

Electronic supplementary information (ESI)

Self-polymerization of Meldrum's acid-amine compounds: an effective route for polyamides

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Supporting Figures and Tables

Spectral analysis results and DSC measurements of the prepared MA-amine compounds are shown in Figures S1 – S4.

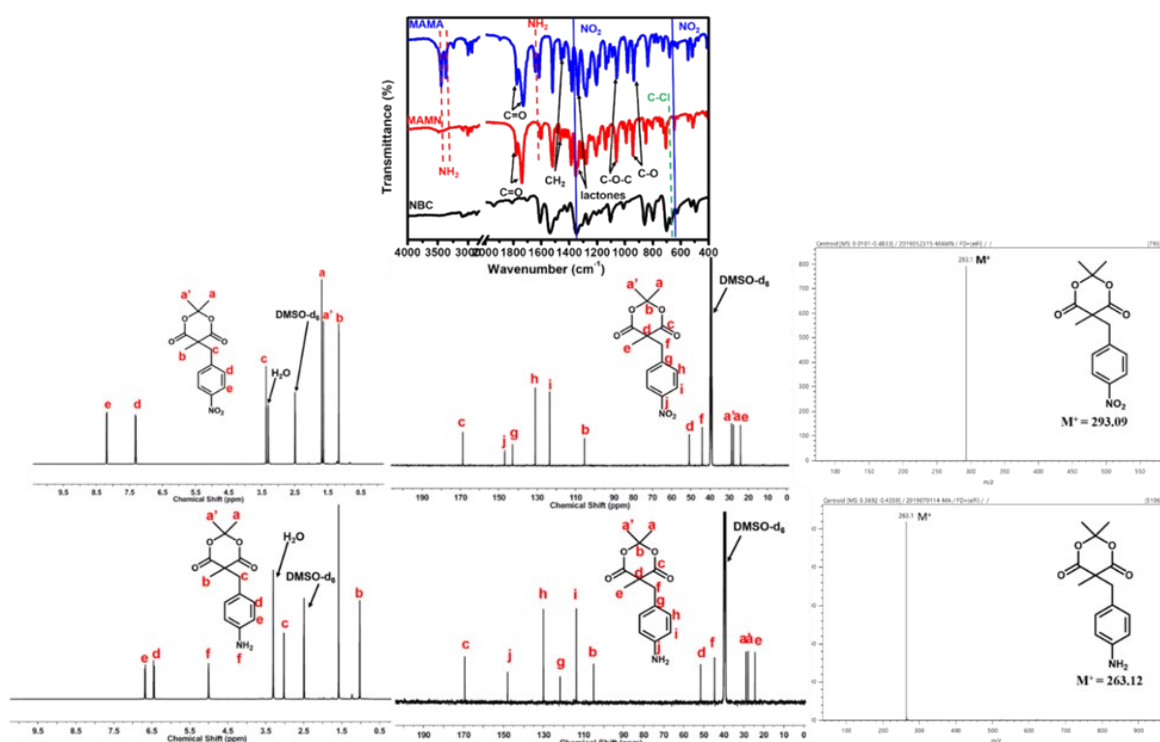


Figure S1. FTIR, $^1\text{H-NMR}$, $^{13}\text{C-NMR}$, LRFD-MS spectrum of MAMN and MAMA.

