Supplementary Material (ESI) for Soft Matter

Supporting Information

Study of poly(*N,N*-diethylacrylamide) nanogel formation by aqueous dispersion polymerization of *N,N*-diethylacrylamide in the presence of poly(ethylene oxide)-*b*-poly(*N,N*-dimethylacrylamide) amphiphilic macromolecular RAFT agents.

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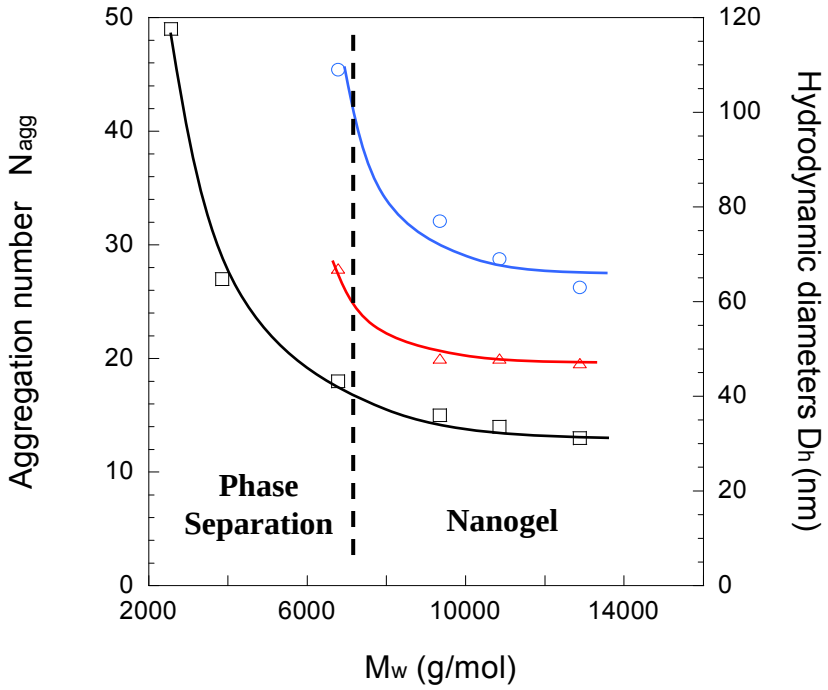

Figure SI-1. Comparison of the evolutions of the aggregation number, N_{agg}, of macroRAFT agent micelles (□) and the hydrodynamic diameters, D_h, of nanogels measured at 15°C (○) and 50°C (Δ) as a function of the weight-average molar mass, M_w, of the macroRAFT agent. The lines are guides to the eyes. The dotted line represents the frontier which separates stable and non stable nanogels.

