

Supporting Information for

***S*-nitrosothiol-modified hyperbranched polyesters**

Lei Yang, Yuan Lu, Robert J. Soto, Anand Shah, Mona Jasmine R. Ahonen, and Mark H. Schoenfisch*

* Department of Chemistry, University of North Carolina – Chapel Hill, Chapel Hill, NC 27599; Email: schoenfisch@unc.edu

Supporting Information

Table S1. Hydrodynamic size of hyperbranched polyesters modified with DTT suspensions.

Fig. S1 Quantitative ^{13}C -NMR spectra of hyperbranched polyesters.

Fig. S2 UV-vis spectra of *S*-nitrosothiol-modified hyperbranched polyesters, G2-HP-AC exposed to the nitrosation reaction conditions, and G2-HP-AC.

Fig. S3 ^1H NMR spectra of HP-G3-DTT and HP-G4-DTT.

Fig. S4 GPC chromatograms of hyperbranched polyesters modified with DTT.

Fig. S5 FTIR spectra for G3-HP-DTT, G3-HP-DTT/NO, G3-HP-AC exposed to the nitrosation reaction conditions, and G3-HP-AC.

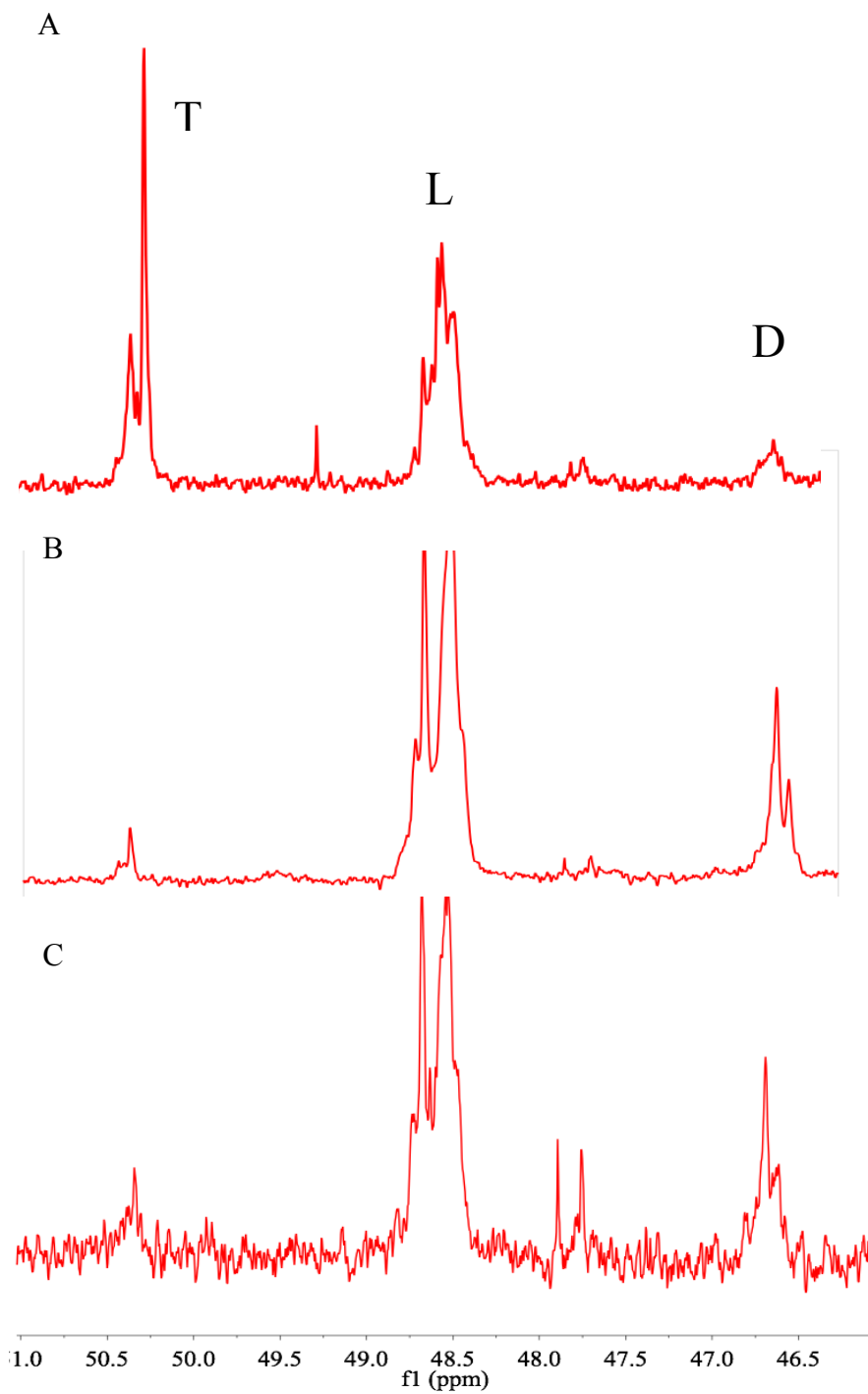


Fig. S1 Quantitative ^{13}C -NMR spectra of hyperbranched polyesters: (A) G2-, (B) G3-, and (C) G4-HP.

Degree of branching (DB) was determined by the integration of distinct peaks in ^{13}C NMR spectrum at 50.6 (T), 48.8 (L), and 46.8 (D) ppm, respectively, using equation S1.

$$DB = \frac{\Sigma D + \Sigma T}{\Sigma D + \Sigma T + \Sigma L}$$

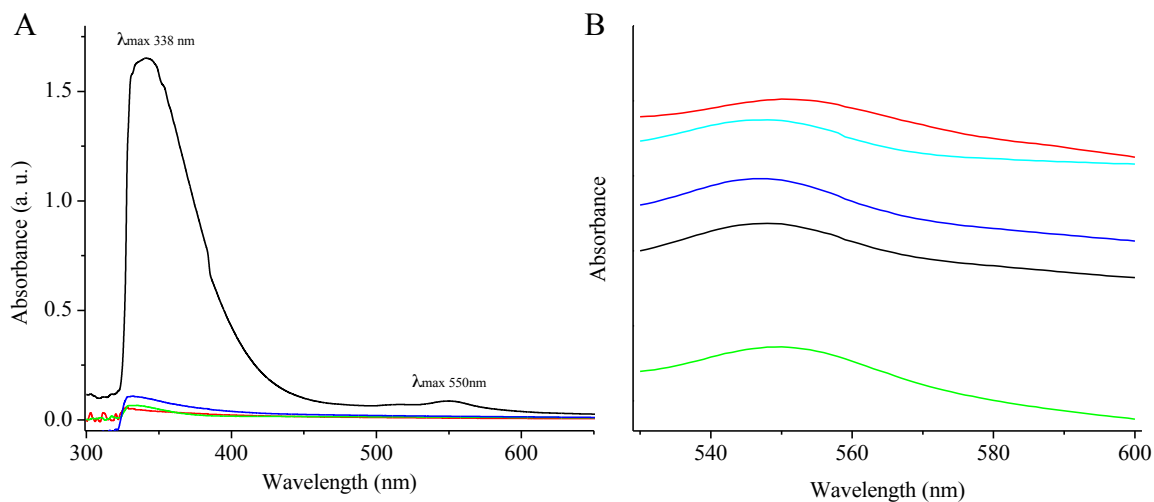


Fig. S2 UV-vis spectra of *S*-nitrosothiol-modified hyperbranched polyesters measured in acetone (0.1 mg mL^{-1}): A) G2-HP-DTT/NO (black), G2-HP-DTT (red), G2-HP-AC exposed to the nitrosation reaction conditions (green), and G2-HP-AC (blue), and B) characteristic *S*-nitrosothiol bands for G2-HP-ET/NO (black), G2-HP-BT/NO (red), G2-HP-DTT/NO (green), G3-HP-DTT/NO (blue), and G4-HP-DTT/NO (cyan).

