Electronic Supplementary Material (ESI) for Polymer Chemistry.

Novel Bio-based AB_2 Monomer for preparing Hyperbranched Polyamides Derived from Levulinic Acid and Furfurylamine

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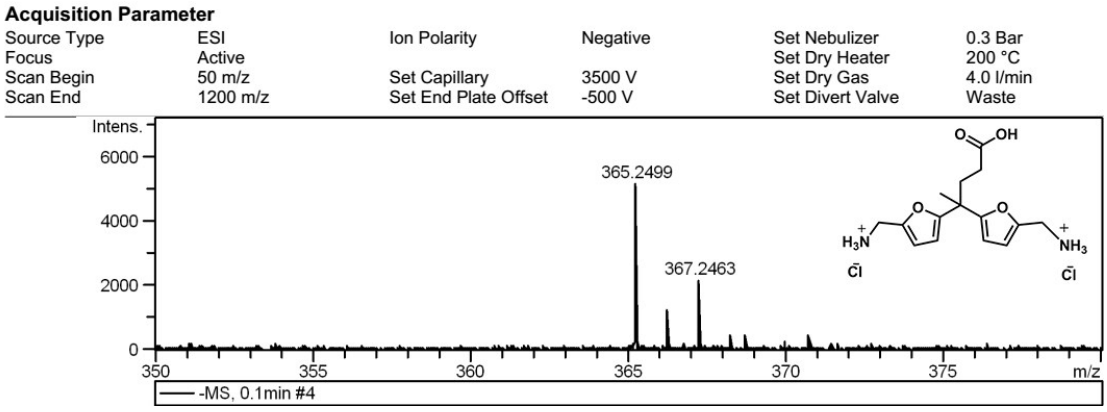
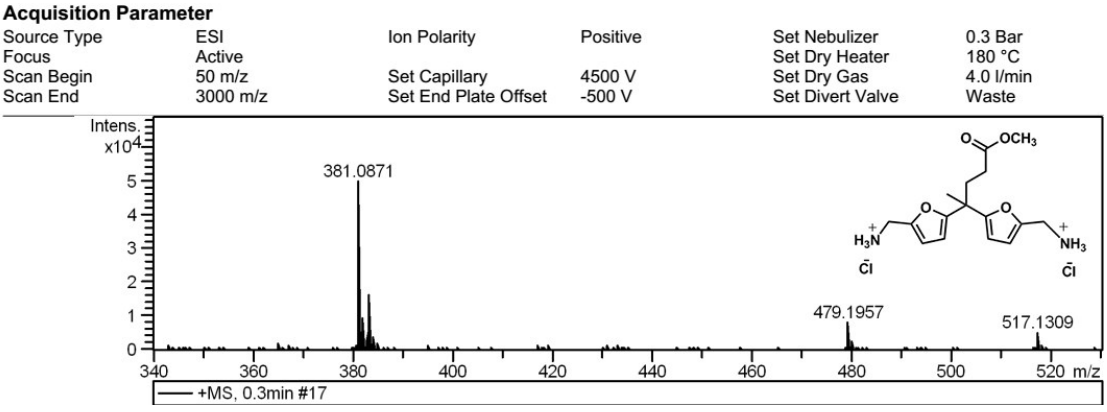
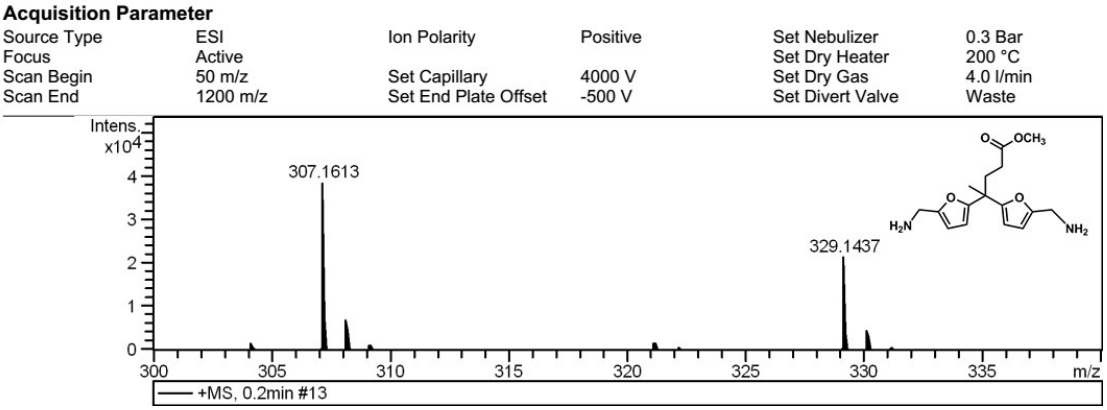


