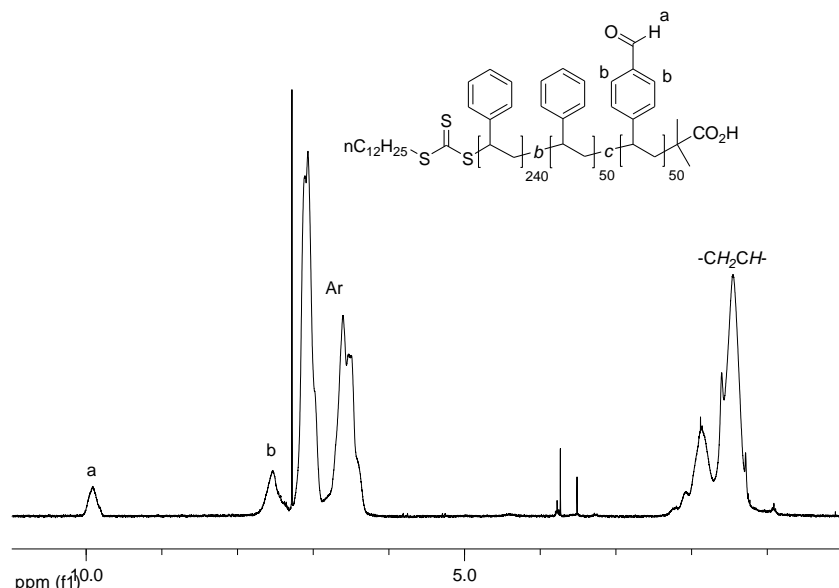


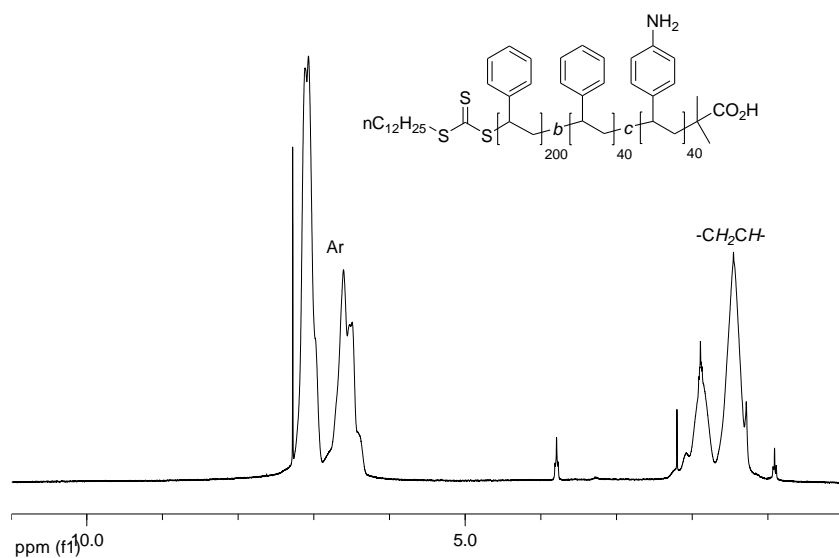
The formation of core cross-linked star polymer and nanogel assemblies facilitated by the formation of dynamic covalent imine bonds