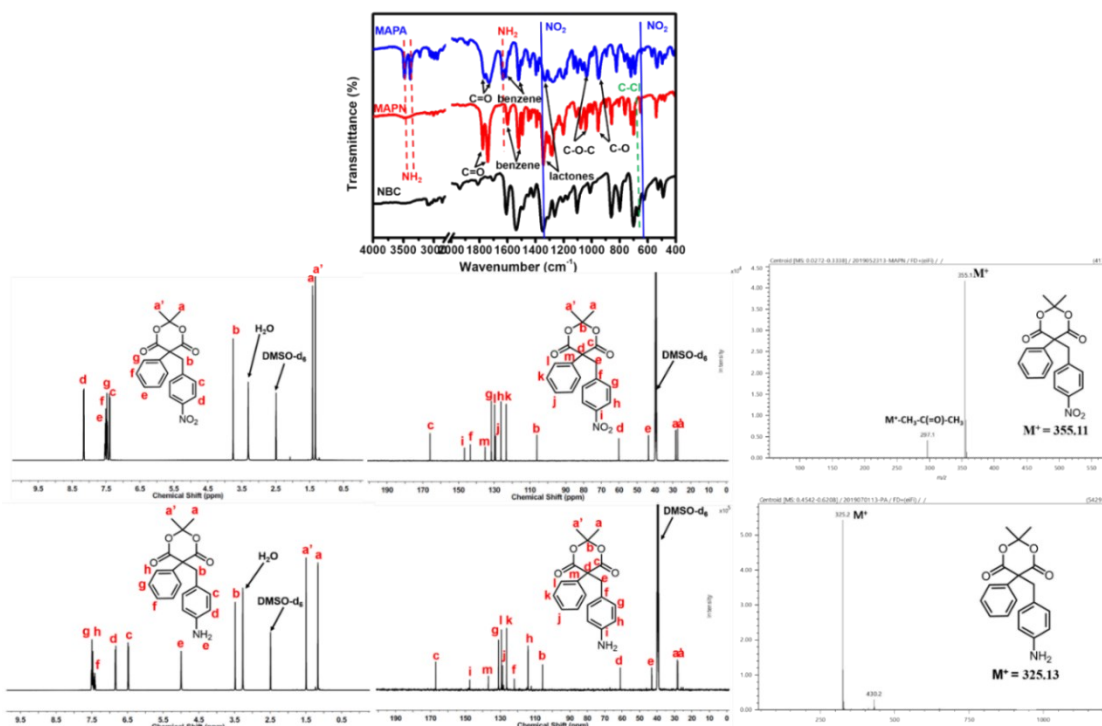


Figure S2. FTIR, $^1\text{H-NMR}$, $^{13}\text{C-NMR}$, LRFD-MS spectrum of MAPN and MAPA.

