

Supporting Information

Self-assembly of Nucleoside-derivatives Low Molecular Weight Gelators: A Thermodynamics and Kinetic study at different length scales

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Table of Contents

Figure S1	3
Figure S2	4
Figure S3	5
Figure S4	6
Figure S5	6
Figure S6	7
Figure S7	8
Figure S8	9
Figure S9	10
Figure S10	11
Figure S11	12
Figure S12	13
Figure S13	14
Figure S14	15
Figure S15	16
Figure S16	17
Figure S17	18
Table S1	19
Figure S18	20
Figure S19	21

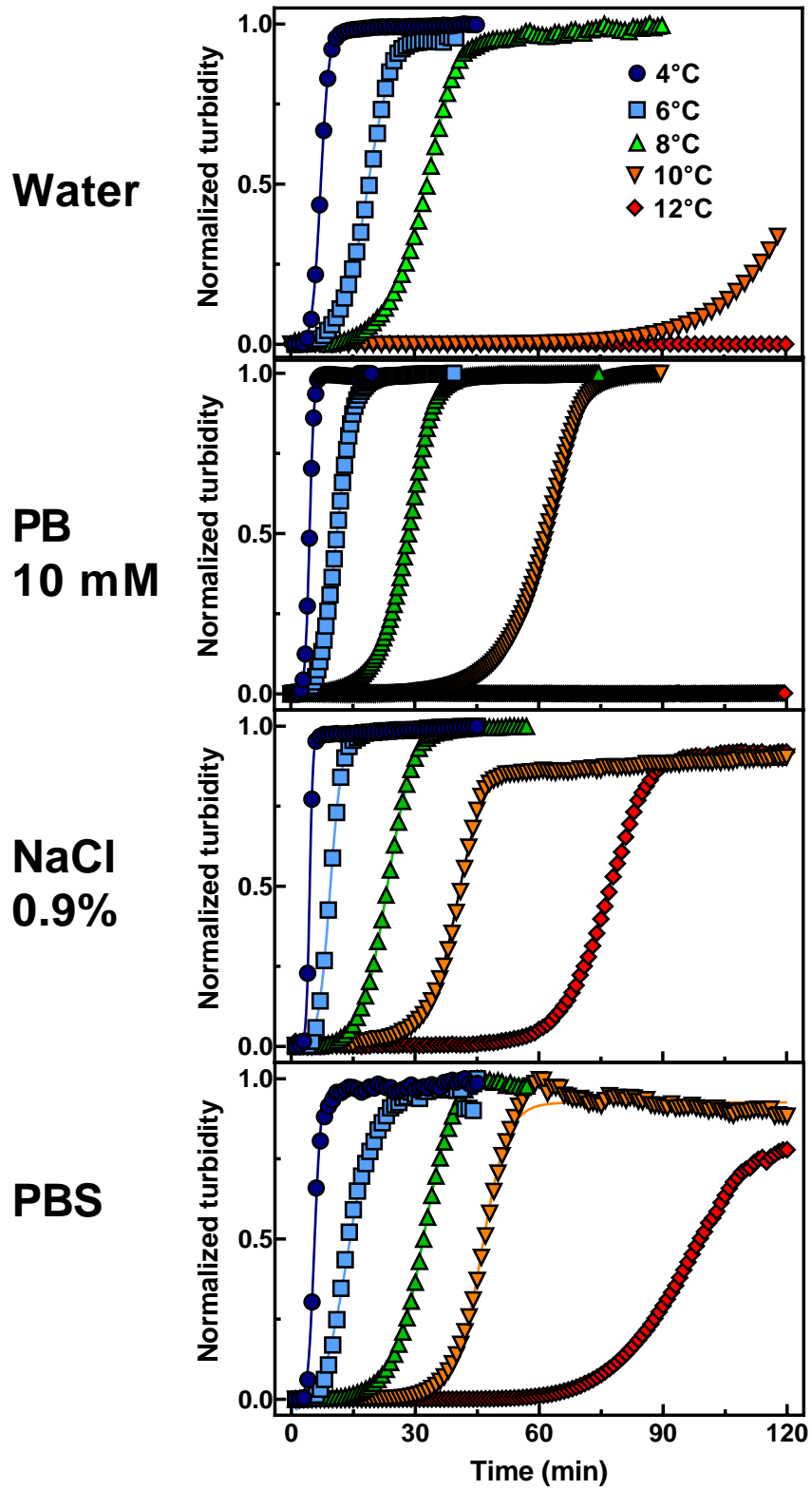


Figure S1. Gelation kinetics of BC 1% w/v in water, phosphate buffer (10mM pH7.2), NaCl (0.9% w/v) and PBS.

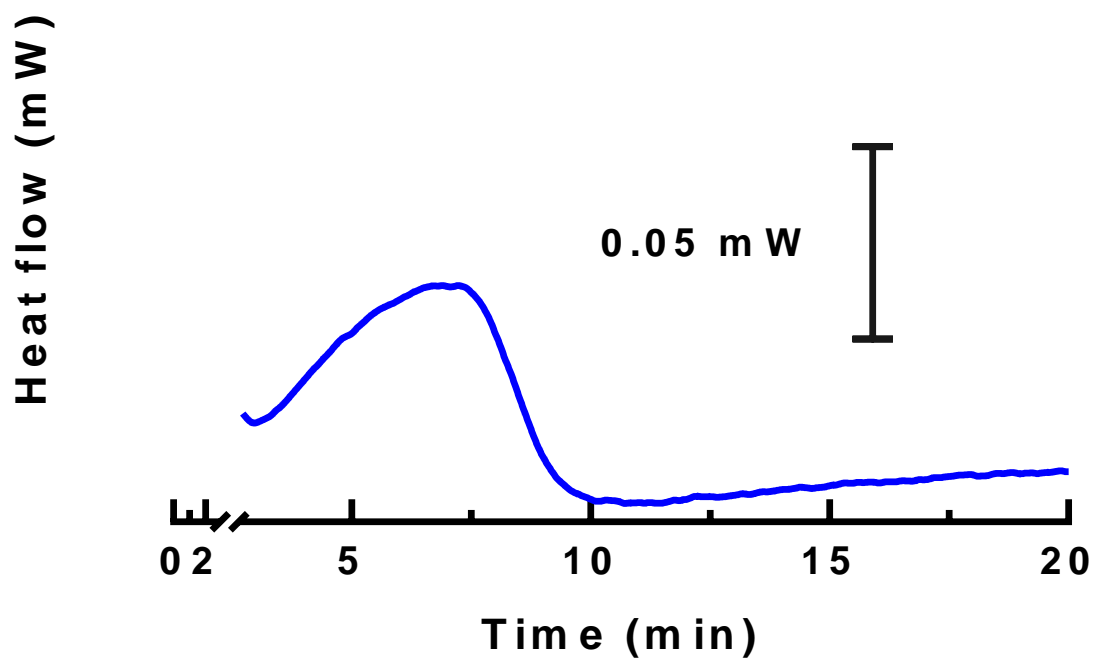


Figure S2. Isothermal calorigram of BC 2% w/v in PBS.