Alexander W. Jackson, Christopher Stakes and David A. Fulton*

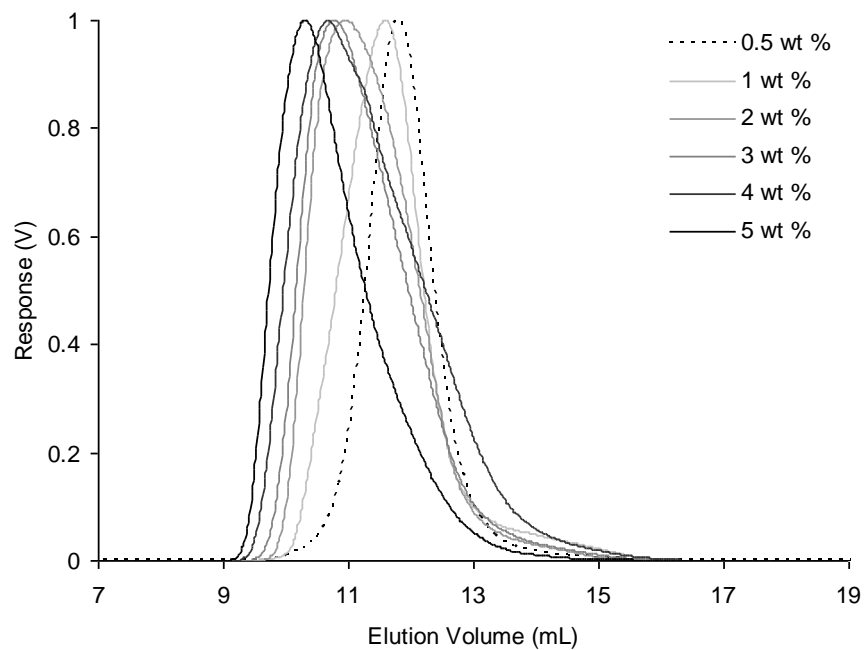
Supporting Information



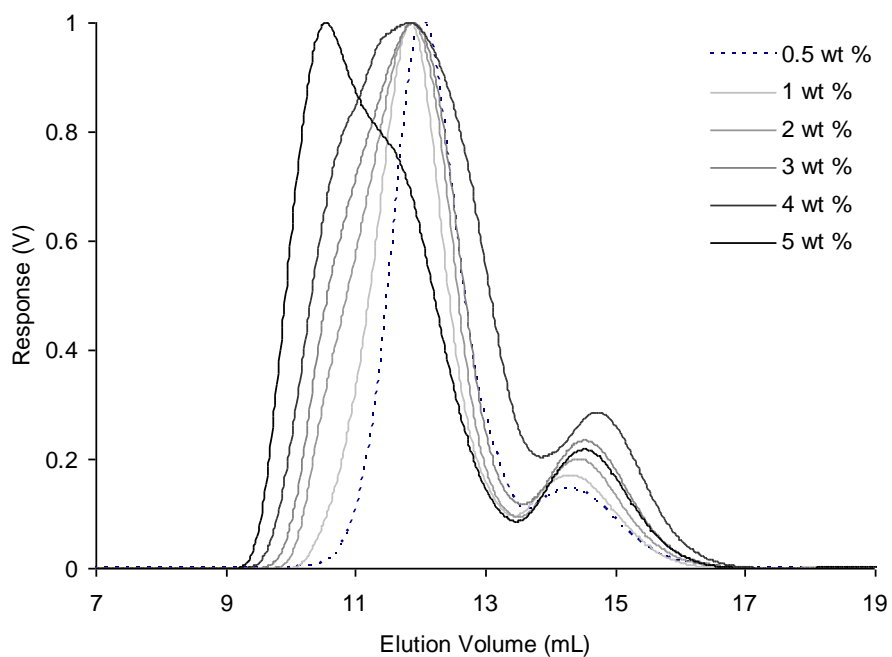
S1. ¹H NMR spectrum (CDCl₃) of aldehyde functional diblock copolymer **P3**.



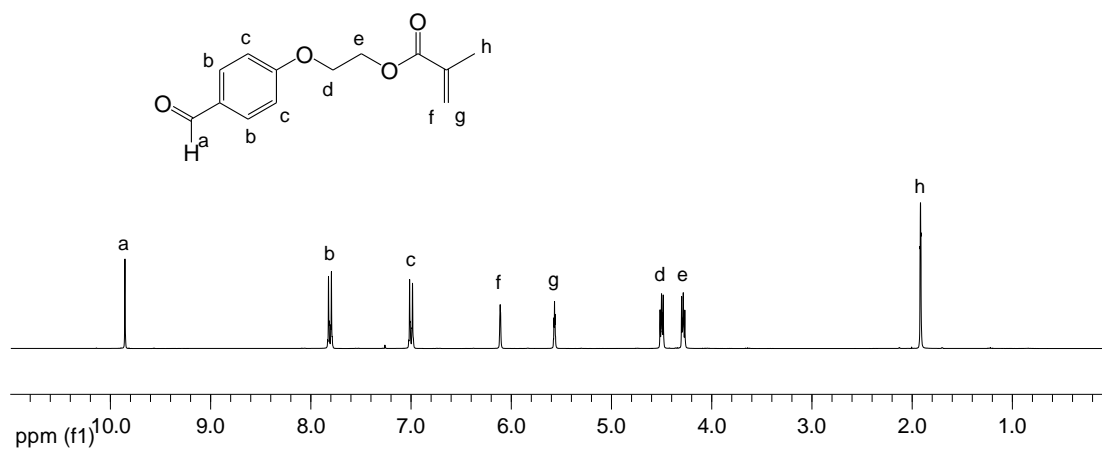
S2. ¹H NMR spectrum (CDCl₃) of amine functional diblock copolymer **P4**.



