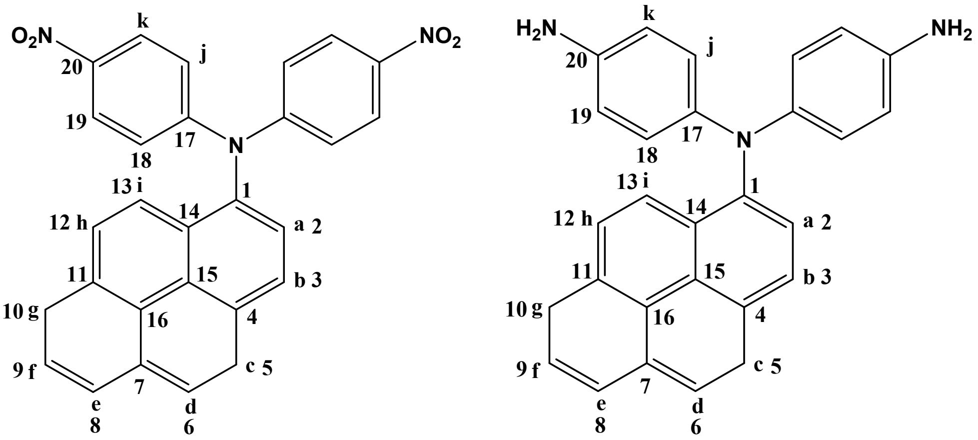
Supporting Information for

Diphenylpyrenylamine-Functionalized Polypeptides: Secondary Structures, Aggregation-Induced Emission, and Carbon Nanotube Dispersibility

Ahmed F. M. EL-Mahdy[a,b] and Shiao-Wei Kuo[a]

[a]Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Kaohsiung 80424, Taiwan

[b]Chemistry Department, Faculty of Science, Assiut University, Assiut 71516, Egypt.



(a) (b)

Scheme S1. NMR spectral peak assignments of (a) pyrene-DPA-2NO$_2$ and (b) pyrene-DPA-2NH$_2$.

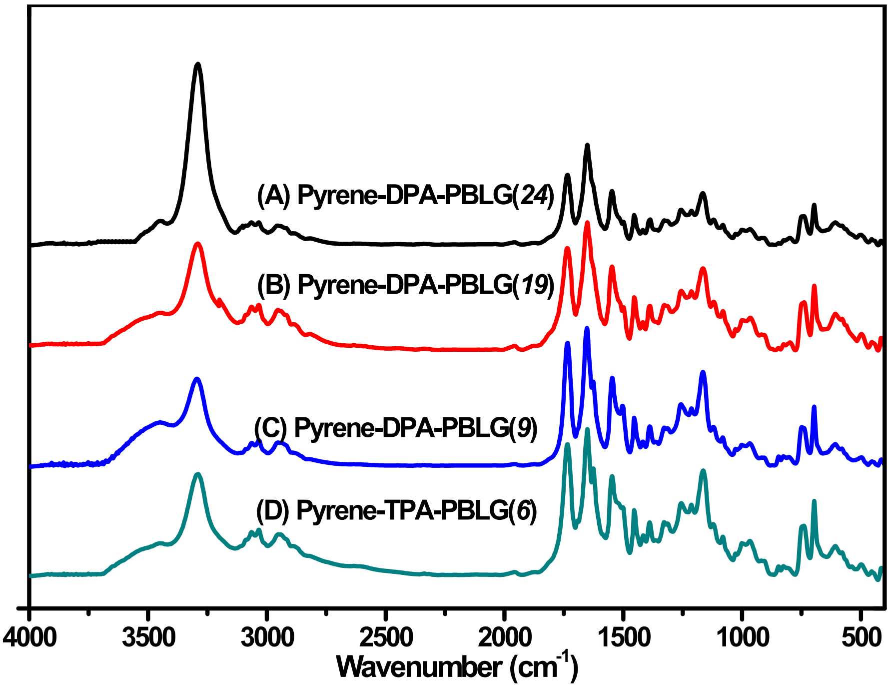


Figure S1. FTIR spectra of (A) pyrene-DPA-PBLG(*24*), (B) pyrene-DPA-PBLG(*19*), (C) pyrene-DPA-PBLG(*9*), and (D) pyrene-DPA-PBLG(*6*), recorded at room temperature.