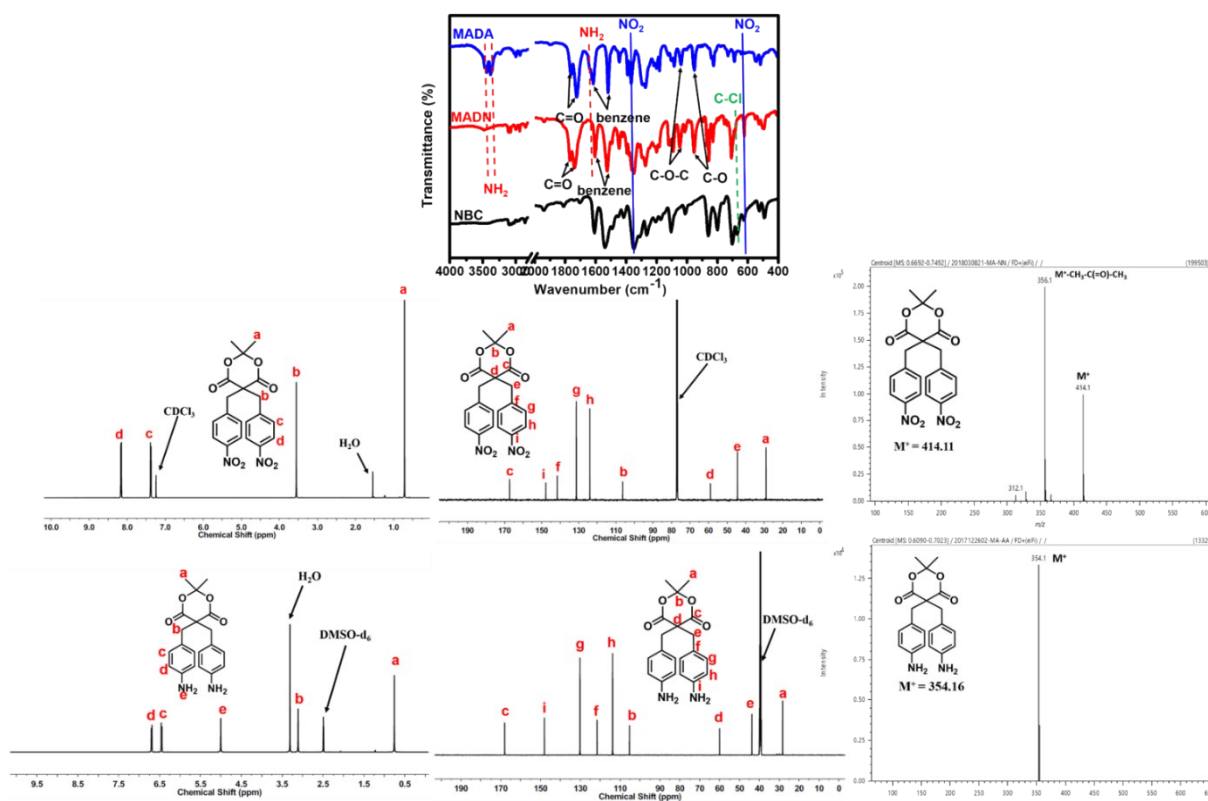


Figure S3. FTIR, $^1\text{H-NMR}$, $^{13}\text{C-NMR}$, LRFD-MS spectrum of MADN and MADA.

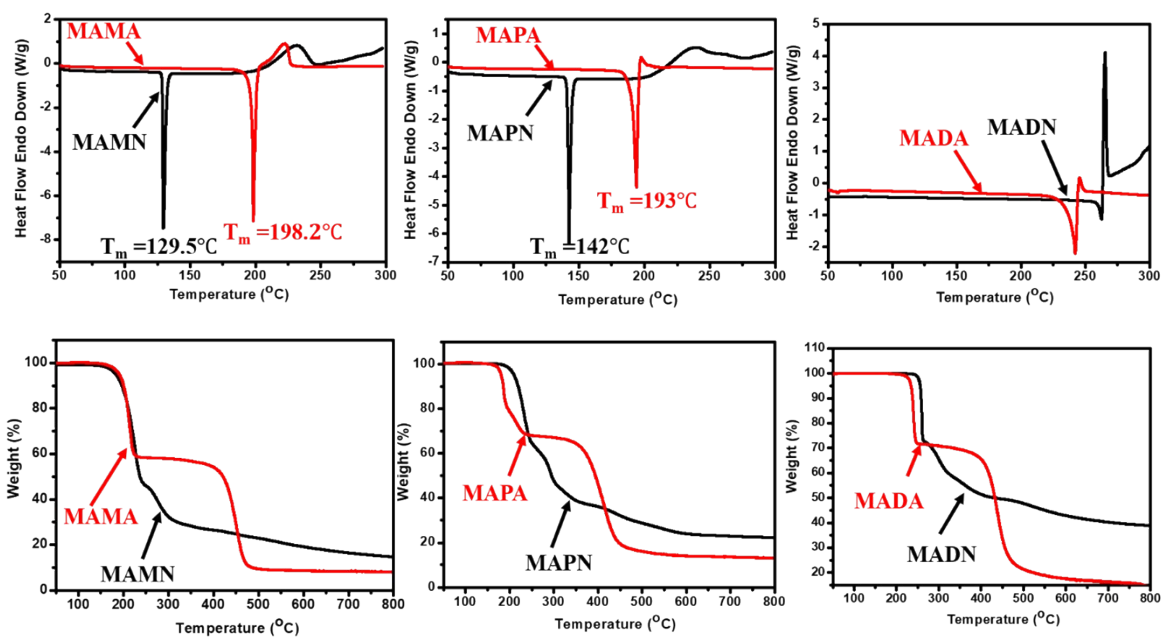


Figure S4. DSC (upper) and TGA thermograms (lower) of A-B type MA-amine compounds.

Instrumental analysis results of the prepared polyamides are shown in Figures S5 – S11.