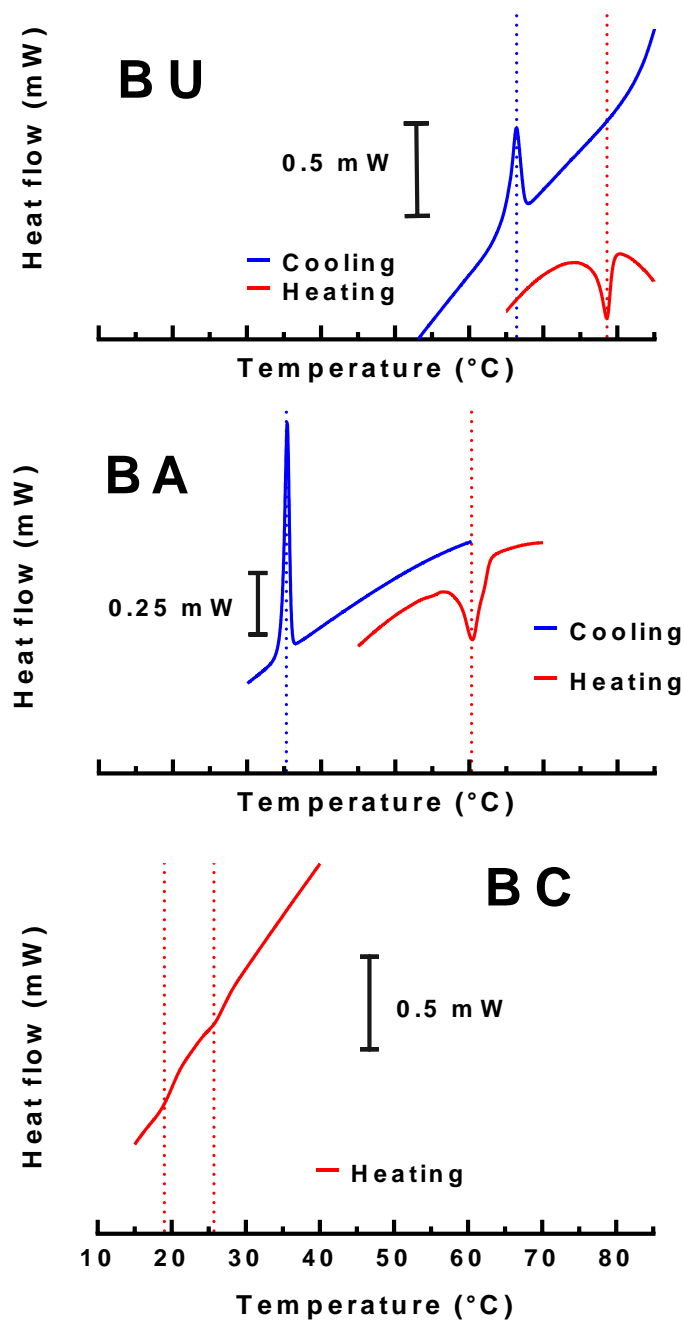


Figure S3. Calorigrams of GNB at 2% w/v in water. Temperature ramp: 1°C.min⁻¹. Heating and cooling cycles are arbitrary separated for clarity reasons.

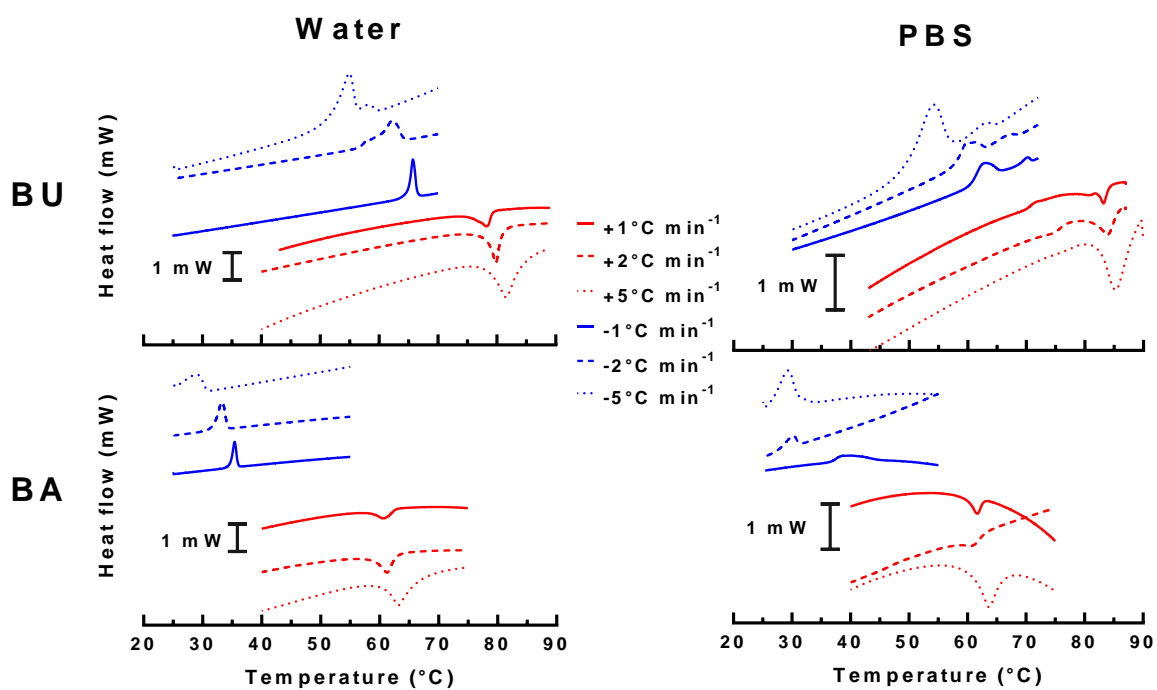


Figure S4. Calorigrams of BU and BA at 2% w/v in water and PBS at different temperature ramps. Heating and cooling cycles are arbitrary separated for clarity reasons.

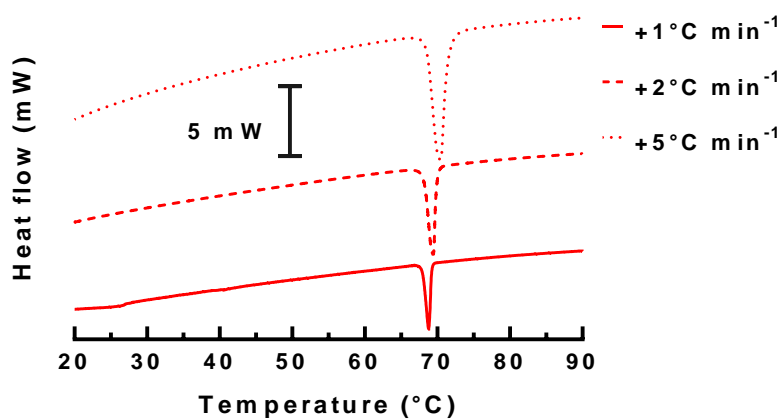


Figure S5. Calorigrams of azobenzene at different temperature ramps. Heating ramps are arbitrary separated for clarity reasons.

