Supporting Information

Poly(*N*-isopropylacrylamide) microgels at the oil-water interfaces: adsorption kinetics

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Table S1. The compositions used for the preparation of S/N1 and S/N8 particles.

	Styrene (g)	NIPAM (g)	BIS (g)	KPS (g)	Water (g)	Stirring rate (rpm)
S/N1	4.55	4.55	0.15	0.3	600	300
S/N8	4.55	0.569	0.15	0.169	600	300

Table S2. The size of the different microgel samples used at 298 K and 323 K, respectively, as measured by dynamic laser light scattering.

	3.2%BA	12.8%BA	S/N1	S/N8
R_h at 298 K (nm)	211	302	280	165
R_h at 323 K (nm)	86	169	139	161

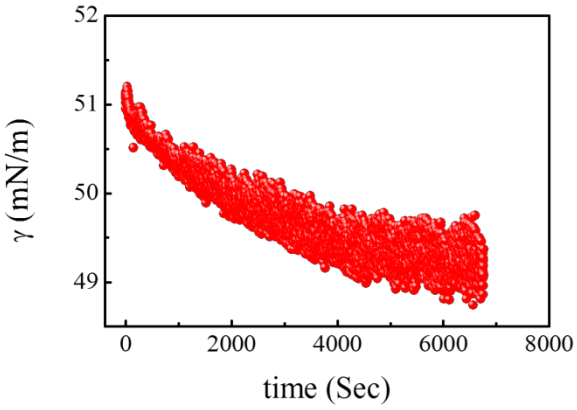

Fig. S1. Time dependence of pure heptane-water interfacial tension γ measured with pendant drop measurement DSA 100.

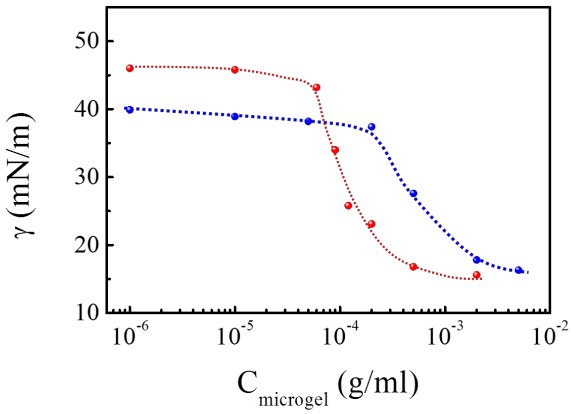

Fig. S2 Meso-equilibrium interfacial tensions γ_m as a function of 3.2%BA PNIPAM microgel concentrations ($C_{microgel}$) at 298 K (red points and dots) and 317 K (blue points and dots).

Table S3. The summary of k_i, C, R^2 Fig. 3 by adopting Eq. (4) at T = 298 K.

	6×10^{-5} g/ml	9×10^{-5} g/ml	1.2×10^{-4} g/ml	2×10^{-4} g/ml
k_i ($s^{-1/2}$·mN/m)	0.0666	0.1873	0.2844	0.5861
C (mN/m)	3.524	2.469	2.472	2.922
R^2	0.9779	0.9975	0.9976	0.9993

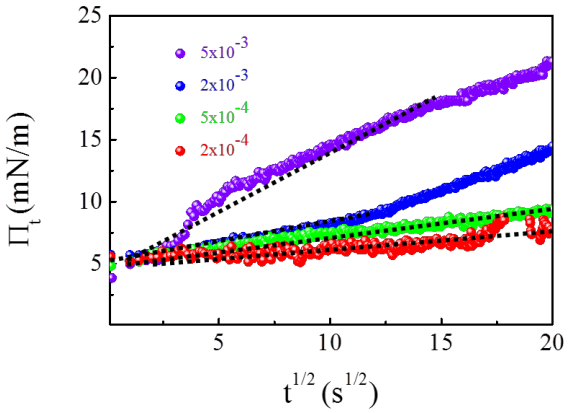

Figure S3. initial stages of Fig. 4 in an enlarged scale.

Table S4. The summary of k_i, C, R^2 Fig. 4 by adopting Eq. (4) at T = 317 K.

	2×10^{-4} g/ml	5×10^{-4} g/ml	2×10^{-3} g/ml	5×10^{-3} g/ml
k_i ($s^{-1/2}$·mN/m)	0.1077	0.2422	0.6505	1.8169
C (mN/m)	5.457	5.050	1.193	1.442
R^2	0.9884	0.9937	0.9985	0.9504

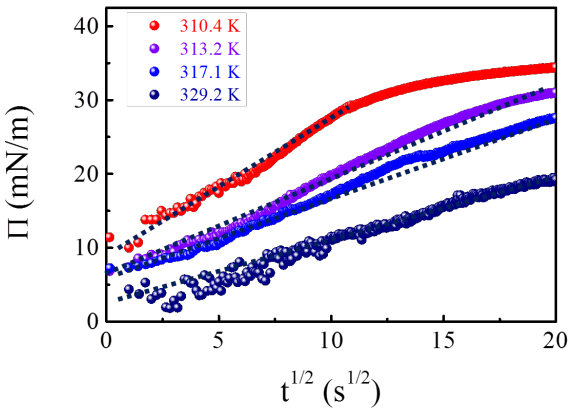

Figure S4. The effect of temperature (T>VPTT) on surface pressure π at the heptane-water interface, in which the used 3.2%BA PNIPAM microgel concentration is fixed at $5 \times 10^{-3}\ g/mL$. Note that only the initial stages are enlarged, shown and fitted to extract the diffusion coefficient at the interface.

Table S5. The summary of k_i, C, R^2 Figure S4 by adopting Eq. (4).

	310.4 K	313.2 K	317.1 K	329.2 K
k_i ($s^{-1/2}$·mN/m)	1.7809	1.4078	1.2269	0.9018
C (mN/m)	9.254	5.2815	4.9993	1.6494
R^2	0.9832	0.9831	0.9926	0.9802

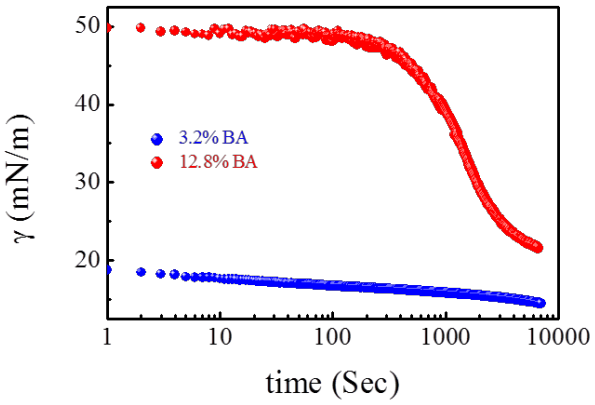

Figure S5. The effect of the softness of microgels (microgels of varied crosslink densities) on lowering heptane-water γ_t at 298 K.