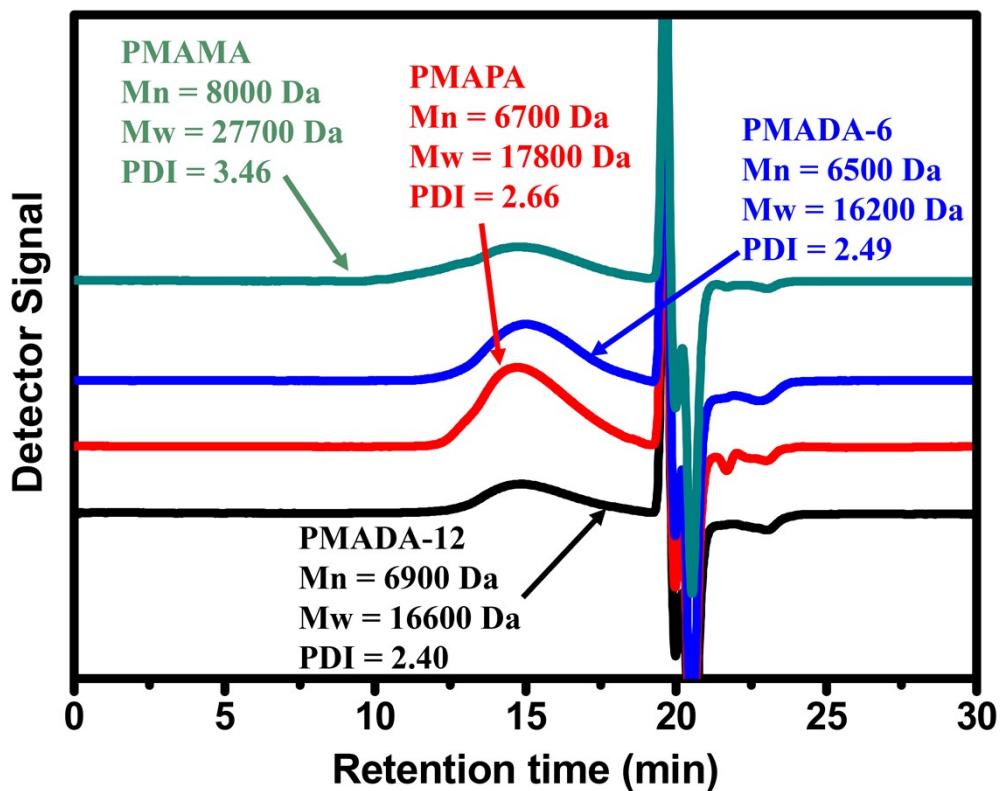


Figure S5. GPC chromatogram of prepared polyamides.