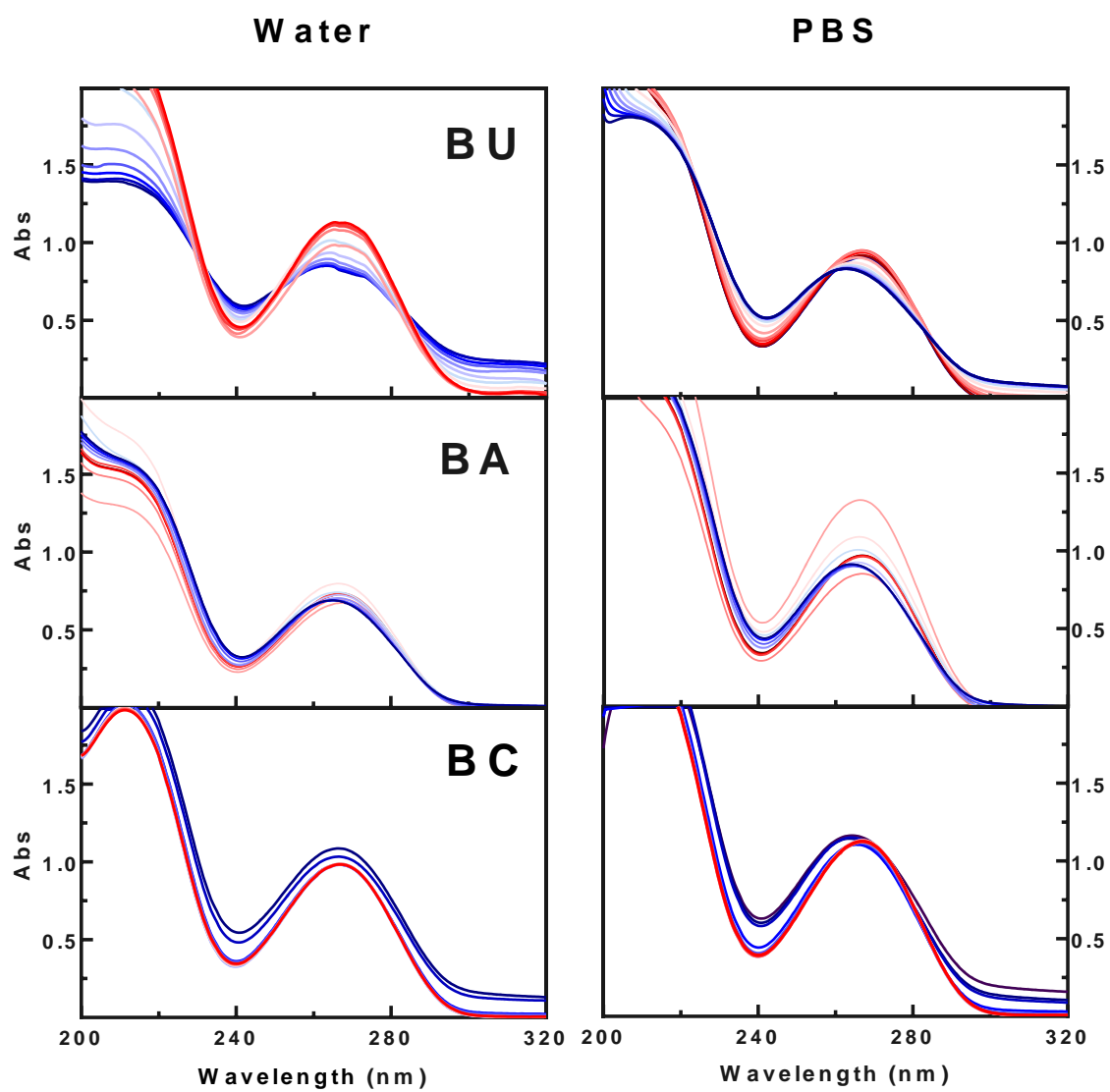


Figure S6. UV spectra of GNB. Top: BU; middle: BA; bottom: BC. Left: water; right: PBS.

Hot to cool temperatures are represented respectively from red to blue.

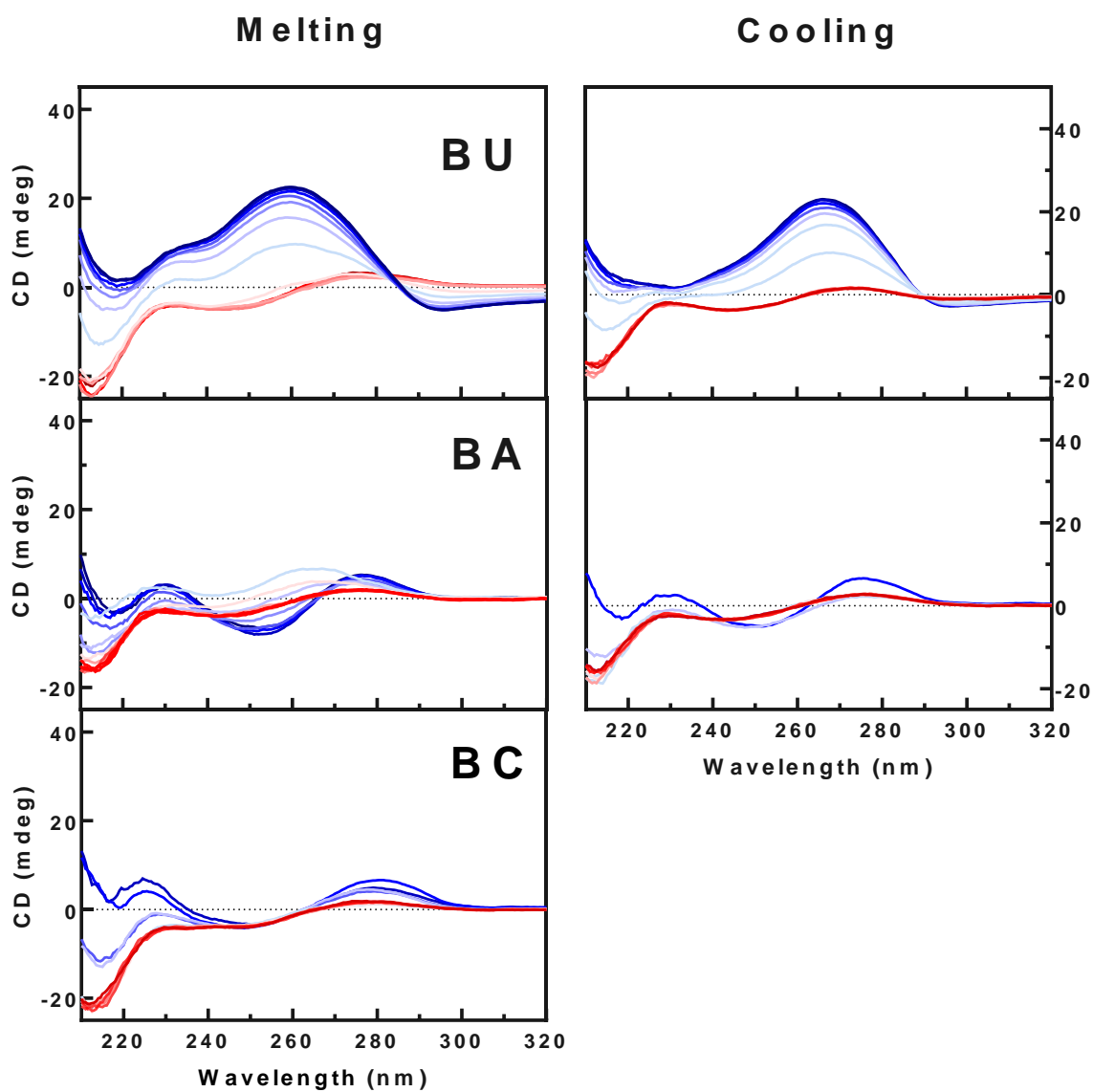


Figure S7. CD temperature scan of GNB in pure water at 0.05% w/v. Top: BU ; middle : BA ; bottom: BC. Left : melting cycle ; right : cooling cycle. Hot to cool temperatures are represented respectively from red to blue.