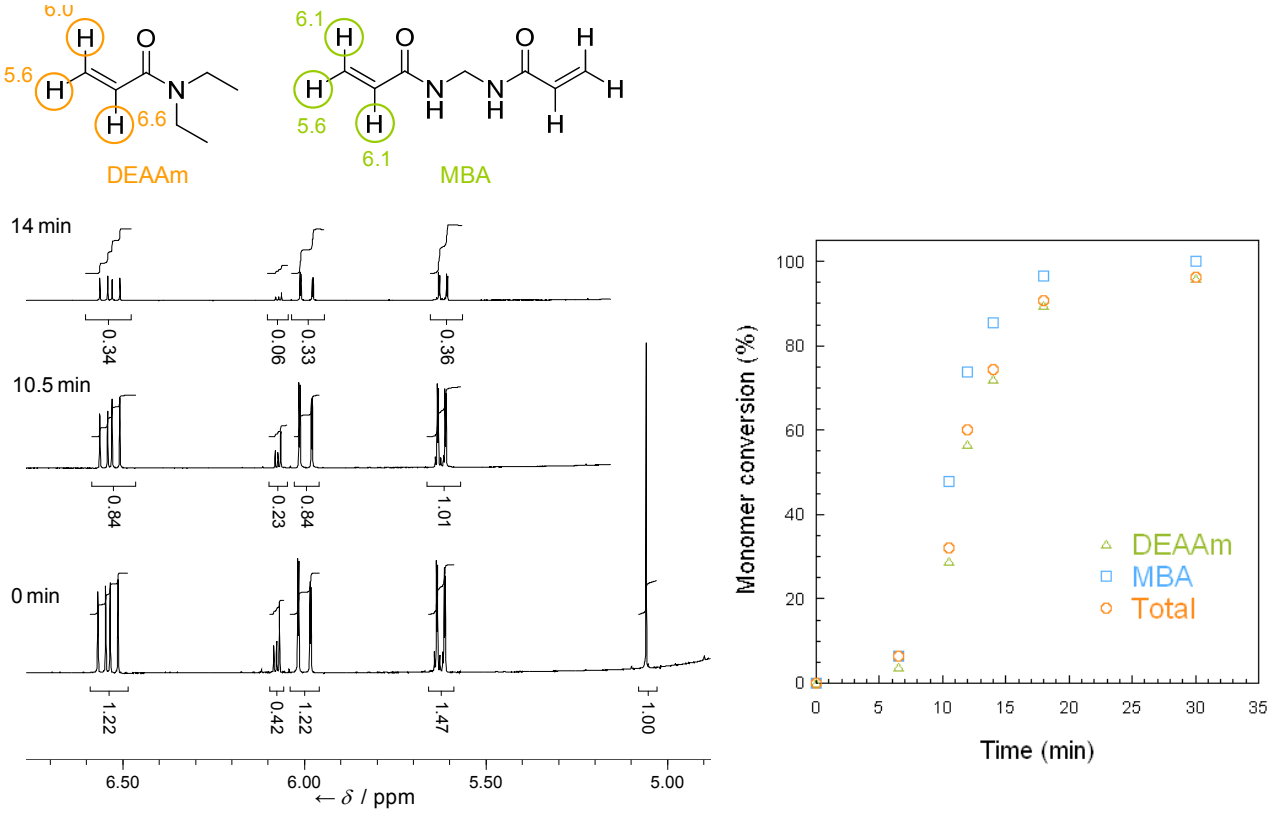

Figure SI-2. Left: Kinetic ^{1}H-NMR analysis (500 MHz, D_2O) of nanogel synthesis **S3CL8** (monomer concentration = 3 wt%, MBA = 8 mol%) ; right: Individual and global conversion of MBA and DEAAm *vs.* time.

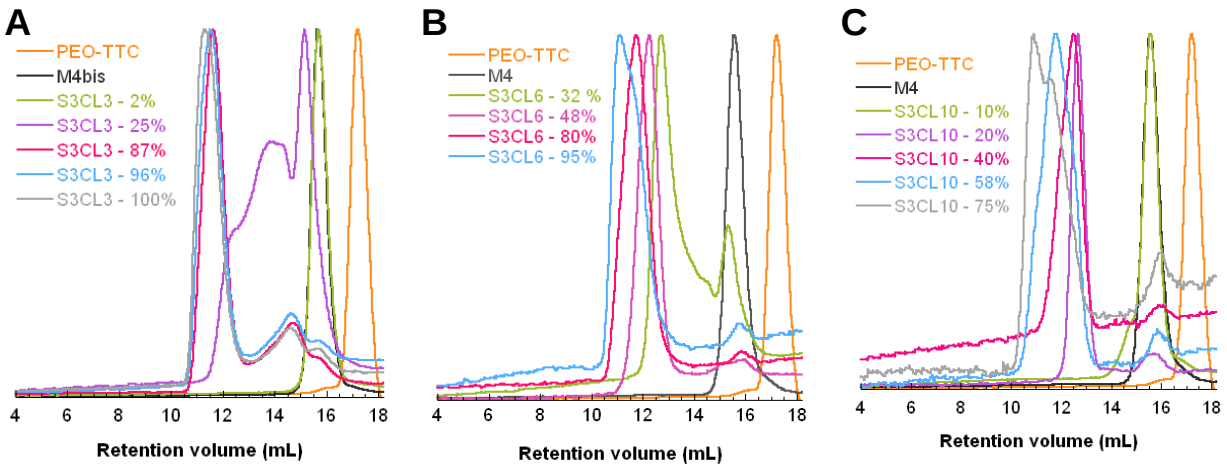

Figure SI-3. Size exclusion chromatograms in DMF (+ LiBr) at various monomer conversions for the RCC performed with 3 wt% of monomer and different crosslinker (CL) concentrations: A) **S3CL3**, B) **S3CL6,** C) **S3CL10** (cf. Table 2). The PEO-TTC and PEO-*b*-PDMAAm-TTC (**M4bis** and **M4**) macroRAFT agents are also represented.