

Supporting information

For

Polypeptide gels incorporating the exotic functional aromatic amino acid 4-amino-L-phenylalanine

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Author Contributions

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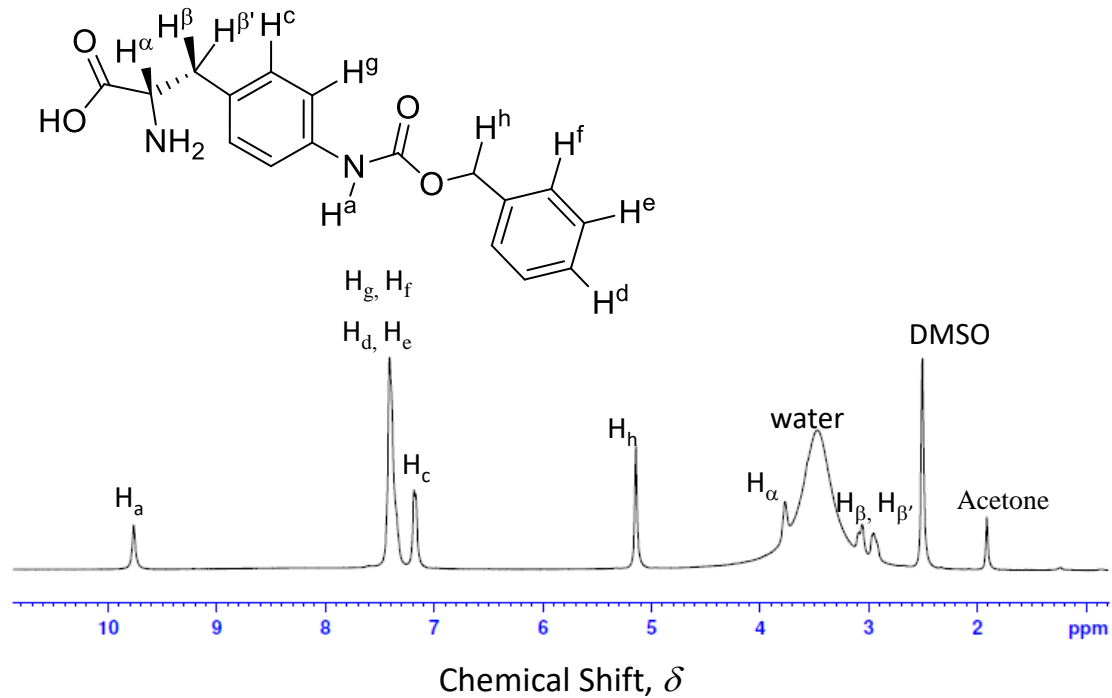


Figure S1. ^1H NMR spectrum (400 MHz, $\text{DMSO-}d_6$) of 4-carbobenzyloxyamino-L-phenylalanine, Cbz-4APhe

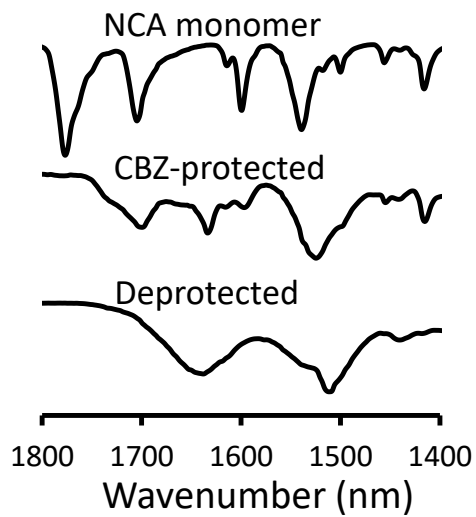


Figure S2. FTIR spectra of Cbz-4APhe NCA monomer, poly(4-carbobenzyloxyamino-L-phenylalanine), and deprotected poly(4-amino-L-phenylalanine), P4APhe.