Cooling

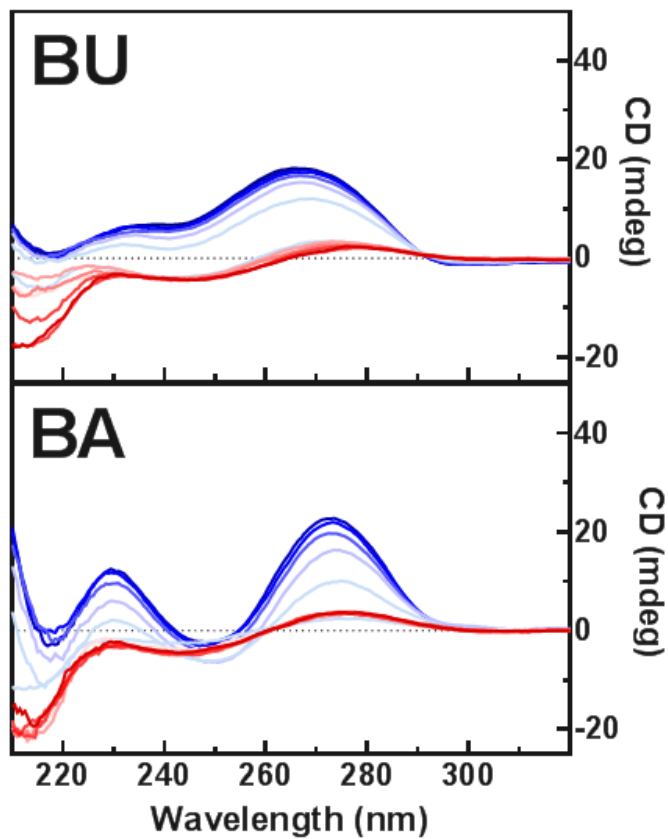


Figure S8. CD temperature scan of BU and BA in PBS at 0.05% w/v. Cooling cycle. Hot to cool temperatures are represented respectively from red to blue.

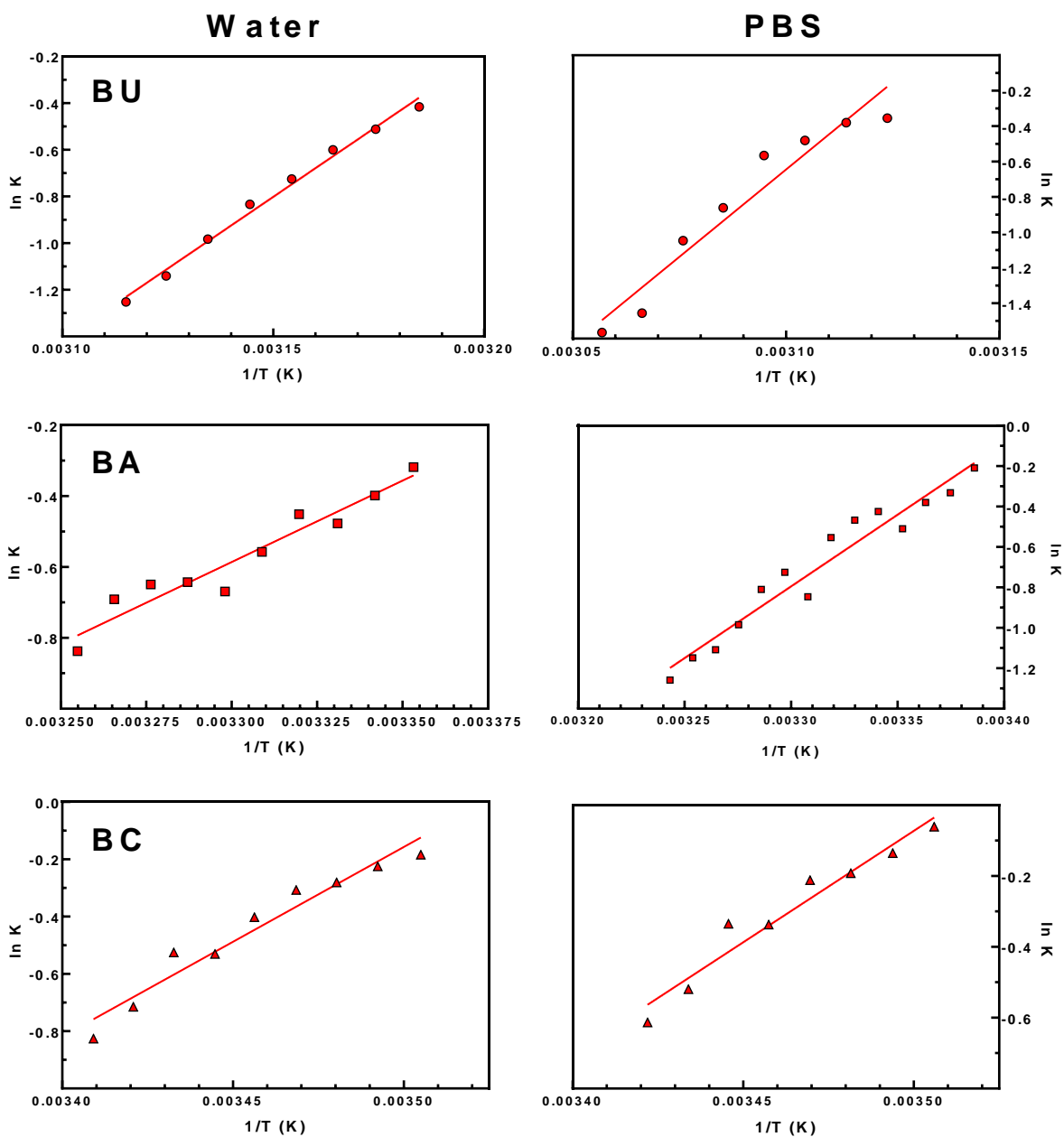


Figure S9. Van't Hoff plots of thermal melting cycle of GNB 0.05% w/v.