S1: Mass Spectrum of FDAH-A



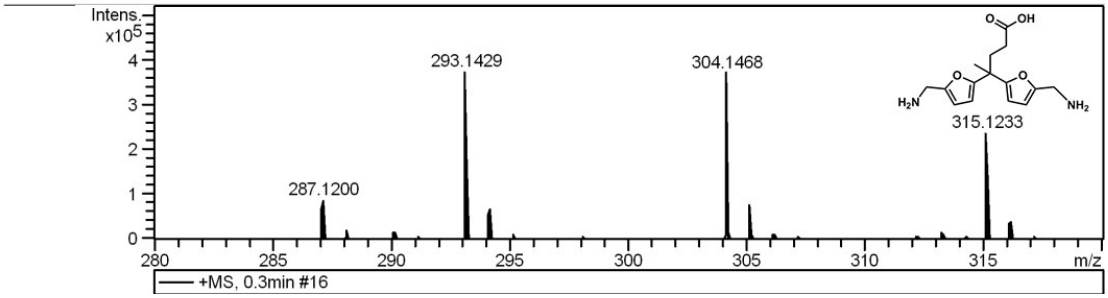
S2: Mass Spectrum of FDAH-E



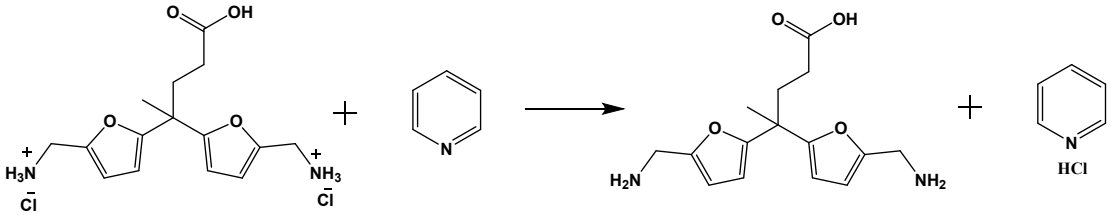
S3: Mass Spectrum of FDA-E

Acquisition Parameter

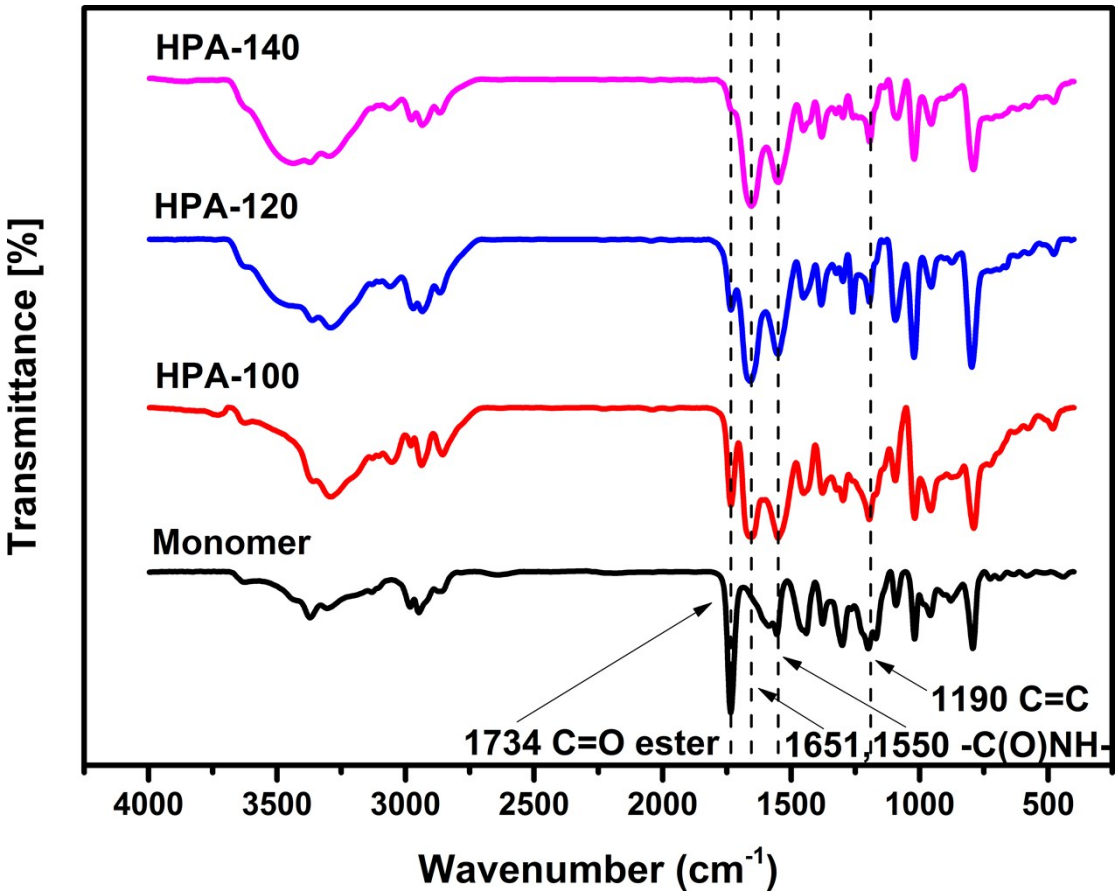
Source Type	ESI	Ion Polarity	Positive	Set Nebulizer	0.3 Bar
Focus	Active			Set Dry Heater	200 °C
Scan Begin	50 m/z	Set Capillary	4000 V	Set Dry Gas	4.0 l/min
Scan End	1200 m/z	Set End Plate Offset	-500 V	Set Divert Valve	Waste