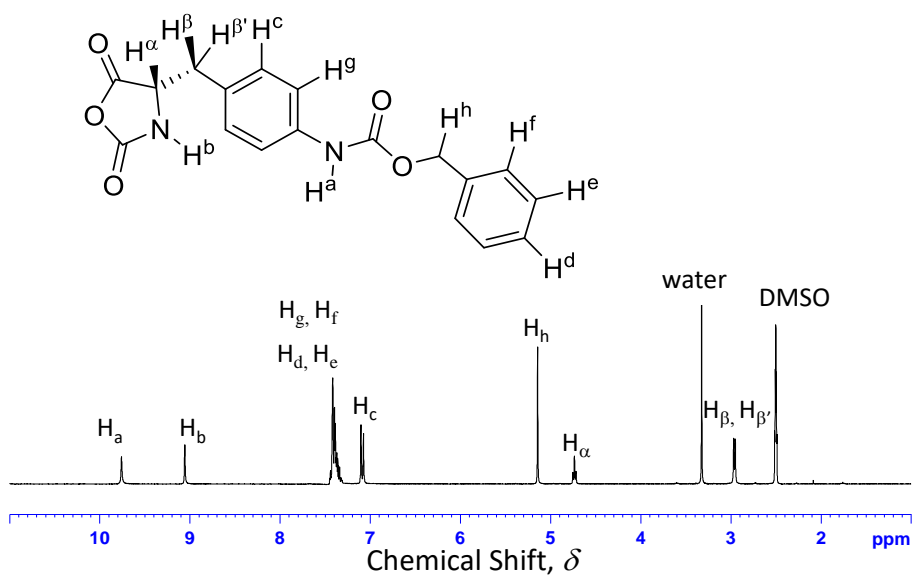


Figure S3. ^1H NMR spectrum (400 MHz, DMSO- d_6) of Cbz-4APhe NCA monomer

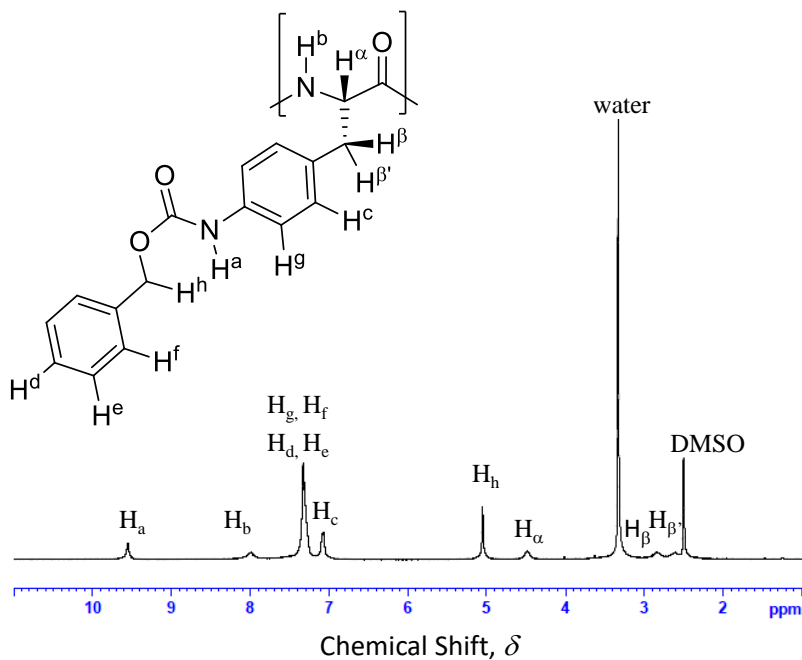


Figure S4. ^1H NMR spectrum (400 MHz, DMSO- d_6) of poly(4-carbobenzyloxyamino-L-phenylalanine)