S3. Gel permeation chromatography (GPC) multi-angle laser light scattering (MALLS) traces (THF, 1.0 mL/min) of styrenic CCS polymers at 0.5 - 5 wt %.



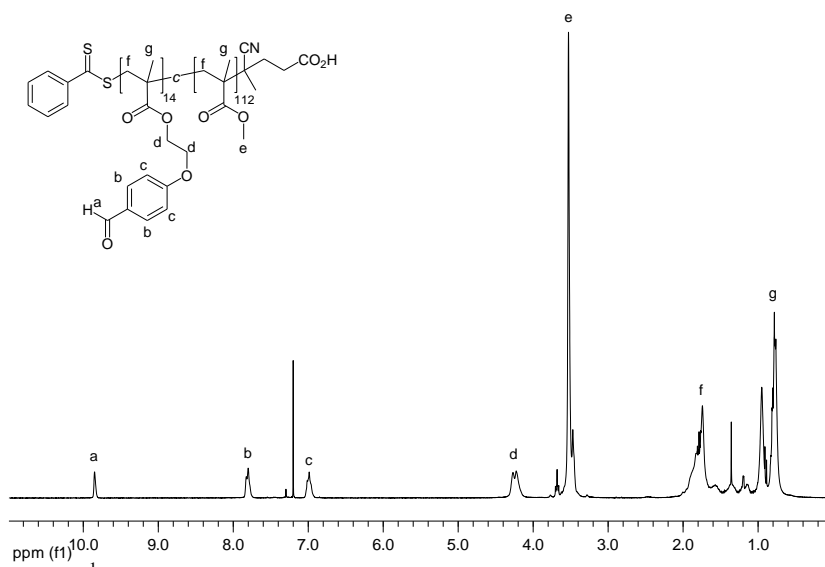
S4. Gel permeation chromatography (GPC) differential refractive index (dRI) traces (THF, 1.0 mL/min) of styrenic CCS polymers at 0.5 - 5 wt %.



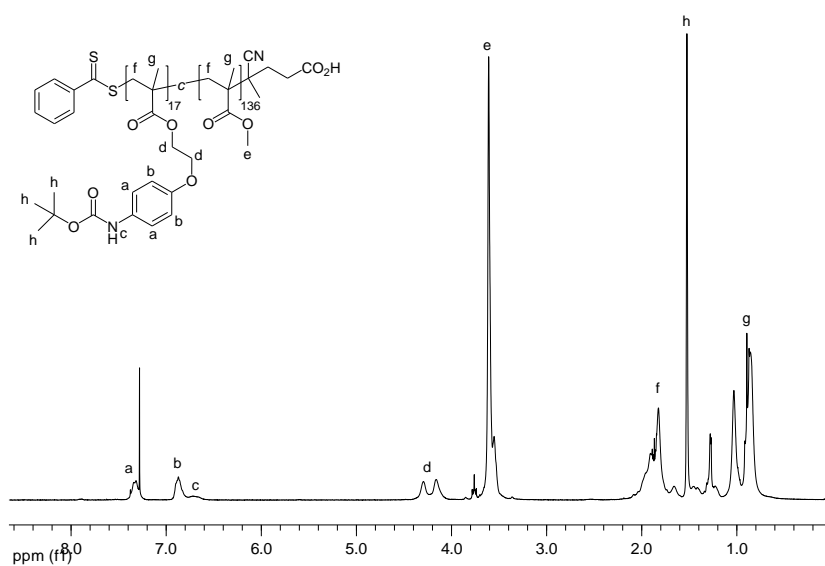
S5. ¹H NMR (CDCl₃) spectra of *p*-(2-methacryloxyethoxy)benzaldehyde (**M1**).