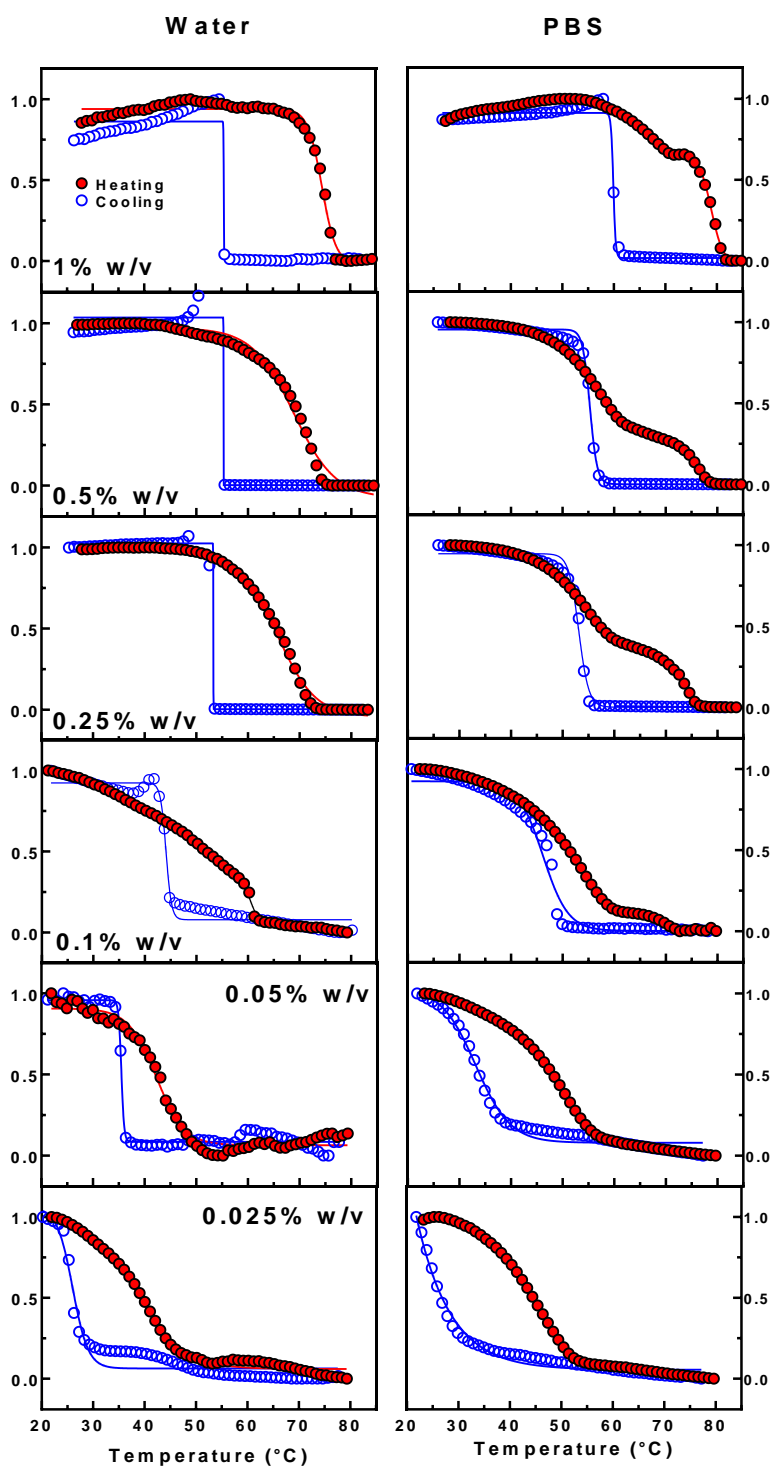


Figure S10. Turbidimetry of BU at different concentration. Y axis: normalized absorbance at 500 nm.

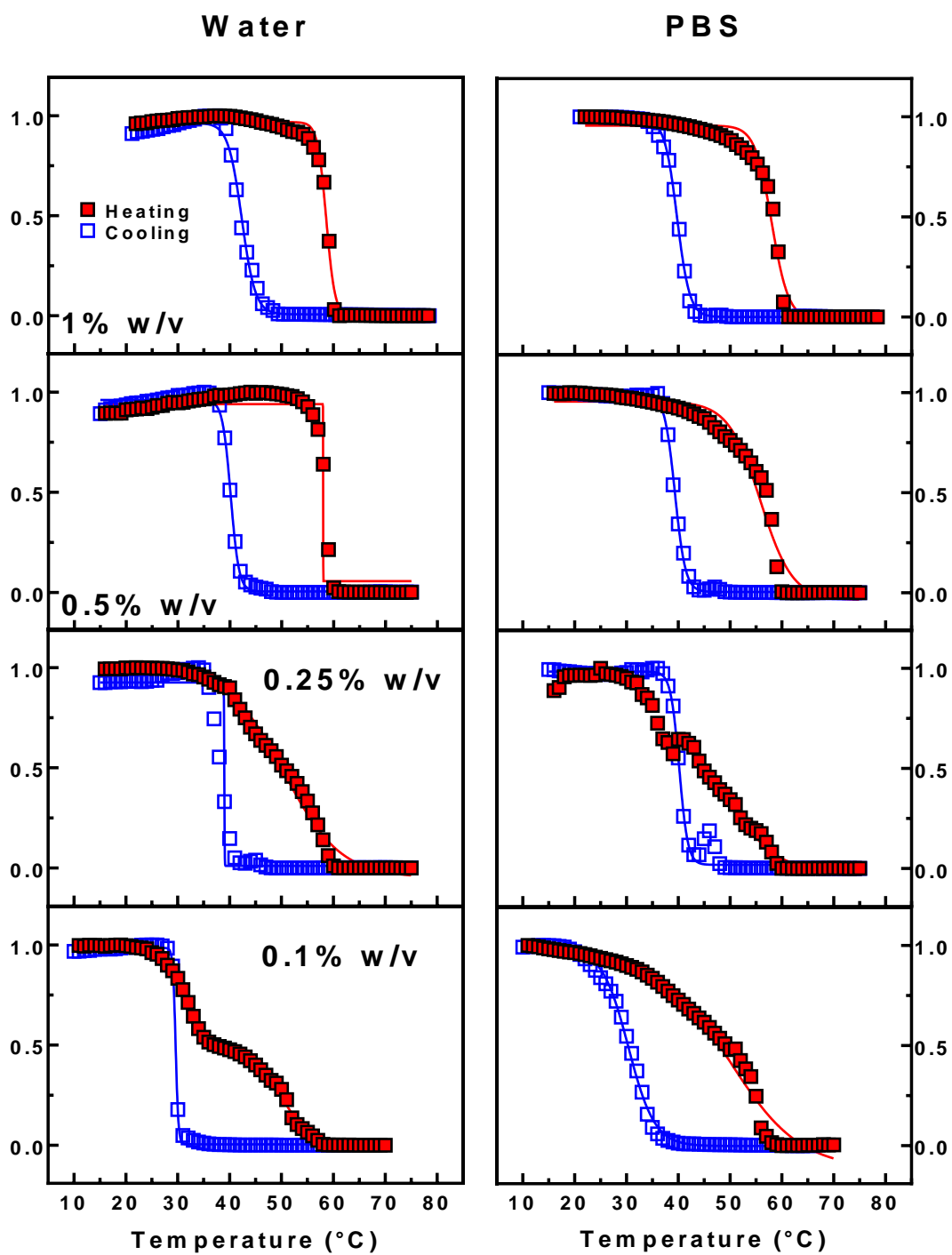


Figure S11. Turbidimetry of BA at different concentration. Y axis : normalized absorbance at 500 nm.