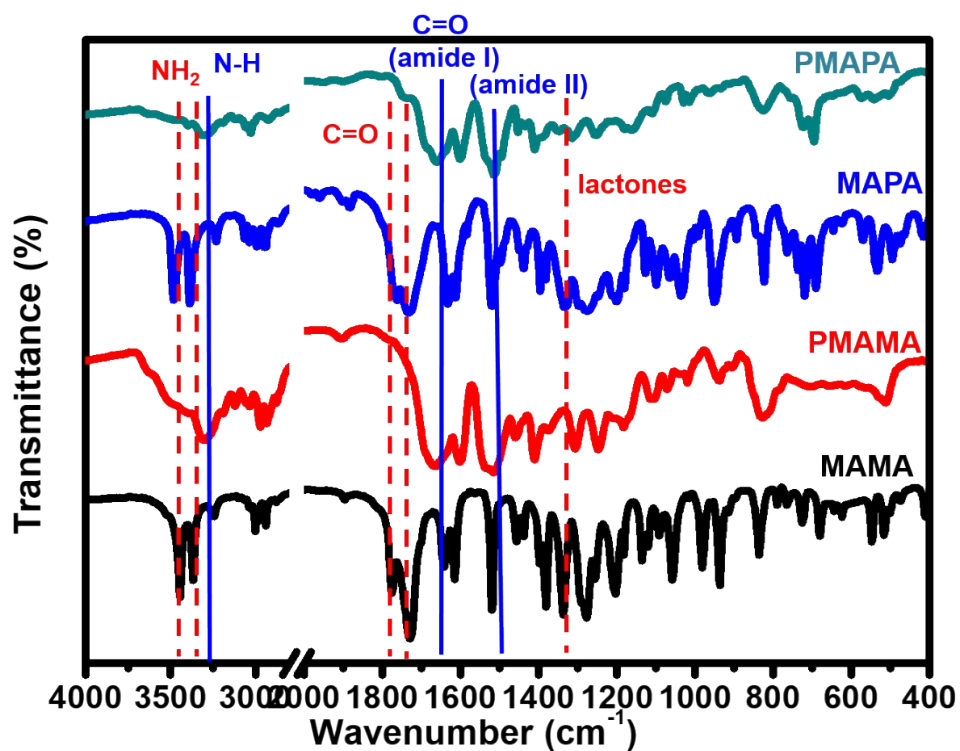


Figure S6. FTIR spectra of the prepared linear polyamides PMAMA and PMAPA.