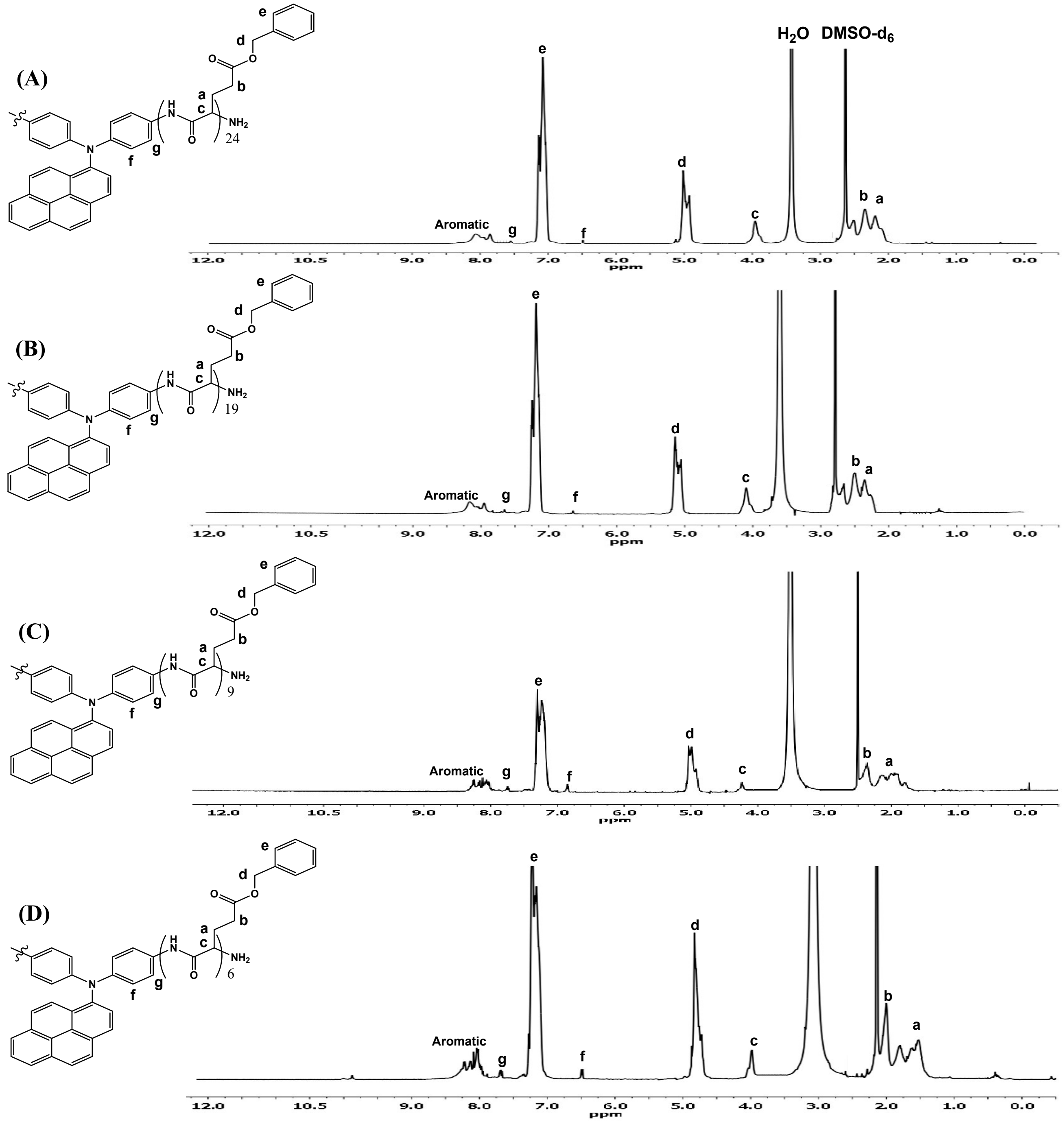


Figure S2. ^{1}H NMR spectra of (A) pyrene-DPA-PBLG(*24*), (B) pyrene-DPA-PBLG(*19*), (C) pyrene-DPA-PBLG(*9*), and (D) pyrene-DPA-PBLG(*6*).