S4: Mass Spectrum of FDA-A

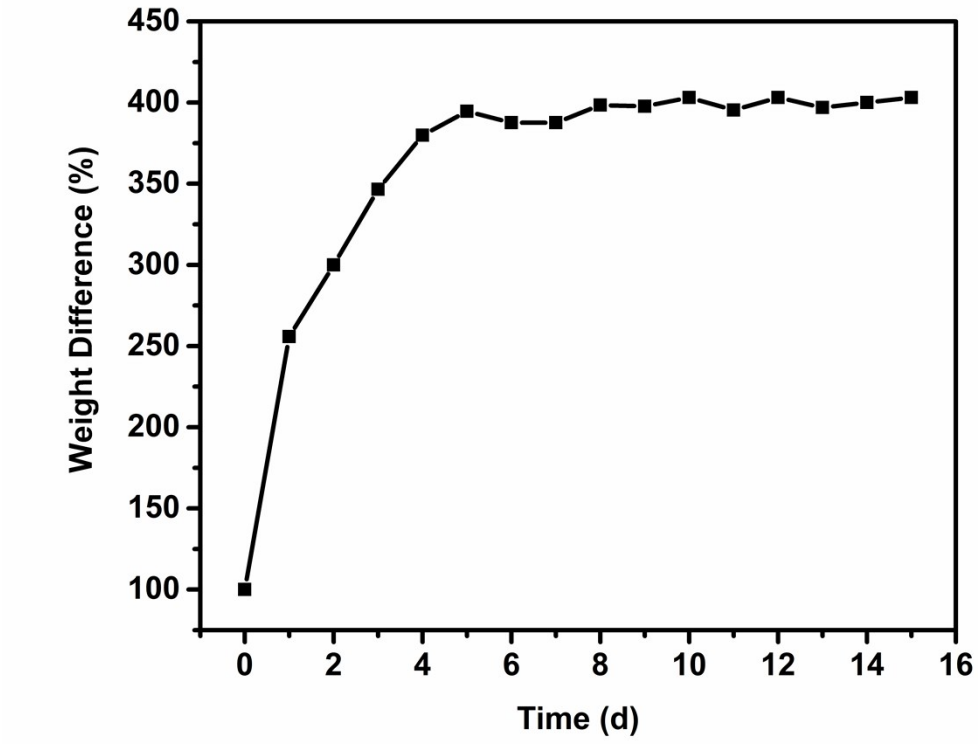


S5: Synthetic Route of FDA-A

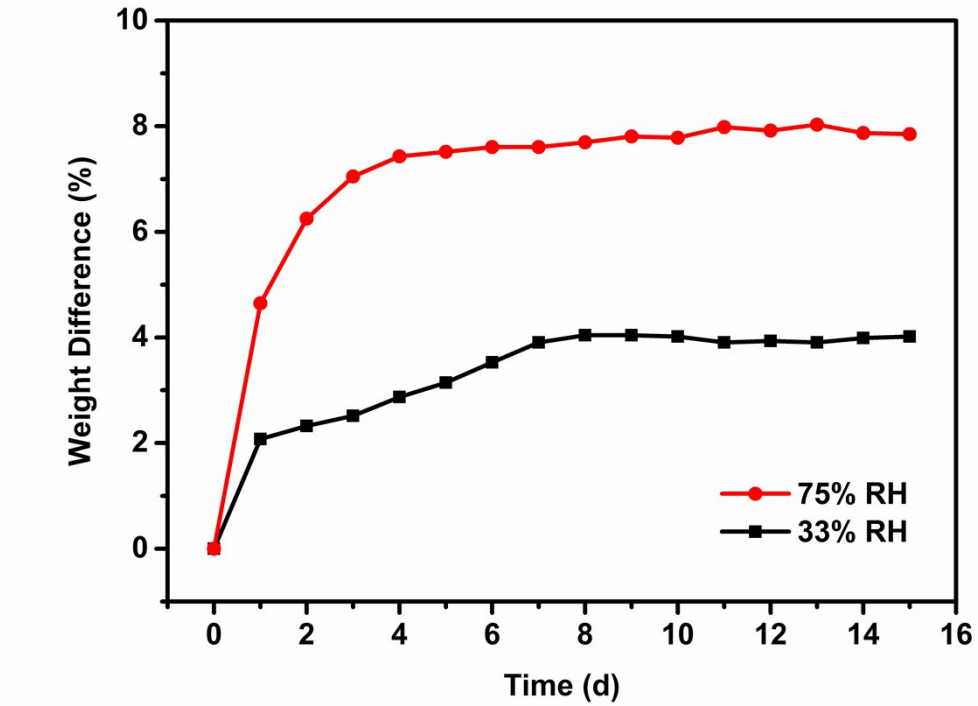


S6: FTIR spectra of HPA-100, HPA-120, and HPA-140