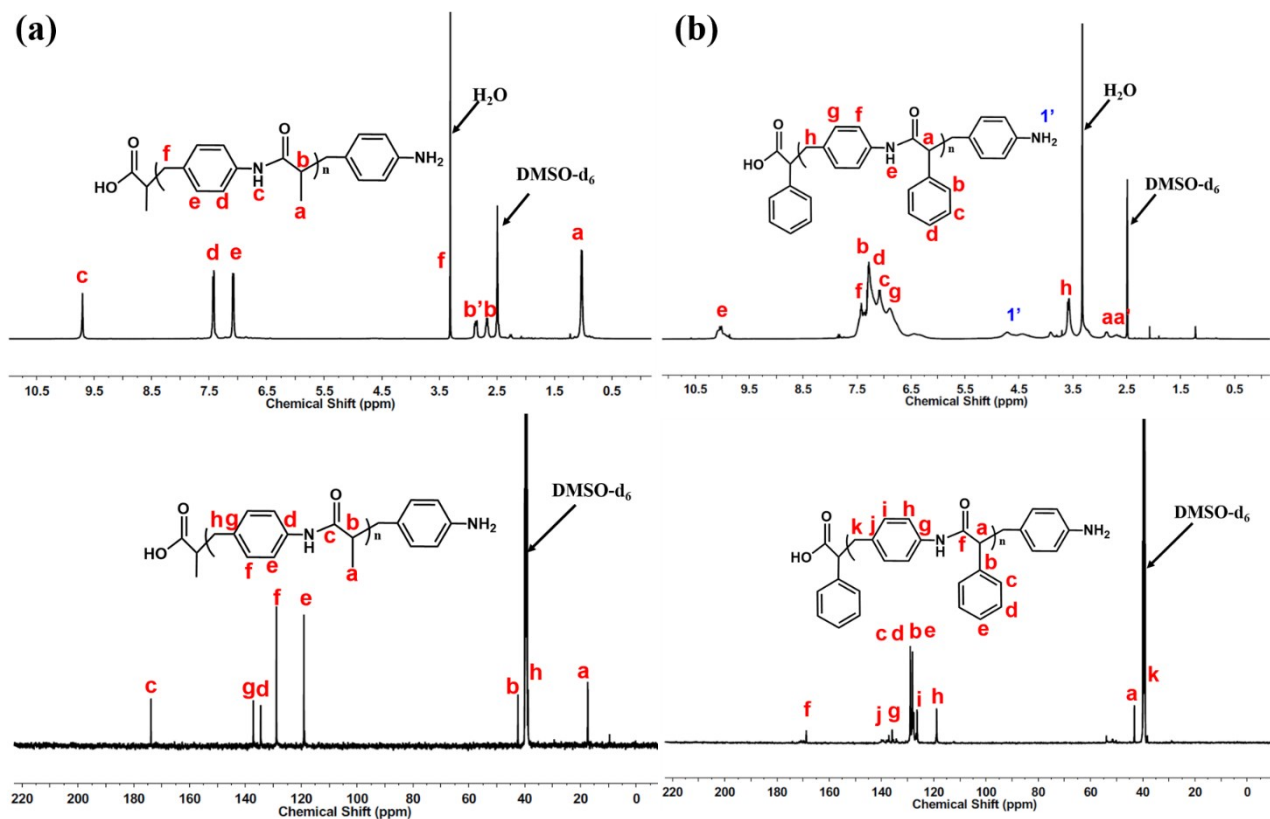


Figure S7. ^1H -NMR (upper) and ^{13}C -NMR (lower) spectrum of (a) PMAMA, (b) PMAPA.

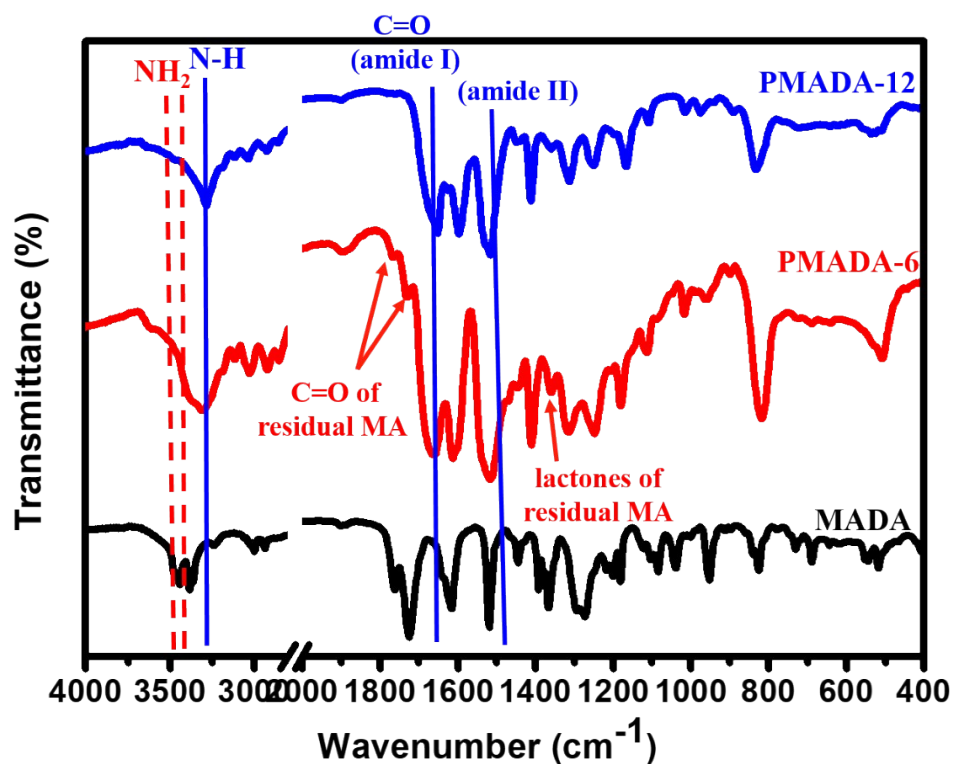


Figure S8. FTIR spectra of the prepared hyperbranched polyamides PMADA-6 and PMADA-12.