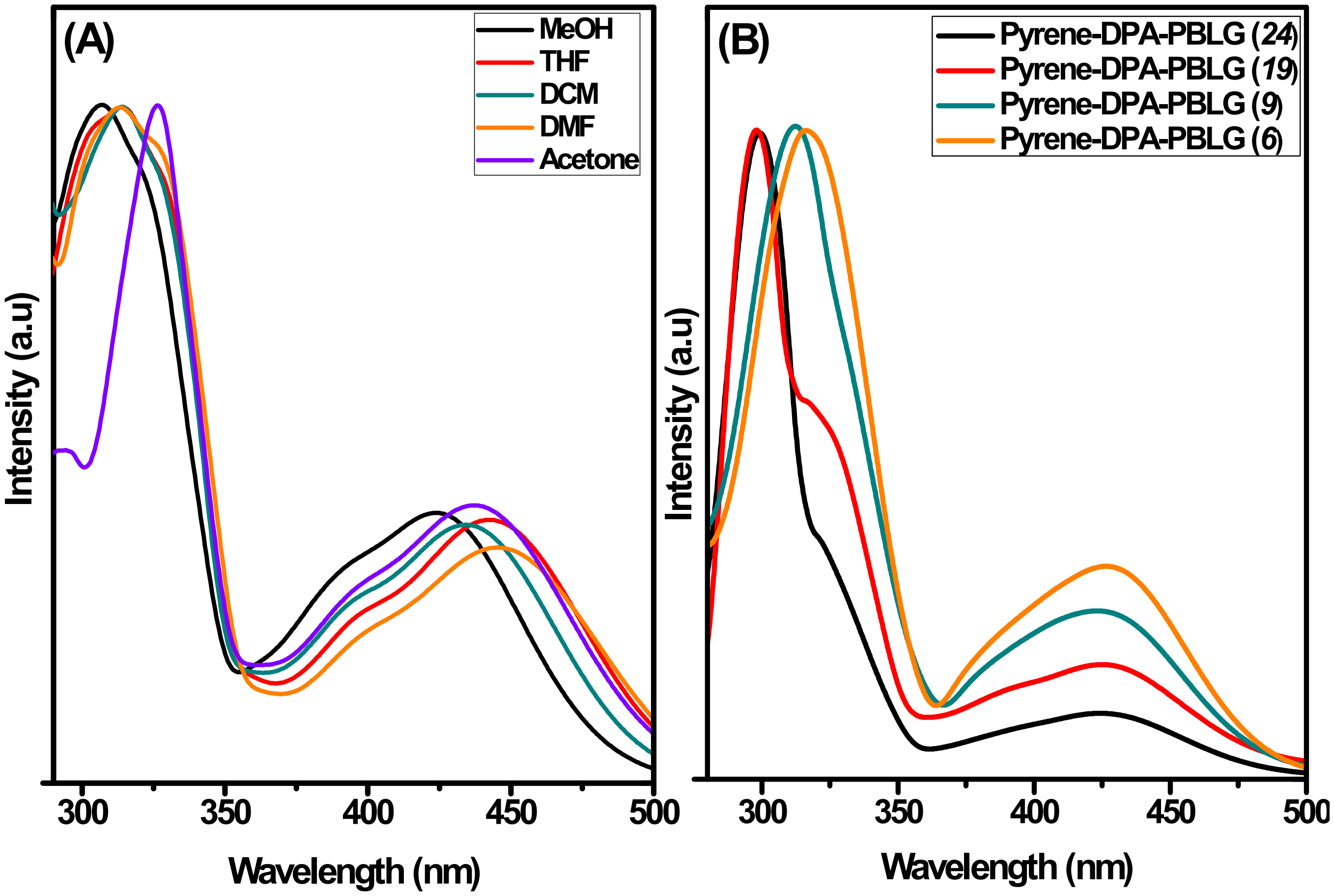


Figure S3. UV–Vis absorption spectra of (A) pyrene-DPA-2NH$_2$ and (B) pyrene-DPA-PBLG in DMF (concentration: 10^{-4} M).

