

Supporting Information for:

Insight into the microscopic structure of module-assembled thermoresponsive conetwork hydrogels

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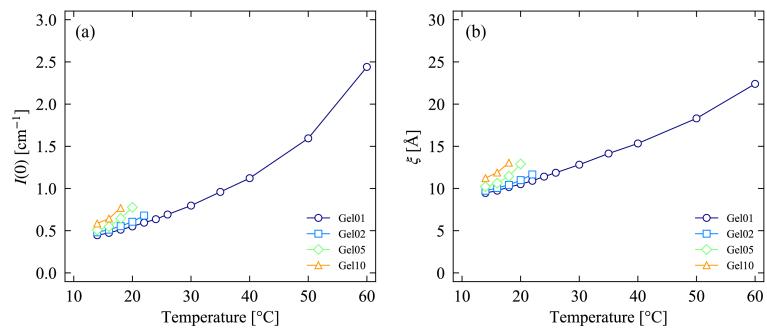


Figure S1. Temperature dependence of the scattering intensity at the thermodynamic limit $I(0)$

(a) and the correlation length ξ (b) obtained by fitting to the OZ function.

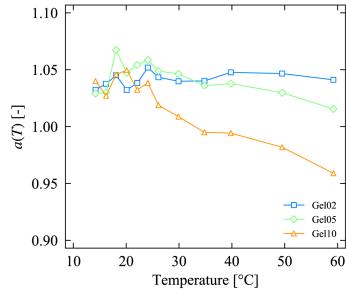


Figure S2. Factor $a(T)$ to obtain $I_{\text{matrix}}(q)$ for Gel02, Gel05, and Gel10 from $I(q)$ of Gel01.

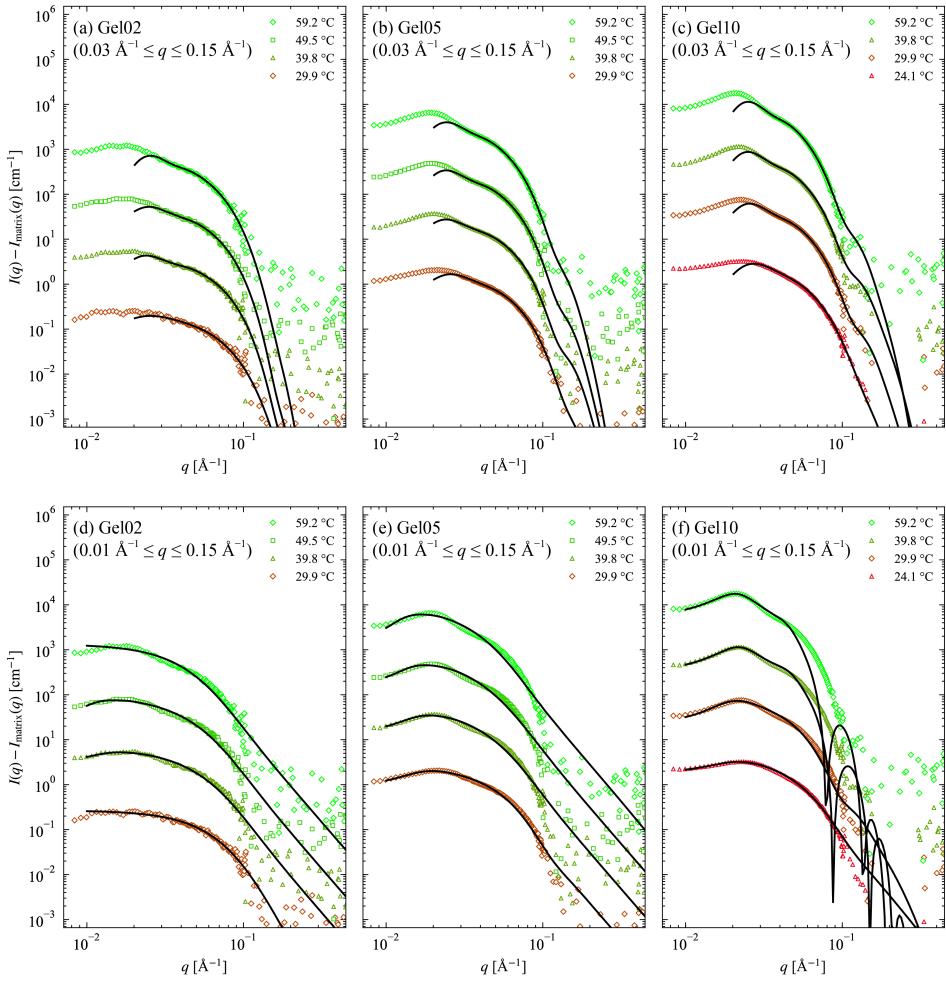


Figure S3. Experimental $I(q) - I_{\text{matrix}}(q) = P(q)S(q)$ and the results of model fitting using different q -ranges; Gel02 (a, d), Gel05 (b, e), and Gel10 (c, f) using $0.03 \text{ \AA}^{-1} \leq q \leq 0.15 \text{ \AA}^{-1}$ (a-c) or $0.01 \text{ \AA}^{-1} \leq q \leq 0.15 \text{ \AA}^{-1}$ (d-f).

Table S1. Structural parameters obtained by the model fitting analysis

r	T [°C]	$n \times 10^8$ [\AA ⁻³]	$\langle R \rangle$ [\AA]	p_{rad} [-]	σ_{interf} [\AA]	$\langle R_{\text{str}} \rangle$ [\AA]
0.02	29.9	4.32	19.0	0.288	10.6	95.9
	34.8	4.05	22.8	0.175	12.2	95.6
	39.8	3.26	24.8	0.163	11.8	122.3
	49.5	3.62	25.6	0.154	13.3	115.3
	59.2	4.61	24.2	0.217	13.5	127.3
0.05	26.1	5.31	25.6	0.228	5.8	100.9
	29.9	4.34	29.6	0.190	5.6	107.5
	34.8	3.92	31.9	0.175	5.6	116.0
	39.8	3.53	33.4	0.171	5.7	120.6
	49.5	3.76	34.0	0.172	5.9	125.0
0.10	59.2	3.94	34.4	0.185	6.4	124.7
	22.1	6.99	24.3	0.302	10.0	100.3
	24.1	6.12	29.3	0.240	10.0	106.3
	26.1	5.61	32.4	0.209	9.6	110.2
	29.9	4.70	36.1	0.182	8.9	117.7
	34.8	4.37	38.2	0.167	8.8	119.6
	39.8	4.36	38.8	0.174	8.7	123.7
	49.5	4.34	39.8	0.172	9.7	124.7
	59.2	4.51	40.3	0.179	10.7	125.5