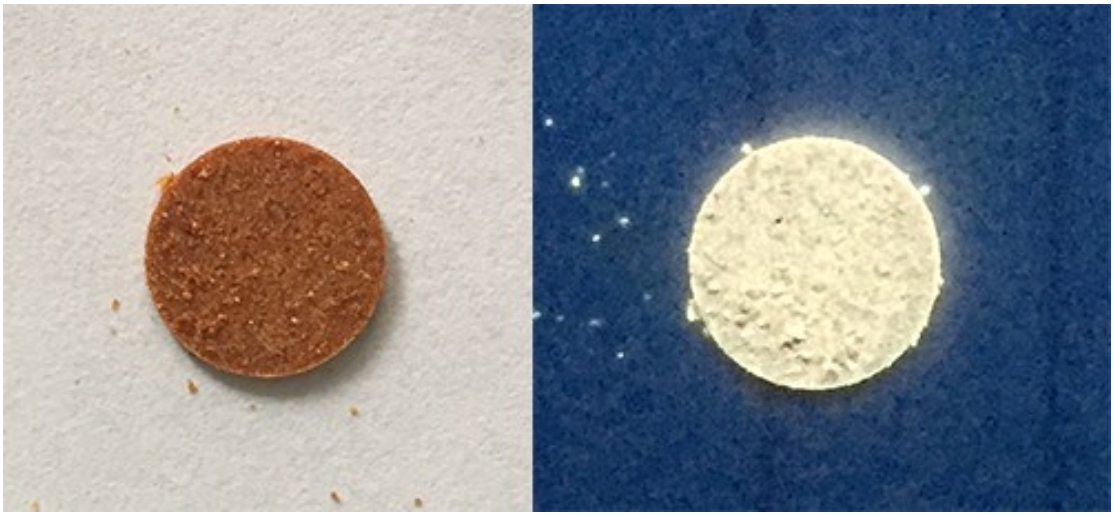
S7: Comparison of the freeze-dried HPA-120 soaked in distilled water before (above) and after (under)



