

Supporting information for the manuscript entitled

New Thermal-Responsive Polymers Based on Alanine and (Meth)acryl Amides

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Table S1. Monomer solubility in water and common solvents

	H ₂ O	MeOH	THF	CHCl ₃	Toluene	DMF
MA-L-Ala-OMe	√	√	√	√	√	√
MA-L-Ala-OEt	√	√	√	√	√	√
MA-L-Ala-O ⁱ Pr	×	√	√	√	√	√
MA-L-Ala- ⁱ PA	×	√	√	√	×	√
Ac-L-Ala-OMe	√	√	√	√	√	√
MA-D-Ala-OMe	√	√	√	√	√	√

√: soluble (>20 mg/mL) ×: insoluble (< 1 mg/mL)

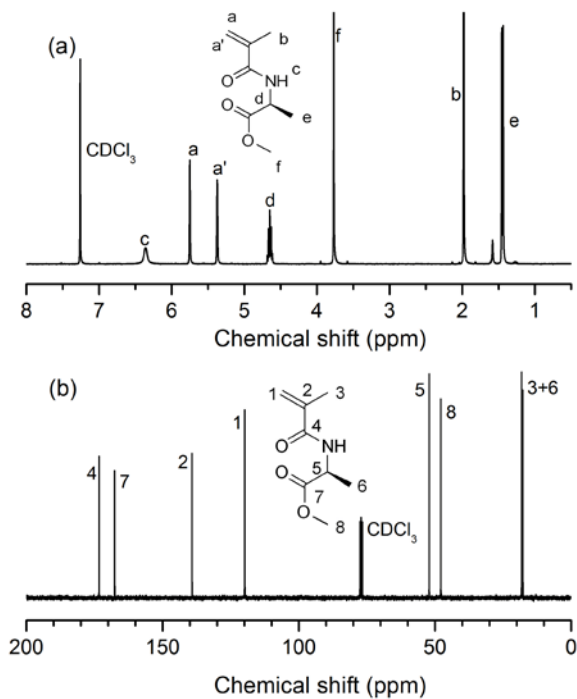


Figure S1. (a) ^1H -NMR and (b) ^{13}C -NMR spectra of MA-L-Ala-OMe.

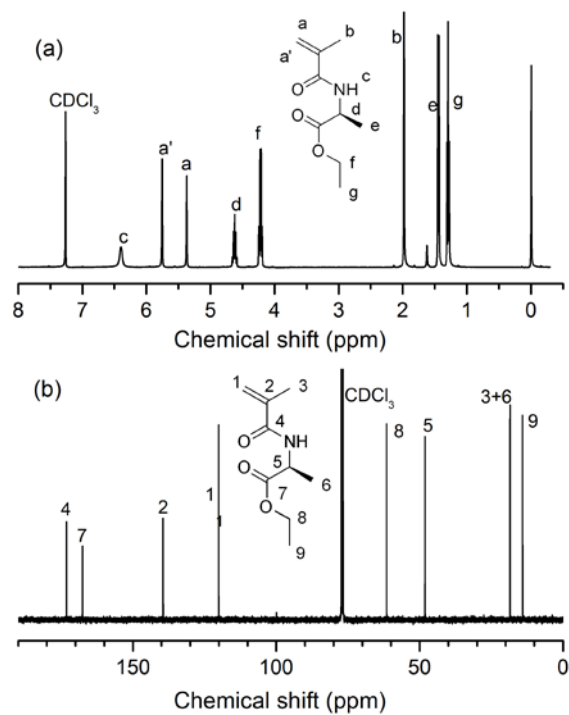


Figure S2. (a) ^1H -NMR and (b) ^{13}C -NMR spectra of MA-L-Ala-OEt.