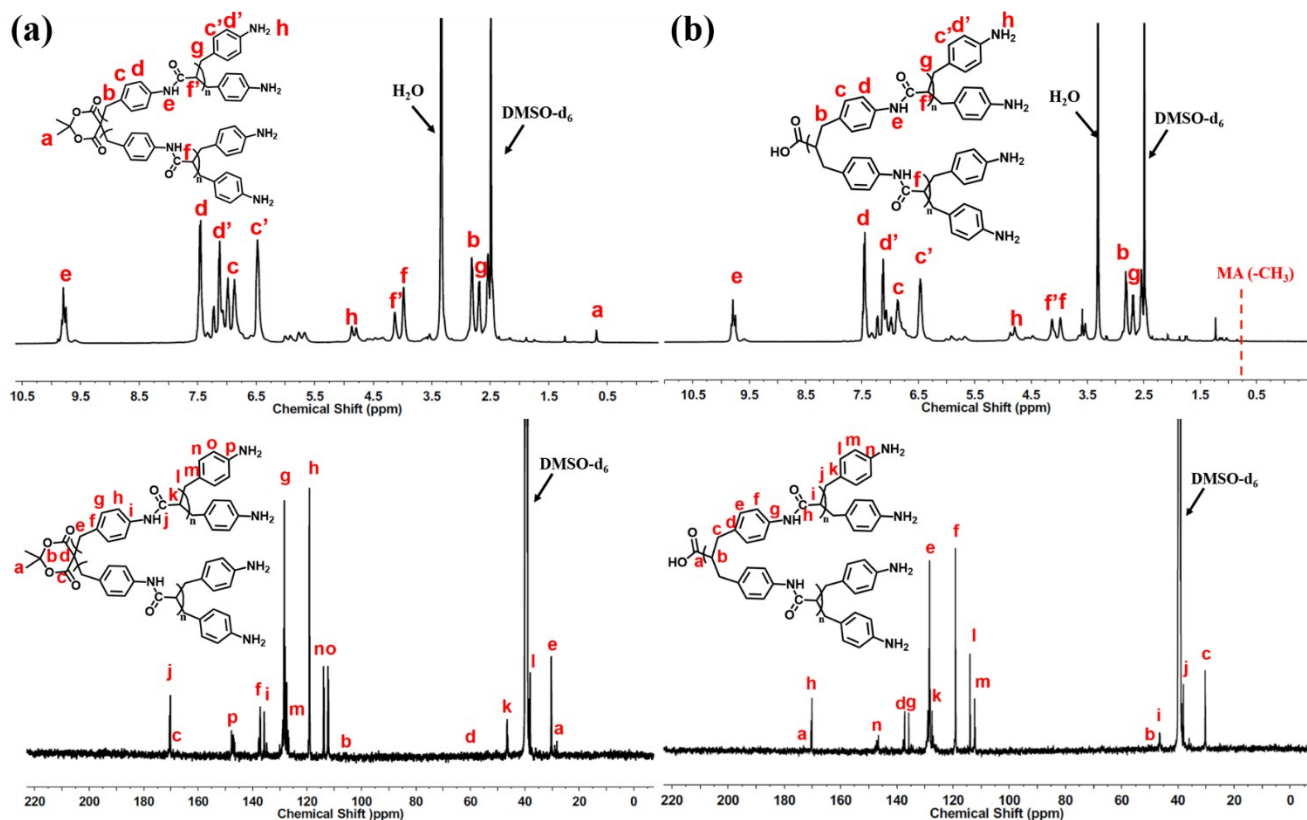
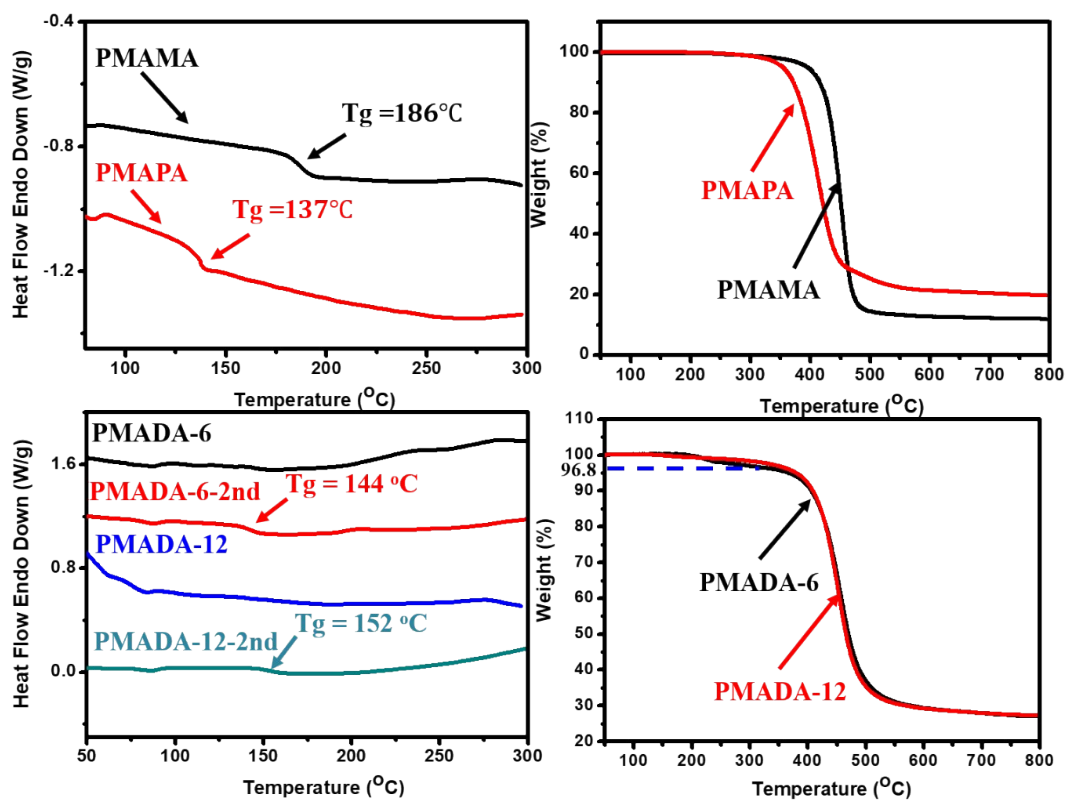