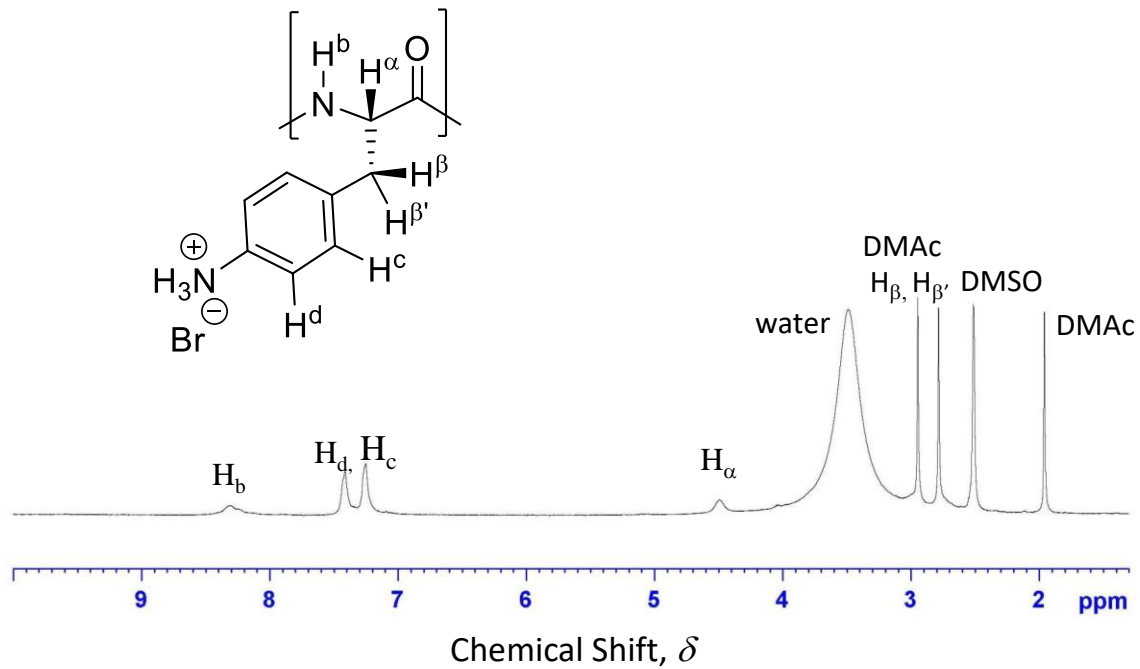


Figure S5. ^1H NMR spectrum (400 MHz, $\text{DMSO-}d_6$) of poly(4-amino-L-phenylalanine), P4APhe

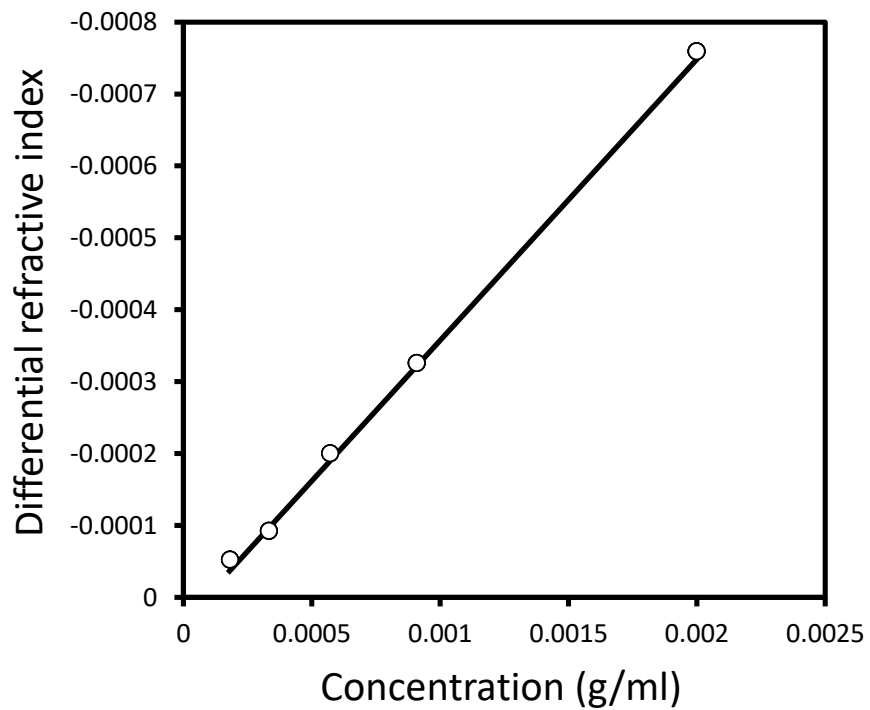


Figure S6. Differential refractive index of poly(4-carbobenzyloxyamino-L-phenylalanine) solutions as a function of polymer concentration. The value of dn/dc (0.392 ml/g) was determined from the slope of the fit line. Solvent = 1.0M LiBr in DMF.