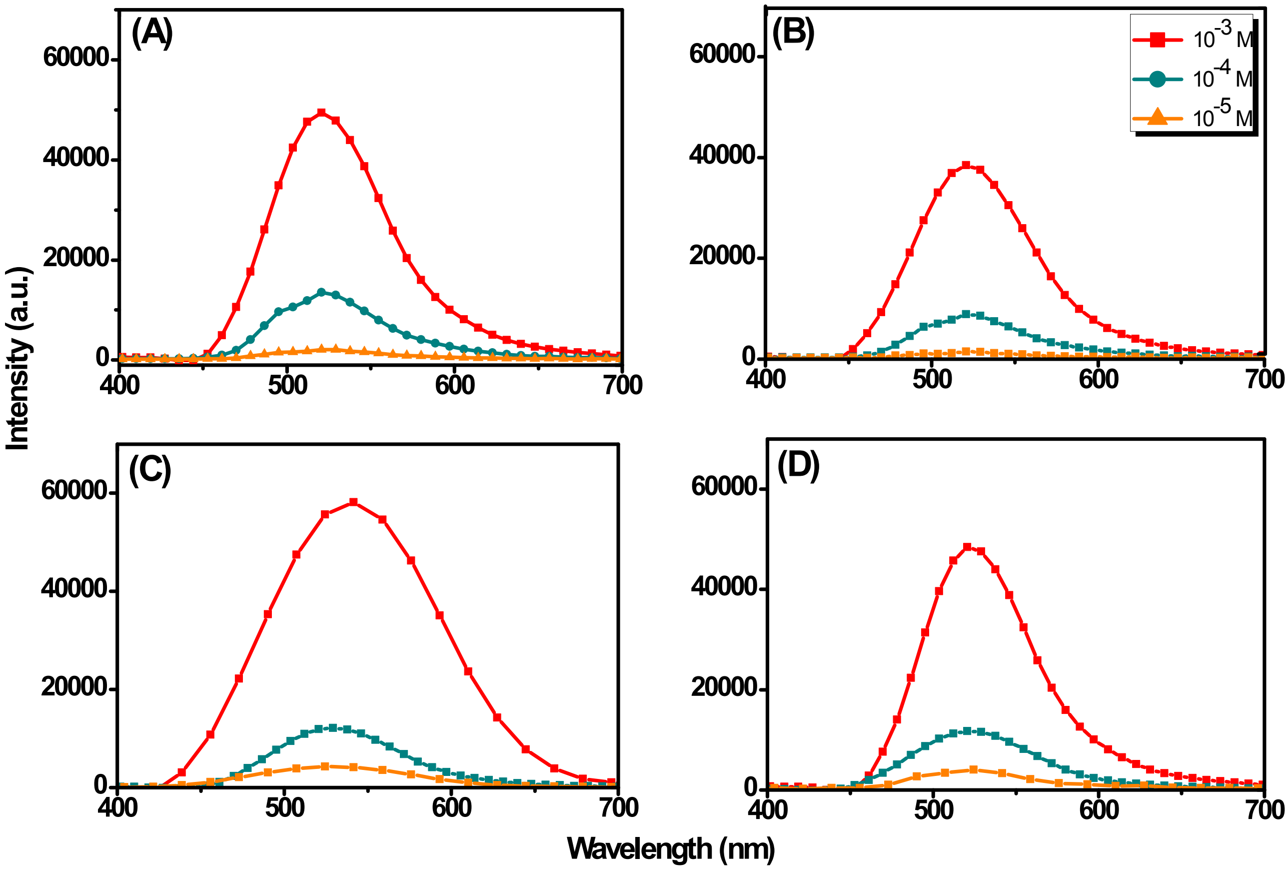


Figure S4. Solution PL emission spectra of (A) pyrene-DPA-PBLG(*24*), (B) pyrene-DPA-PBLG(*19*), (C) pyrene-DPA-PBLG(*9*), and (D) pyrene-DPA-PBLG(*6*) in THF (excitation wavelength: 343 nm).