Figure S9. NMR spectra of hyperbranched polyamides PMADA-6 and PMADA-12.

Figure S10. DSC (left) and TGA thermograms (right) of prepared polyamides.



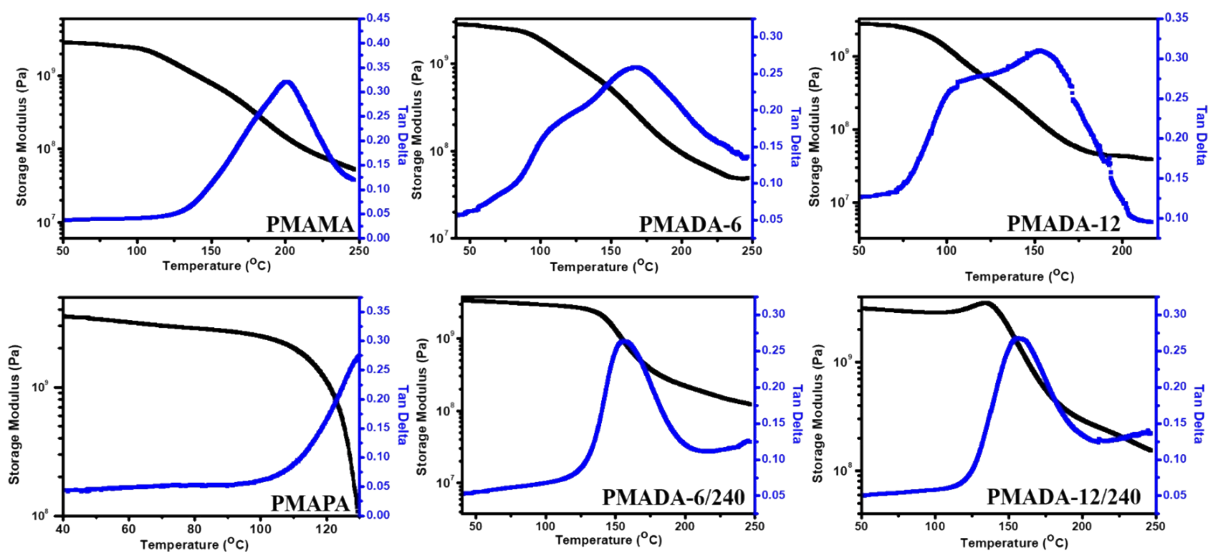


Figure S11. DMA thermogram of PMAMA, PMAPA, PMADA-6, PMADA-6/240, PMADA-12, and PMADA-12/240.