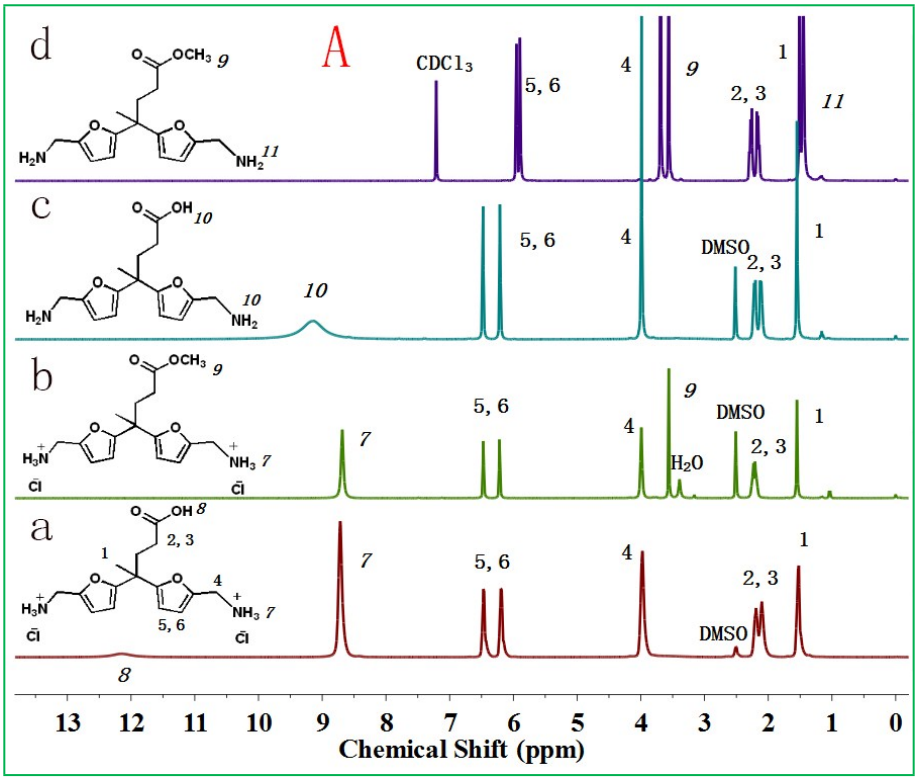
S8: Water adsorption test of HPA-120

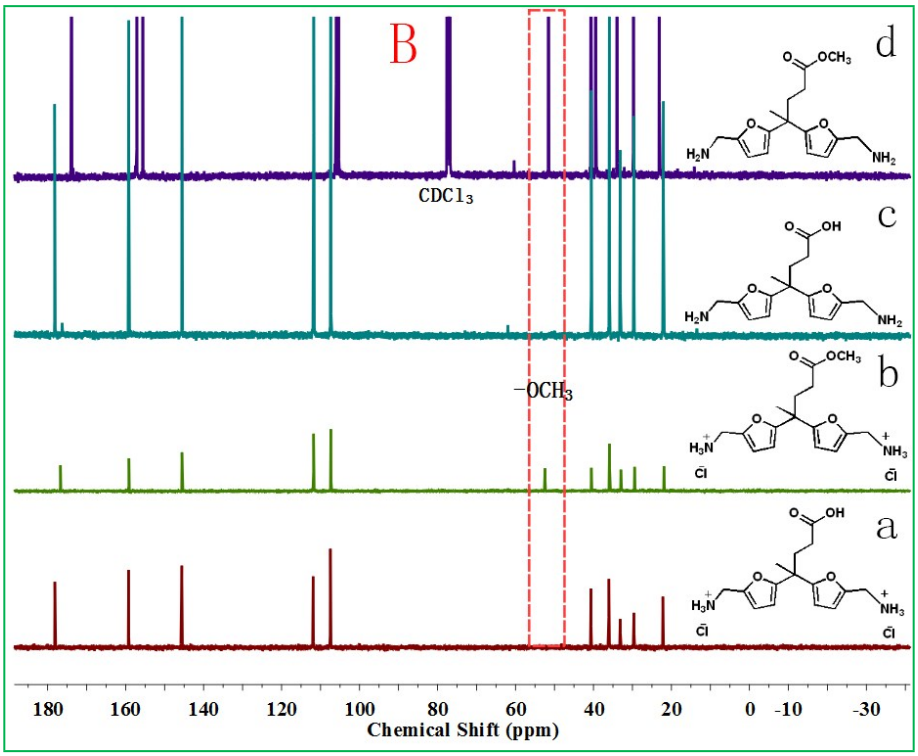


S9: Humidity absorption tests of HPA-120

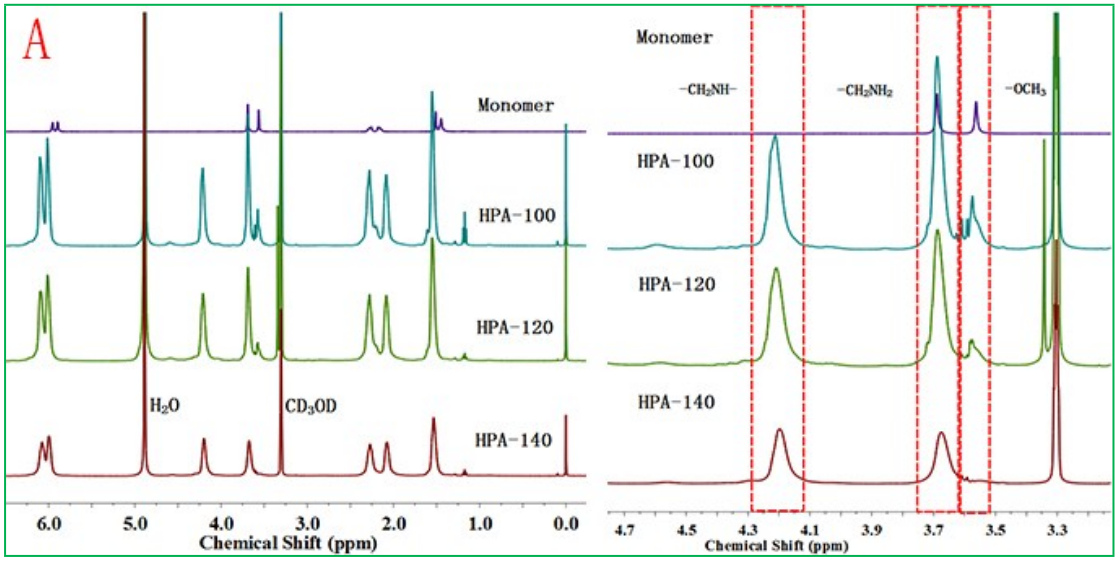


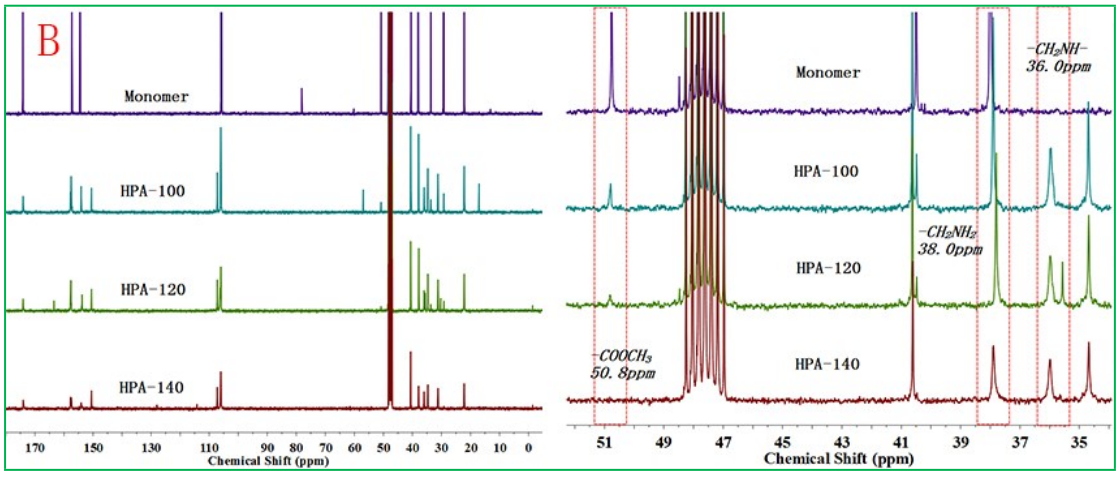