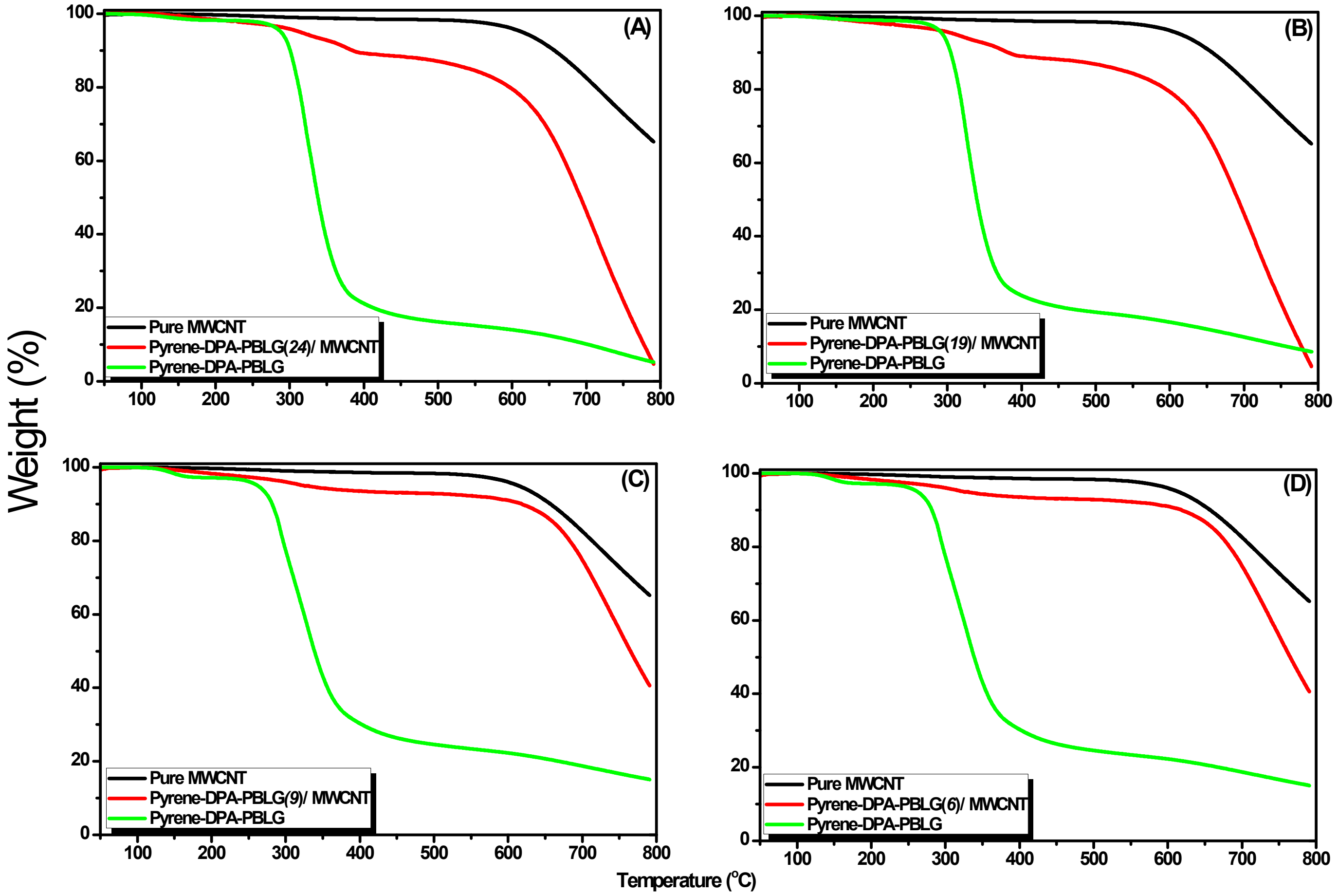


Figure S5. TGA analyses of (A) pyrene-DPA-PBLG(*24*), (B) pyrene-DPA-PBLG(*19*), (C) pyrene-DPA-PBLG(*9*), and (D) pyrene-DPA-PBLG(*6*) as composites with MWCNTs.