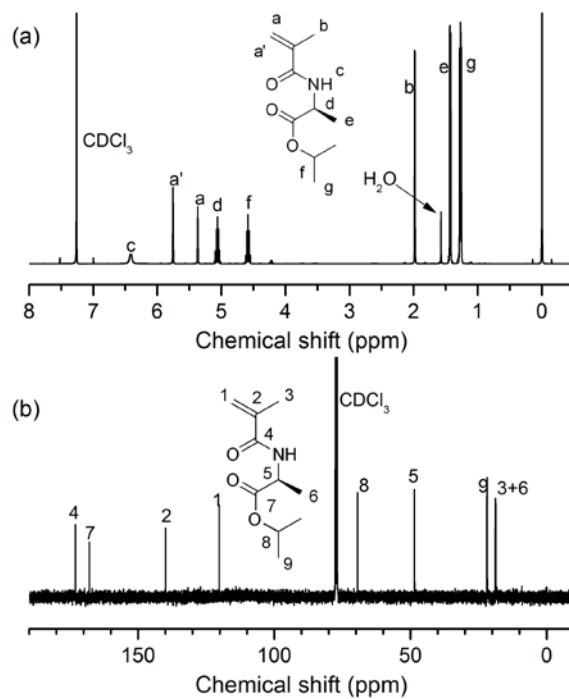


Figure S3. (a) $^1\text{H-NMR}$ and (b) $^{13}\text{C-NMR}$ spectra of MA-L-Ala-OⁱPr.

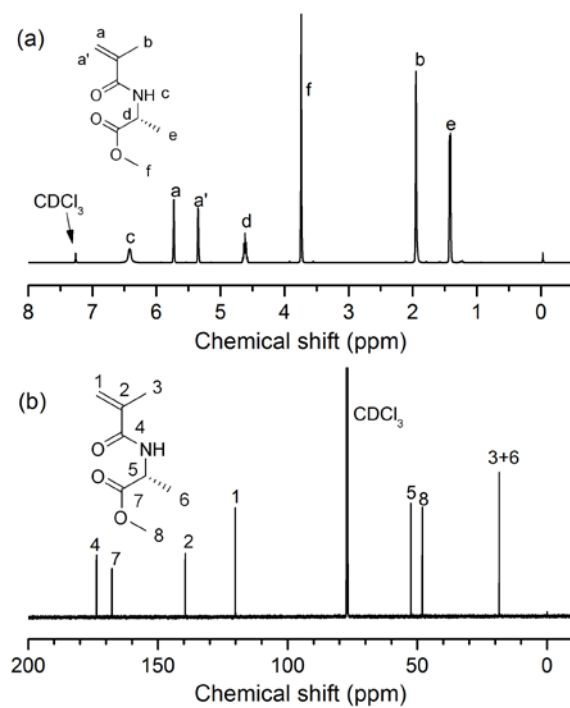


Figure S4. (a) $^1\text{H-NMR}$ and (b) $^{13}\text{C-NMR}$ spectra of MA-D-Ala-OMe.

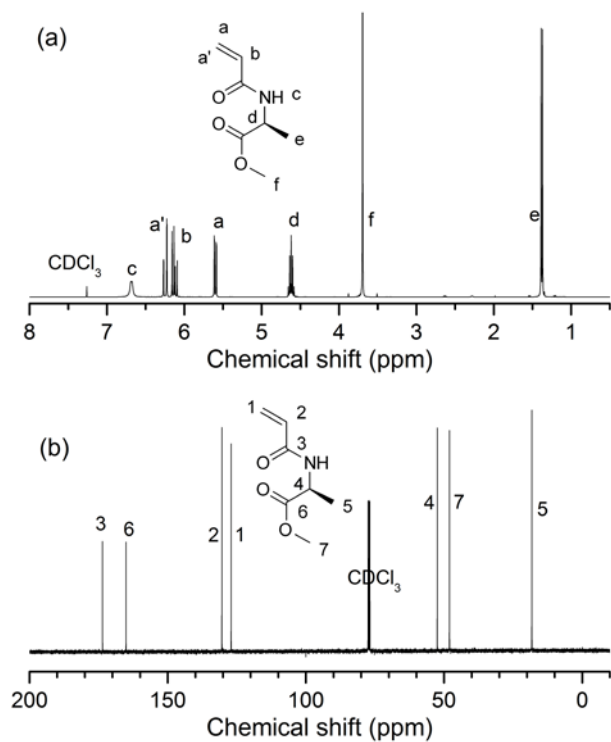


Figure S5. (a) $^1\text{H-NMR}$ and (b) $^{13}\text{C-NMR}$ spectra of Ac-L-Ala-OMe.

