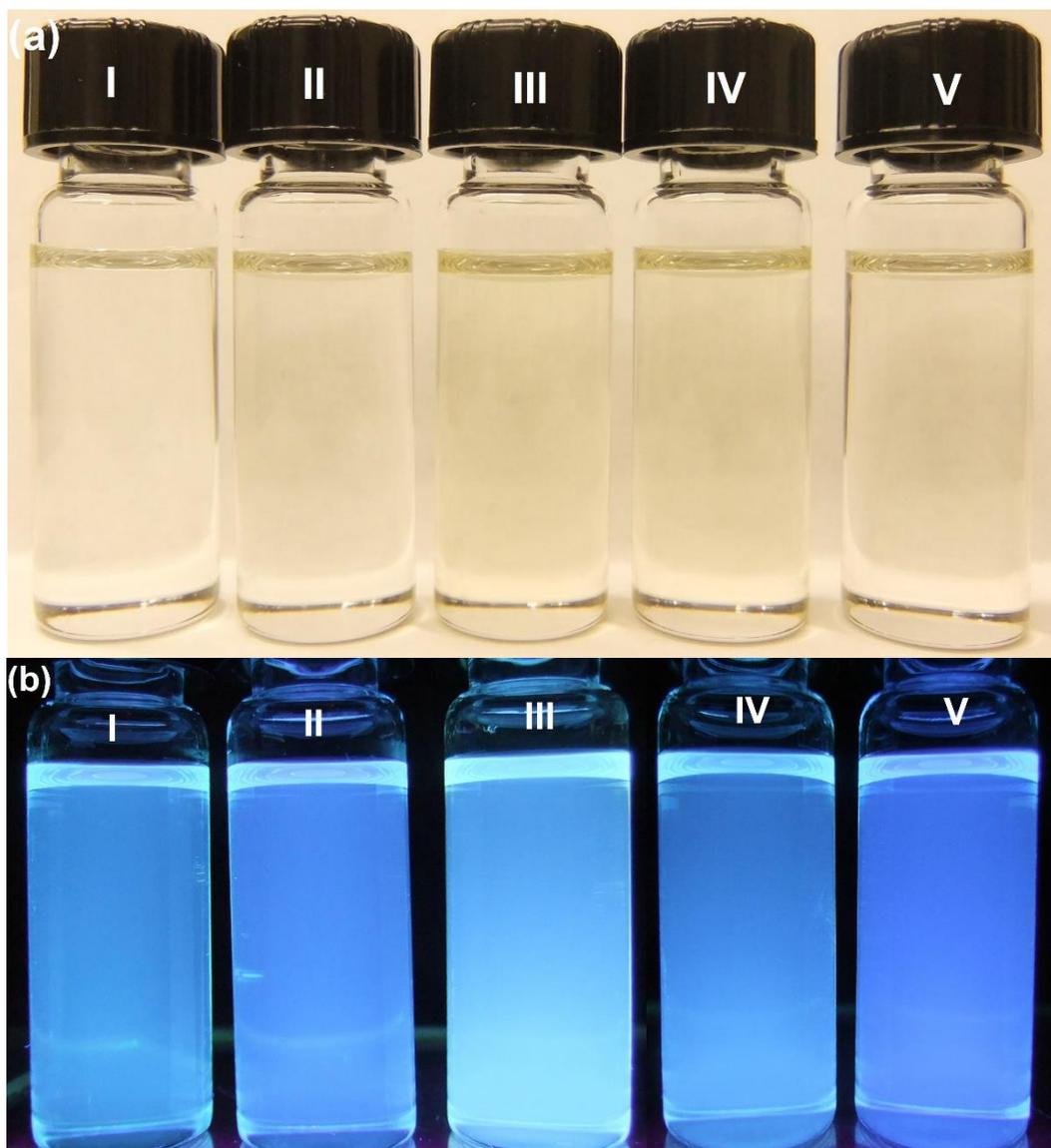


Figure S1. <sup>1</sup>H NMR spectrum of carboxyl-functionalized monomer, phenolphthalin.



**Figure S2.** FTIR spectrum of carboxyl-functionalized monomer, phenolphthalin.



**Figure S3.** Optical photographs of CPAENs in NMP at the polymer concentration of  $5 \text{ mg ml}^{-1}$ : (a) under visible light, and (b) under the UV irradiation at 365 nm. I: CPAEN(PPL); II: CPAEN(RS/PPL); III: CPAEN(HQ/PPL); IV: CPAEN(BPA/PPL); and V: CPAEN(PP/PPL).