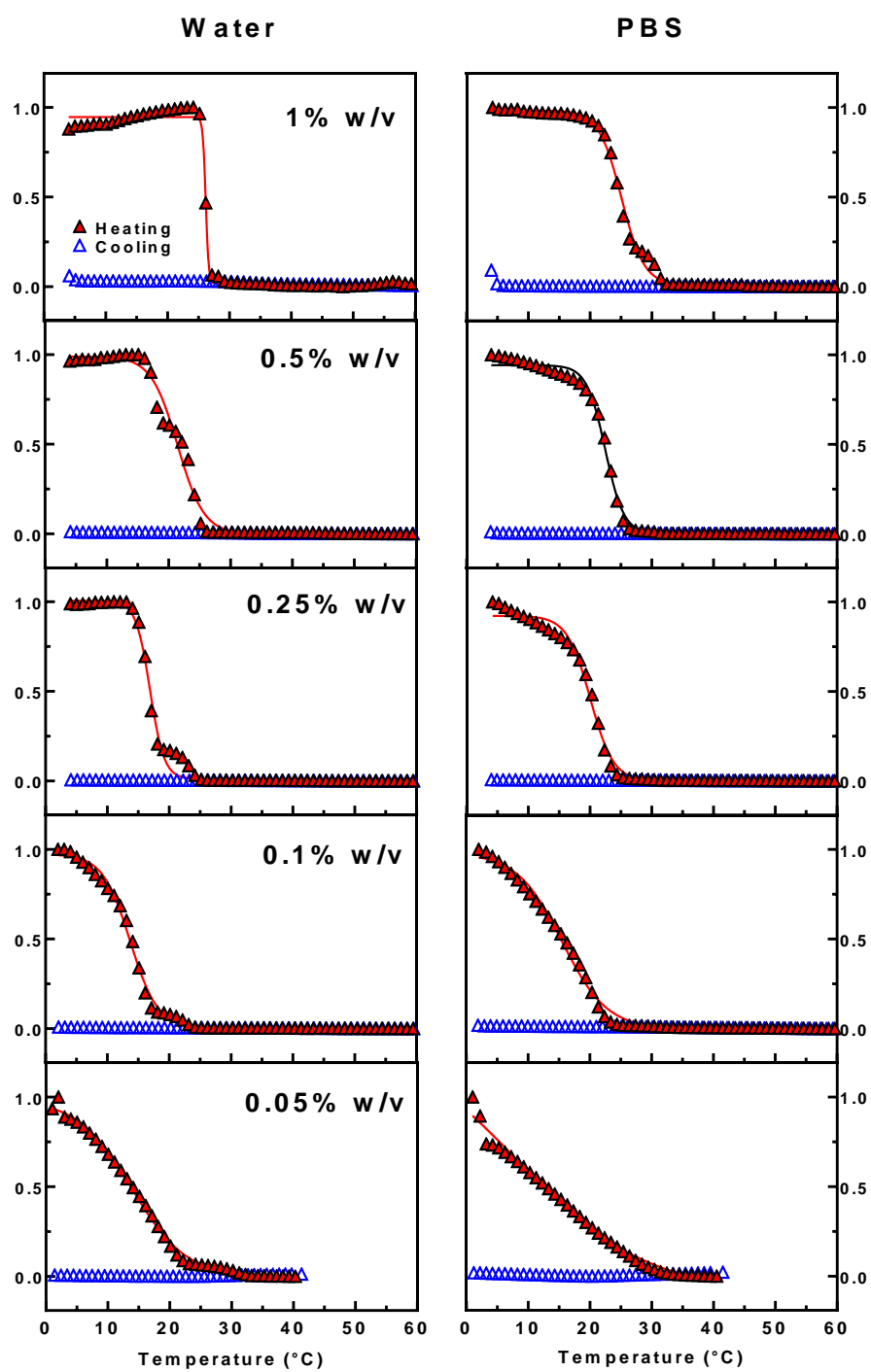


Figure S12. Turbidimetry of BC at different concentration. Y axis : normalized absorbance at 500 nm.

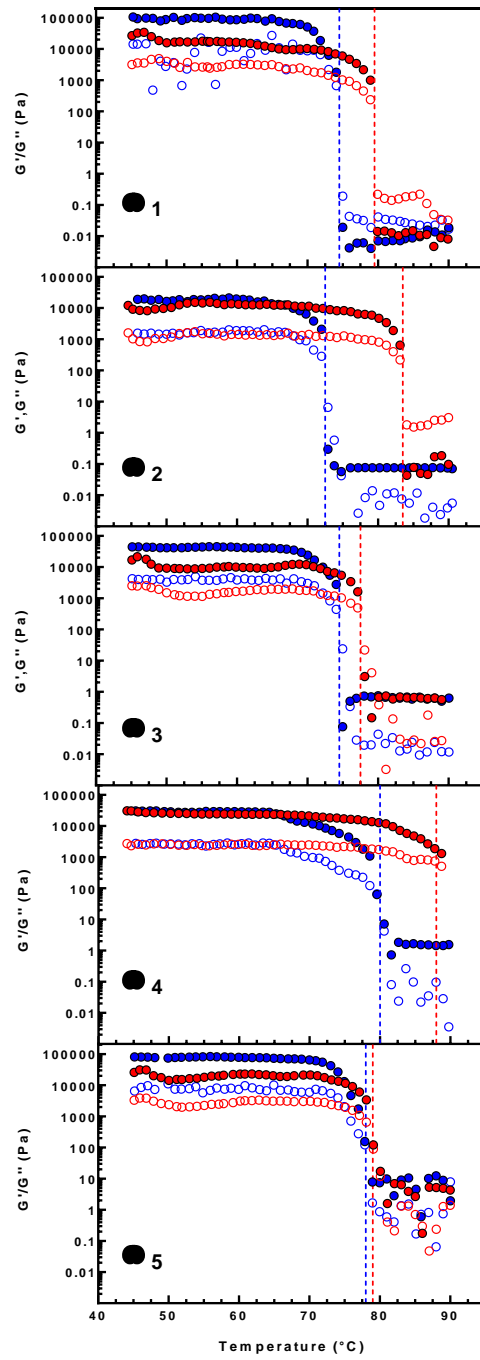


Figure S13. Sol-gel rheology of BU 1% w/v PBS at controlled stress. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} . Red and blue dashed lines qualitatively represents the gel-sol and sol-gel transitions respectively.

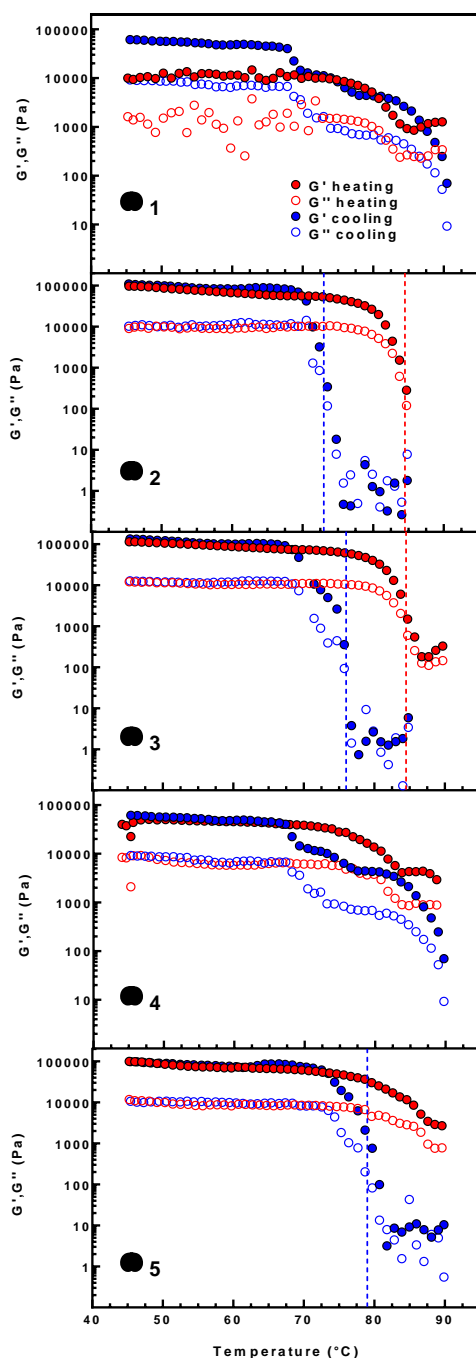


Figure S14. Sol-gel rheology of BU 1% w/v PBS at controlled strain amplitude. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} . Red and blue dashed lines qualitatively represents the gel-sol and sol-gel transitions respectively.