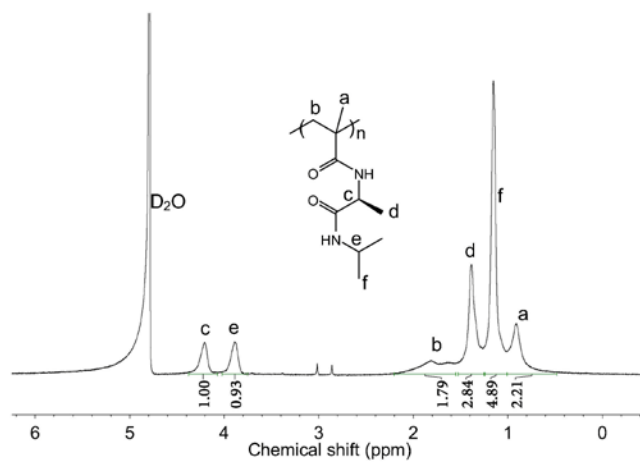


Figure S6. $^1\text{H NMR}$ spectrum of poly(MA-L-Ala-iPA)₉₆ in D_2O .

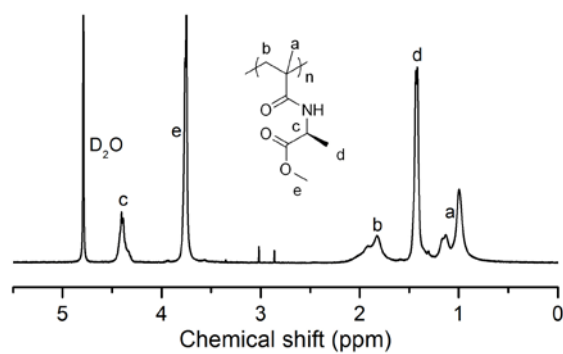


Figure S7. $^1\text{H NMR}$ spectrum of poly(MA-L-Ala-OMe)₈₉ in D_2O .

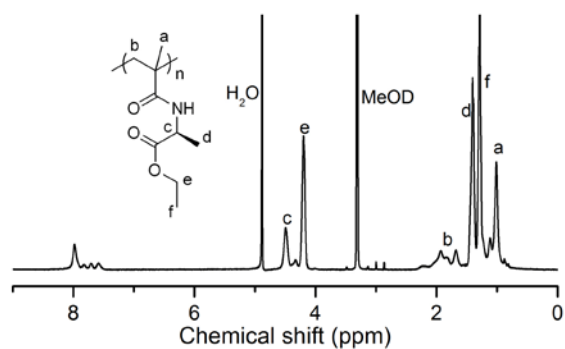


Figure S8. ^1H NMR spectrum of poly(MA- $_L$ -Ala-OEt) $_{76}$ in MeOD.

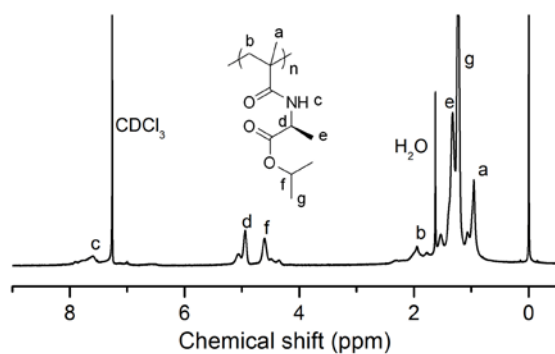


Figure S9. ^1H NMR spectrum of poly(MA- $_L$ -Ala-O i Pr) $_{47}$ in CDCl_3 .