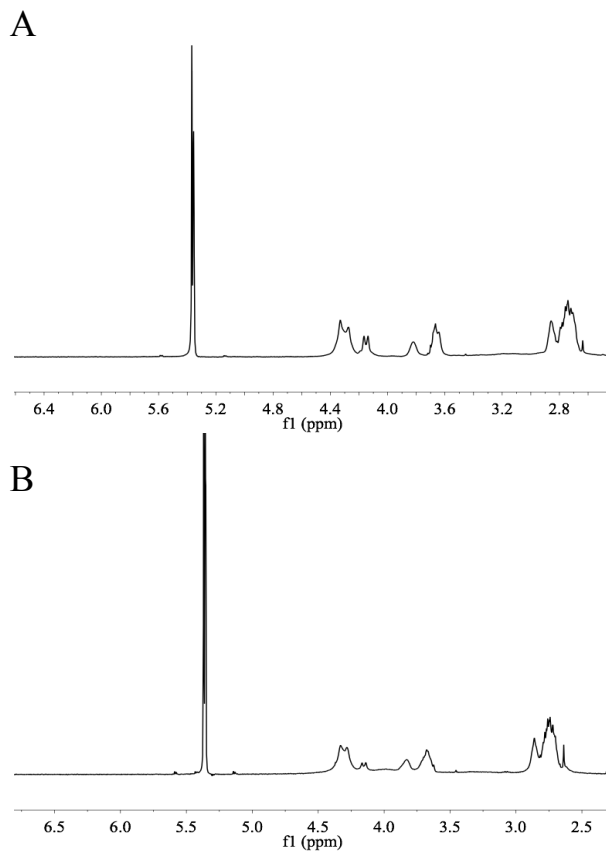


Fig. S3 ^1H NMR spectra of A) G3-HP-DTT and B) G4-HP-DTT.

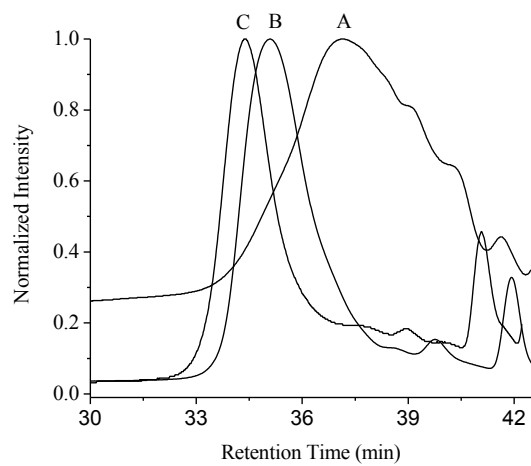


Fig. S4 GPC chromatograms of hyperbranched polyesters modified with DTT: A) G2-, B) G3-, and C) G4-HP-DTT.