S10: The pressed film of HPA-140 were excited with sunlight (left) and 365nm UV light (right)



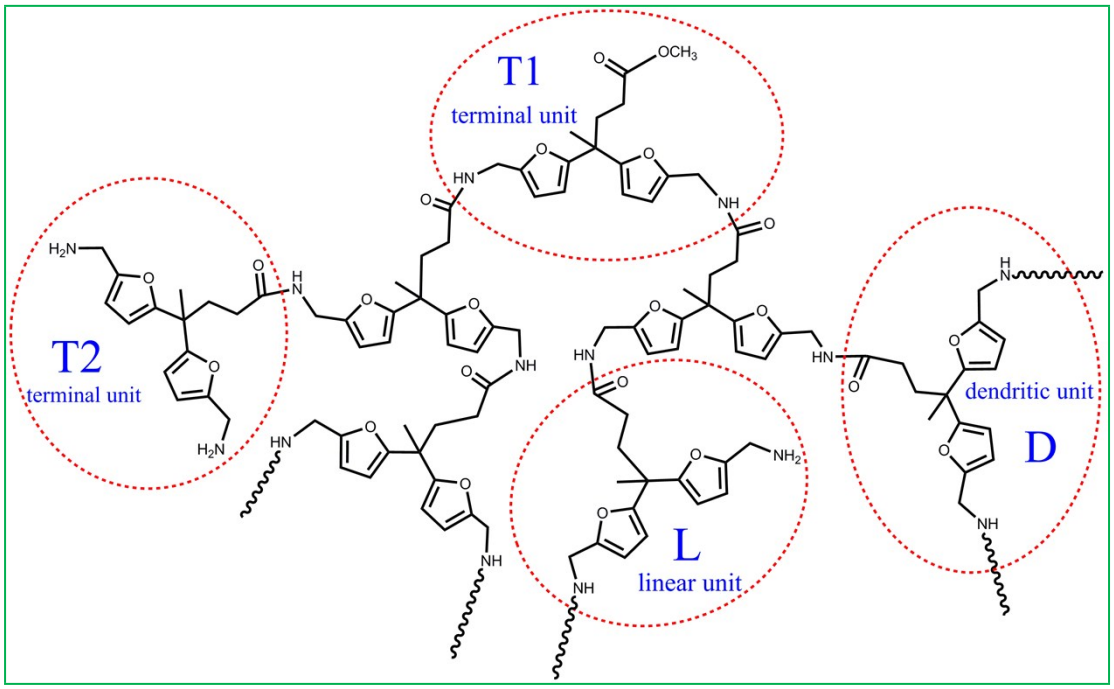


S11: NMR spectra of (a) FDAH-A, (b) FDAH-E, (c) FDA-A, and (d) FDA-E (A: ^{1}H NMR; B: ^{13}C NMR)





S12: NMR spectra of HPA-100, HPA-120, HPA-140, and-FDA-E. (A: ^{1}H NMR; B: ^{13}C NMR)



S13: Identification of dendritic (D), linear (L), and terminal (T) structure in hyperbranched polyamides