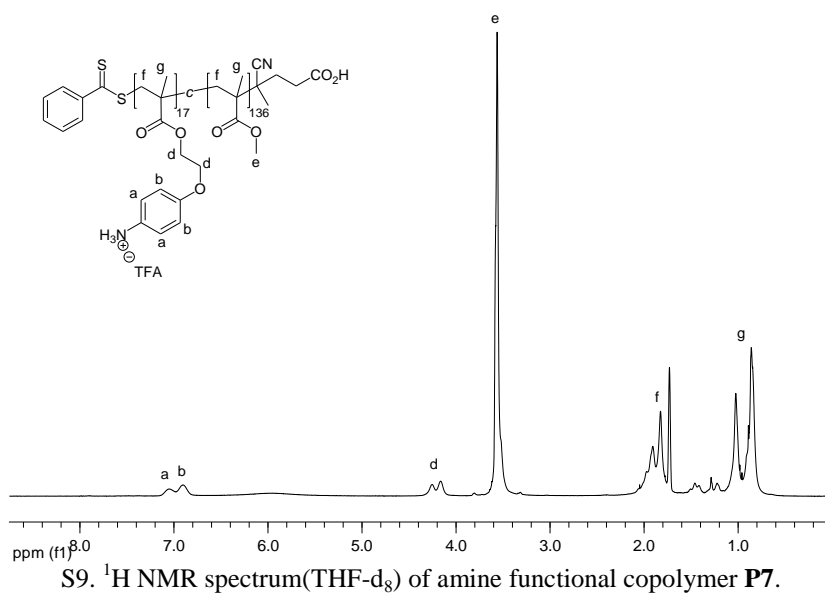
S6. ¹H NMR (CDCl₃) spectra of *p*-(2-Methacryloxyethoxy)-*N*-boc-aminobenzene (**M2**).



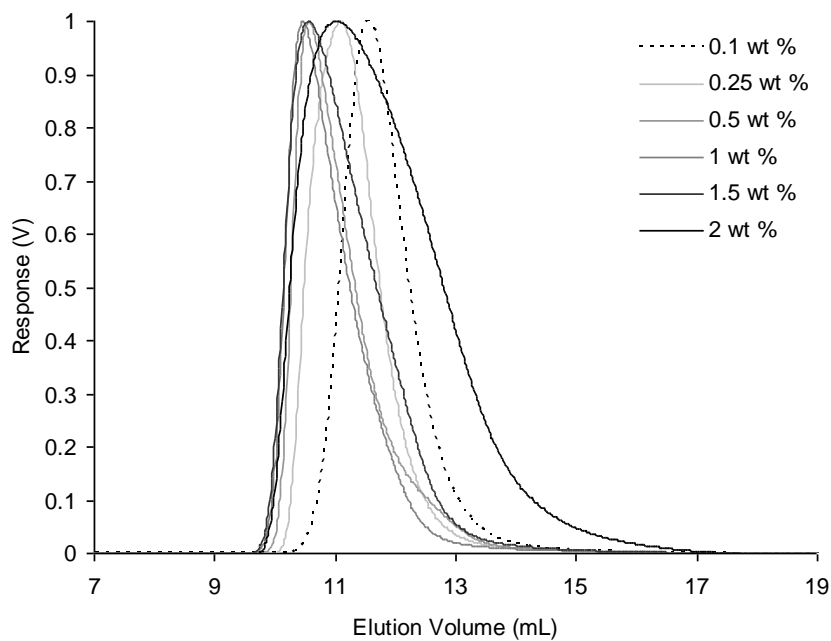
S7. ¹H NMR spectrum (CDCl₃) of aldehyde functional copolymer **P5**.