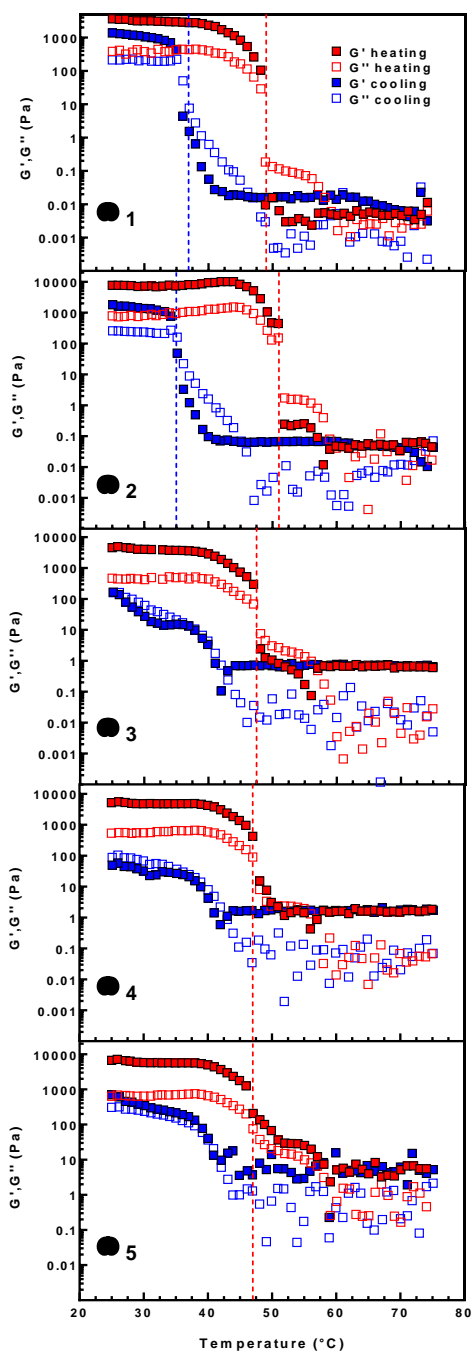


Figure S15. Sol-gel rheology of BA 1% w/v PBS at controlled stress. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} . Red and blue dashed lines qualitatively represent the gel-sol and sol-gel transitions respectively.

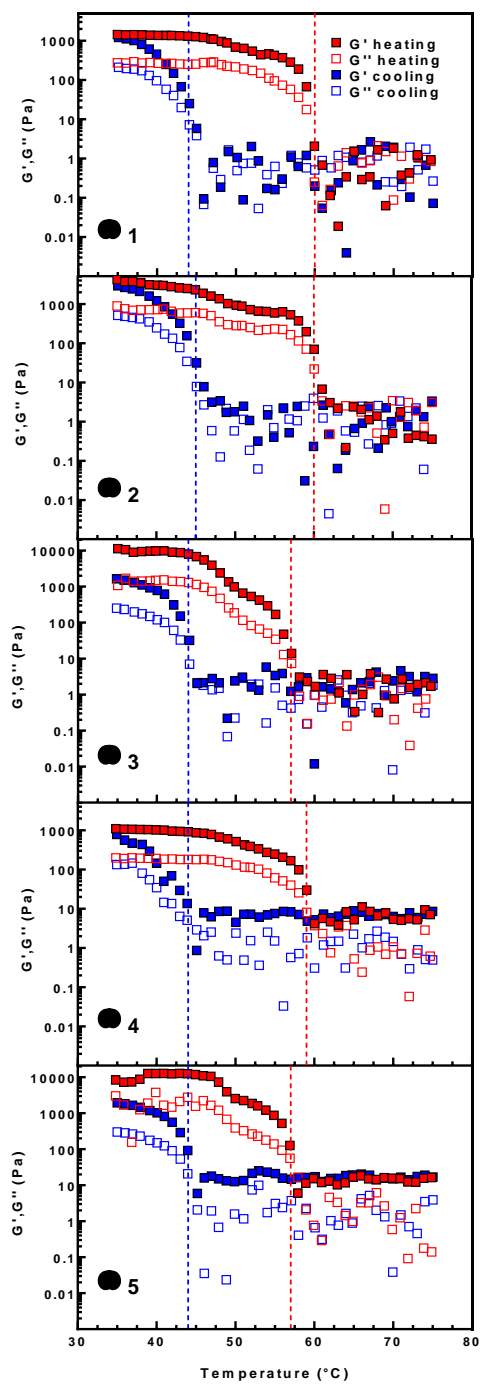


Figure S16. Sol-gel rheology of BA 1% w/v PBS at controlled strain amplitude. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} . Red and blue dashed lines qualitatively represents the gel-sol and sol-gel transitions respectively.

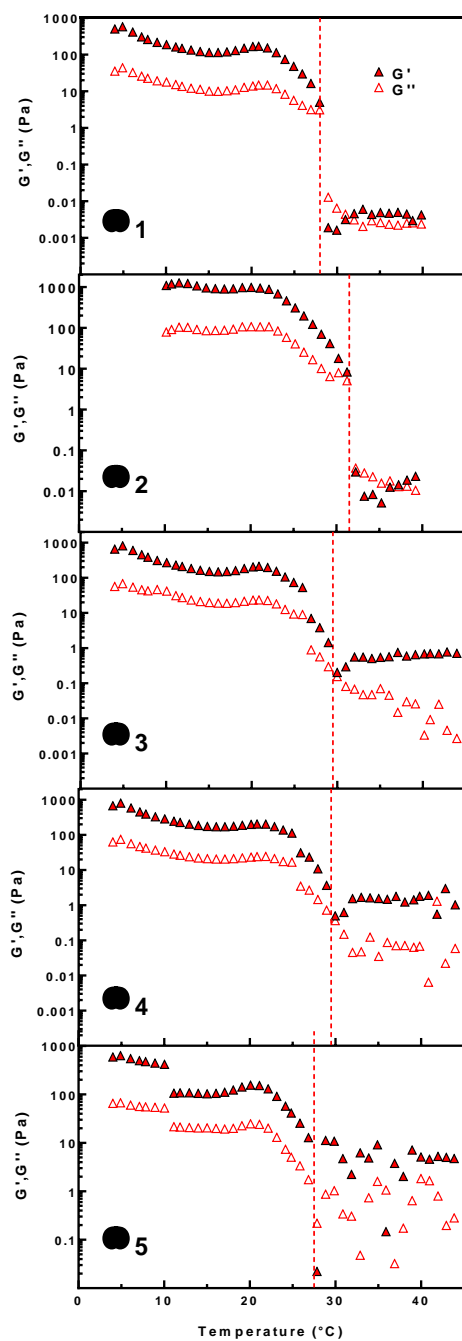


Figure S17. Sol-gel rheology of BC 1% w/v PBS at controlled stress. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} . Red dashed lines qualitatively represent the gel-sol transitions.