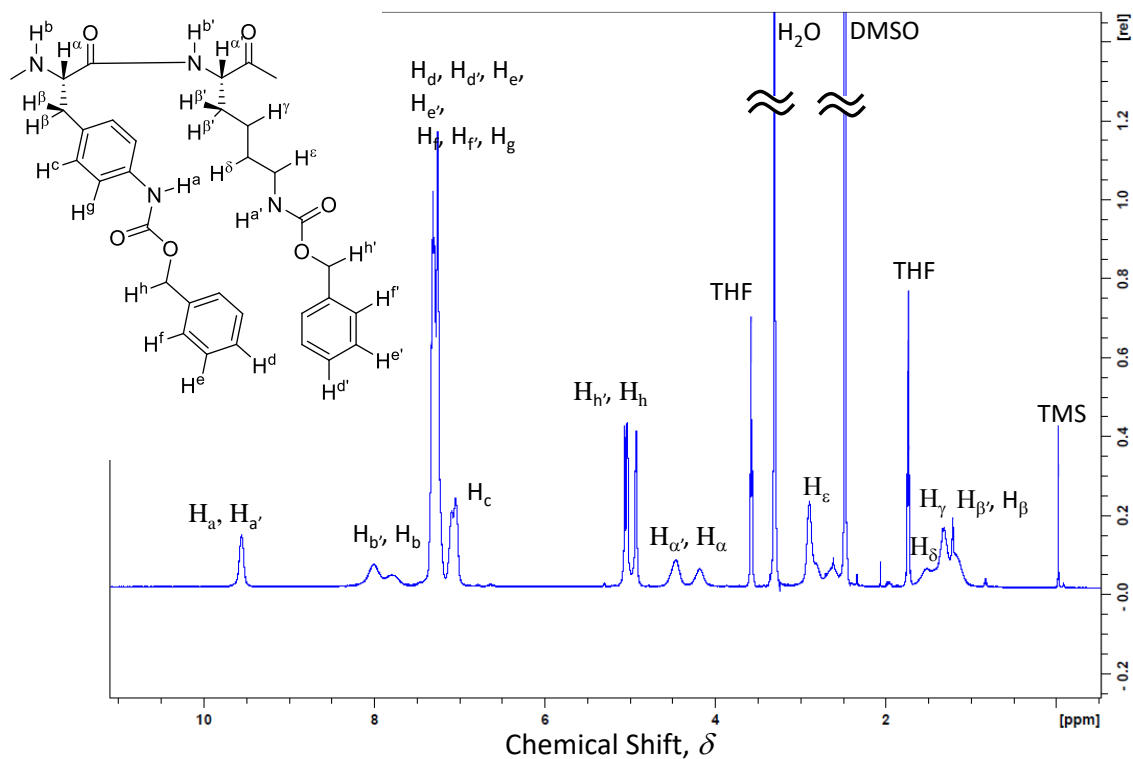


Figure S7. Representative ^1H NMR spectrum (400 MHz, $\text{DMSO-}d_6$) of the copolymer of Cbz-4APhe and Cbz-Lysine. Copolymer composition was determined from the ratio of the integrals for the α and α' resonances

Table S1. Molecular weight, composition, and qualitative firmness data for copolymers of Cbz-4APhe and Cbz-Lysine. Total initial NCA concentration = 80 mg/ml.

% Lysine in feed	80	60	40	20	0
% Lysine in copolymer	80.6	59.6	41.5	23.1	0
$M_w \times 10^{-4}$	5.4	6.1	5.1	5.4	5.3
Film firmness	Soft	—————>			Hard

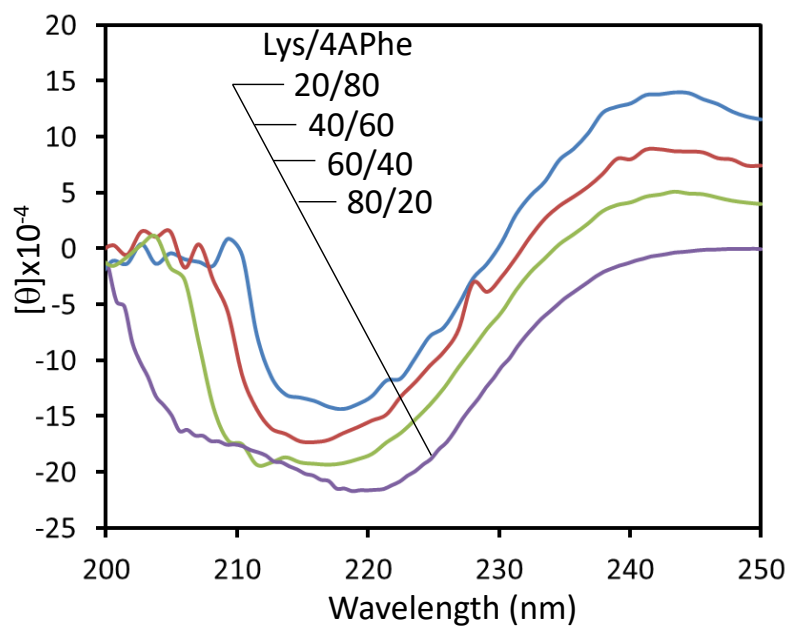


Figure S8. CD spectra of statistical copolymers of 4APhe and L-lysine with a range of comonomer compositions, measured at pH = 2.0. Copolymer concentrations = 2.5 mg/ml.