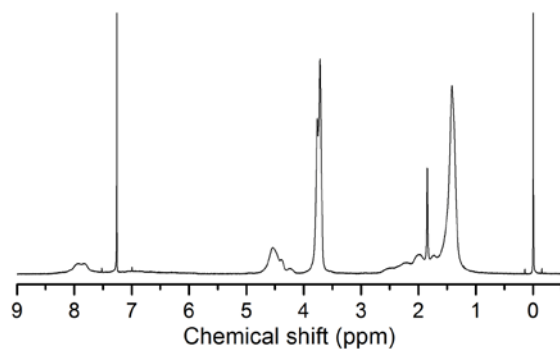


Figure S10. ^1H NMR spectrum of poly(Ac- $_L$ -Ala-OMe) $_{92}$ in CDCl_3 .

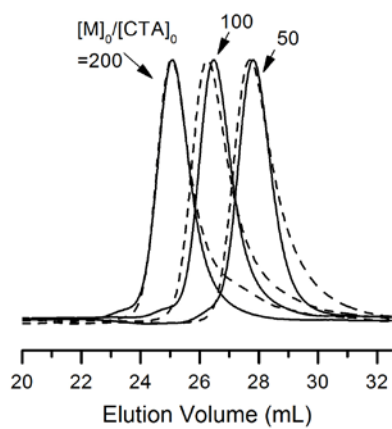


Figure S11. GPC traces of poly(MA- $_L$ -Ala-OEt) before (dash lines) and after (solid lines) end-group modification.

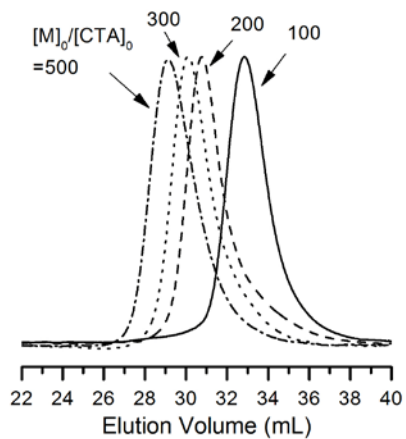


Figure S12. SEC traces of poly(Ac-L-Ala-OMe) prepared by RAFT polymerization.

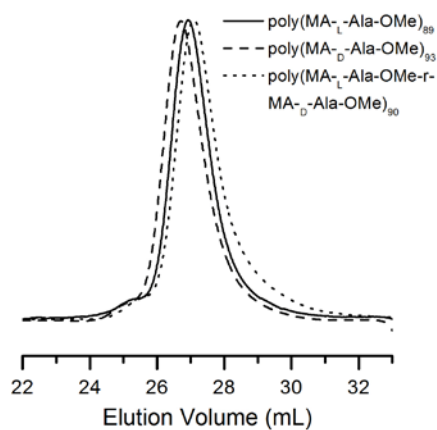


Figure S13. SEC traces of poly(MA-L-Ala-OMe)₈₉, poly(MA-D-Ala-OMe)₉₃, and poly(MA-L-Ala-OMe-r-MA-D-Ala-OMe)₉₀.

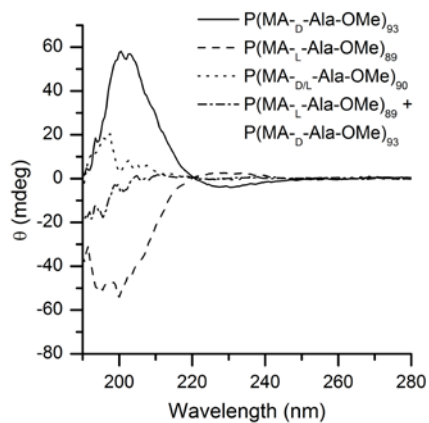


Figure S14. CD spectra of poly(MA-L-Ala-OMe)₈₉, poly(MA-D-Ala-OMe)₉₃ and poly(MA-D/L-Ala-OMe)₉₀ in aqueous solution (0.1mg/mL).