Temperature of G'-G'' crossover in heating cycle (°C)										
	Controlled stress (3 Pa)					Controlled strain amplitude (0.1%)				
	ω_1	ω_2	ω_3	ω_4	ω_5	ω_1	ω_2	ω_3	ω_4	ω_5
BU	79.9	85.1	78.1	88.8	80.0	-	84.7	84.7	-	-
BA	49.0	51.1	47.5	47.0	47.0	59.6	60.1	57.1	58.7	57.2
BC	28.9	32.2	30.0	30.0	27.9	-	-	-	-	-
Temperature of G'-G'' crossover in cooling cycle (°C)										
	Controlled stress (3 Pa)					Controlled strain amplitude (0.1%)				
	ω_1	ω_2	ω_3	ω_4	ω_5	ω_1	ω_2	ω_3	ω_4	ω_5
BU	74.5	72.5	74.5	78.0	78.1	-	73.2	75.9	-	78.9
BA	36.9	35.1	-	-	-	44.4	45.1	43.9	44.1	44.0

Table S1. Temperatures of G'-G'' crossover in heating and cooling cycles of temperature sweeps.

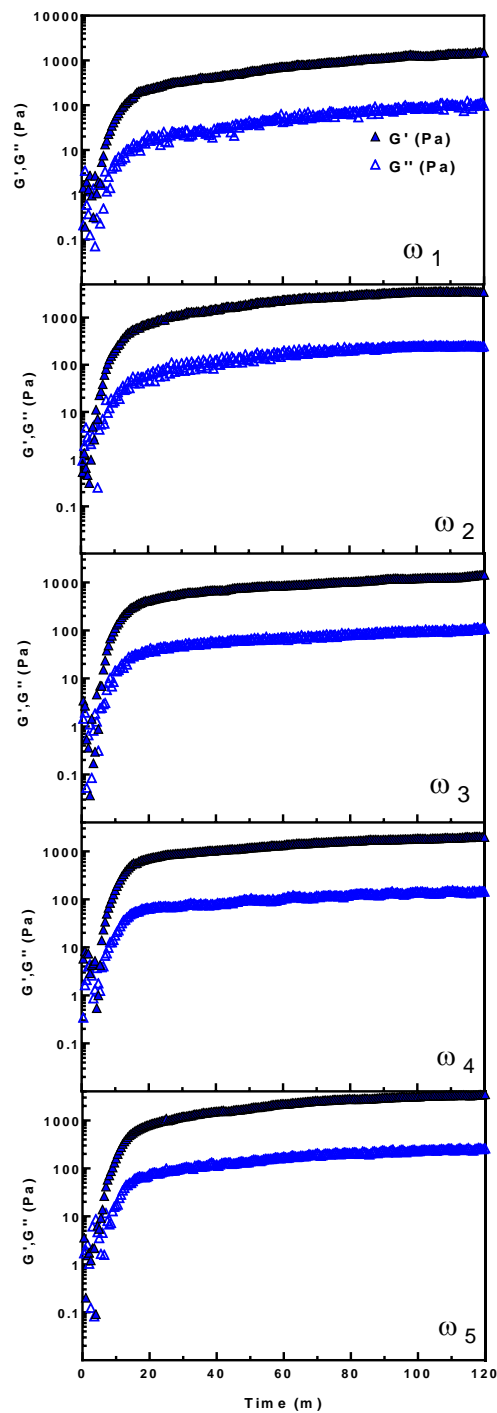


Figure S18. Gelation kinetic of BC 1% w/v PBS at 4°C in controlled strain amplitude conditions. ω_1 to ω_5 are equals respectively to 3.149, 6.283, 19.87, 31.49 and 62.83 rad s^{-1} .

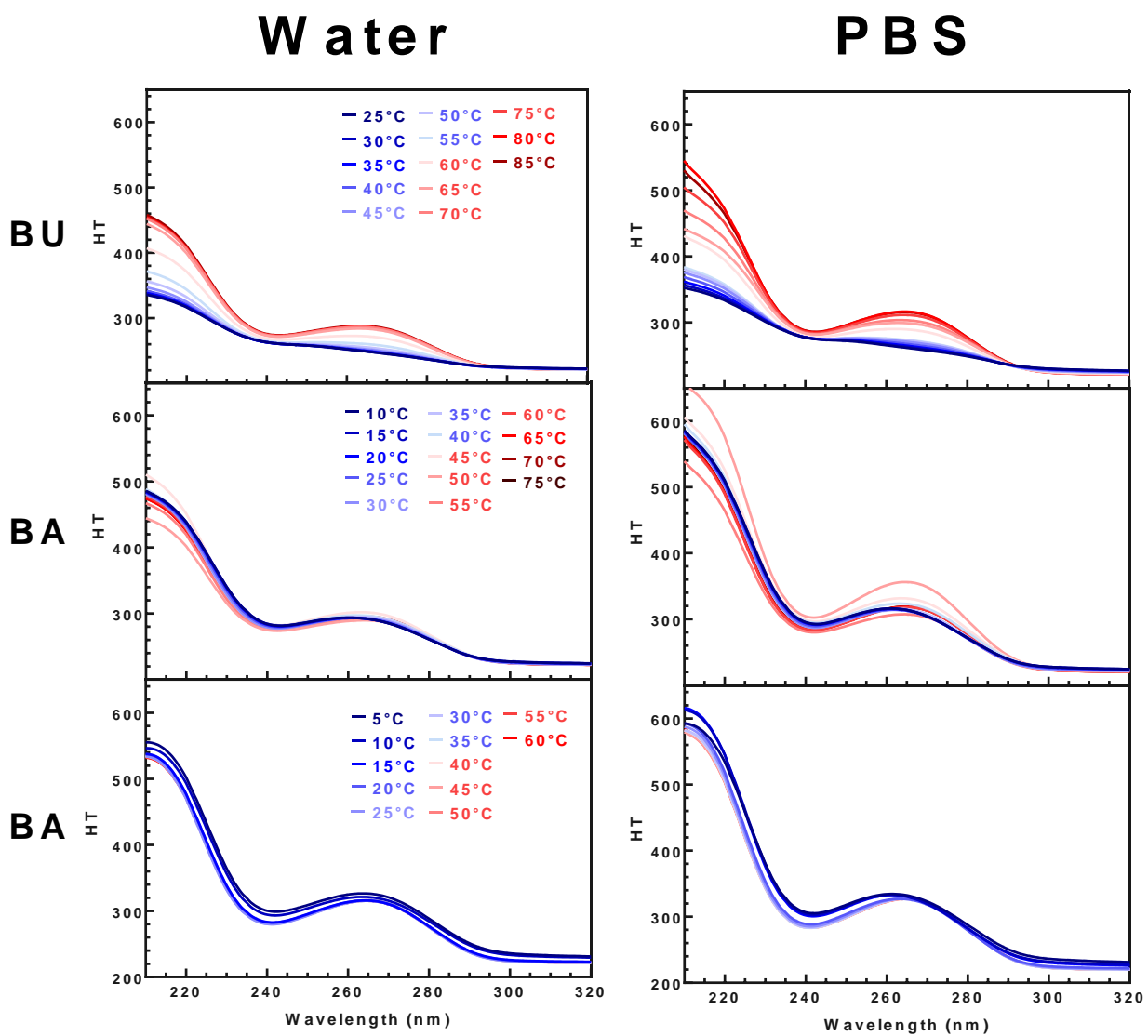


Figure S19. HT data from CD experiment.