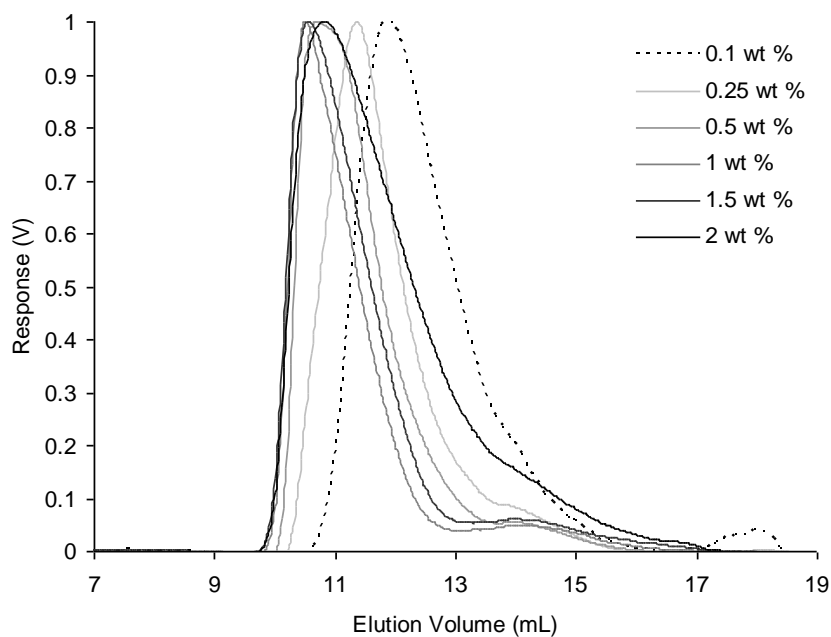
S8. ¹H NMR spectrum (CDCl₃) of *N*-boc-amine functional copolymer **P6**.



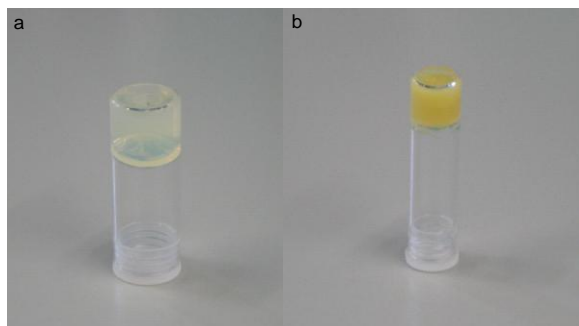
S9. ¹H NMR spectrum (THF-d₈) of amine functional copolymer **P7**.



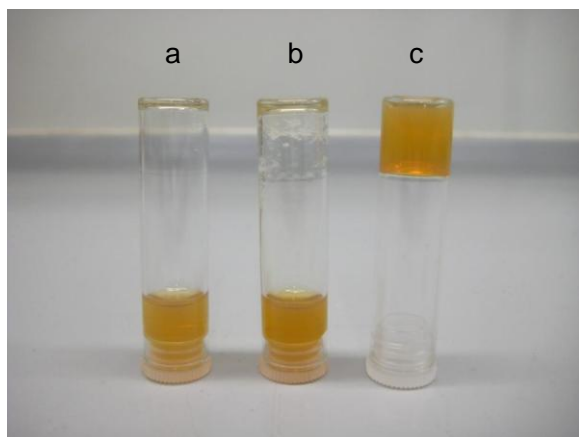
S10. Gel permeation chromatography (GPC) multi-angle laser light scattering (MALLS) traces (THF, 1.0 mL/min) of methyl methacrylate nanogels at 0.1 - 2 wt %.



S11. Gel permeation chromatography (GPC) differential refractive index (dRI) traces (THF, 1.0 mL/min) of methyl methacrylate nanogels at 0.1 - 2 wt %.



S12. a) Gelation of **P1** and **P2b** in THF (0.5 wt %), b) Gelation of **P1** and **P2b** in THF (5 wt %).



S13. a) Cross-linking of **P5** and **P7** in THF (3 wt %), b) Cross-linking of **P5** and **P7** in THF (4 wt %),
c) Gelation of **P5** and **P7** in THF (5 wt %)