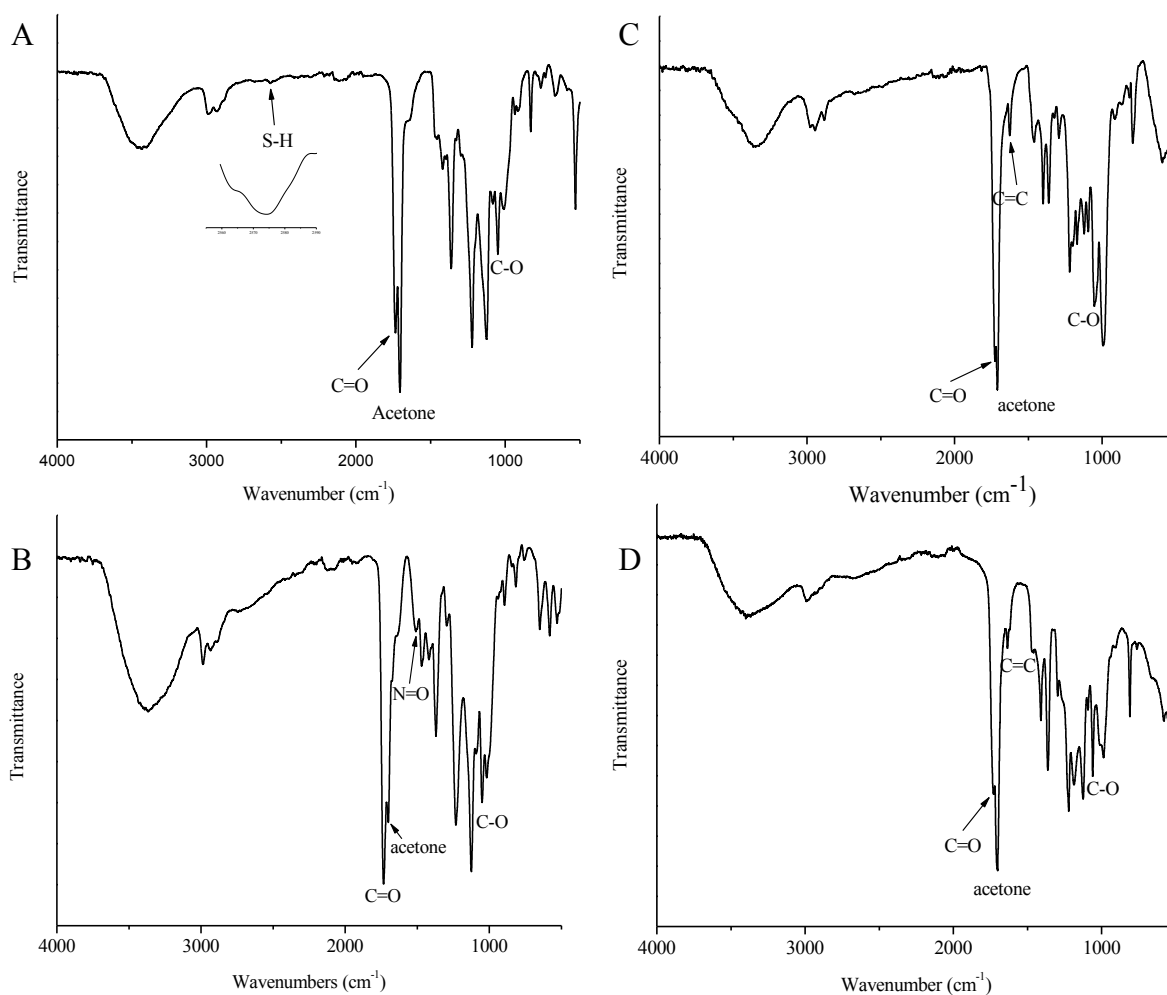


Fig. S5 FTIR spectra for: A) G3-HP-DTT, B) G3-HP-DTT/NO, C) G3-HP-AC, and D) G3-HP-AC exposed to the nitrosation reaction conditions. A droplet of highly concentrated polyesters acetone solution was added onto the ATR-FTIR stage, and the spectra were collected via ATR mode.

Table S1 Hydrodynamic size of hyperbranched polyesters modified with DTT suspensions.^a

Polyesters	Hydrodynamic size (nm) ^b	PDI
G2-HP-DTT/NO	1170 ± 160	0.12 ± 0.07
G3-HP-DTT/NO	1050 ± 180	0.10 ± 0.07
G4-HP-DTT/NO	987 ± 150	0.09 ± 0.06

^a n ≥ 3 separate syntheses. ^b As determined by Dynamic Light Scattering. The concentration of NO-releasing scaffold in PBS solution for DLS measurement was the same with for NO analyzer measurement (0.33 mg mL⁻¹).