Electronic Supplementary Material (ESI) for Polymer Chemistry.

Supplementary Information

Optimization of the RAFT Polymerization Conditions for the *in Situ* Formation of Nano-objects via Dispersion Polymerization in Alcoholic Medium

Wei Zhao,[1] Guillaume Gody,[2] Siming Dong,[4] Per B. Zetterlund[4] and Sébastien Perrier[2,3]*

[1] *Key Centre for Polymers & Colloids, School of Chemistry, Building F11, The University of Sydney, NSW 2006, Australia.*

[2] *Department of Chemistry, The University of Warwick, CV4 7AL, UK.*

[3] *Faculty of Pharmacy and Pharmaceutical Sciences, Monash University, VIC 3052, Australia*

[4] *Centre for Advanced Macromolecular Design (CAMD), School of Chemical Engineering, The University of New South Wales, Sydney, New South Wales 2052, Australia*

Correspondence to Tel: +44 (0)2476 528085; Fax: +44 (0)2476 524112;

E-mail: s.perrier@warwick.ac.uk

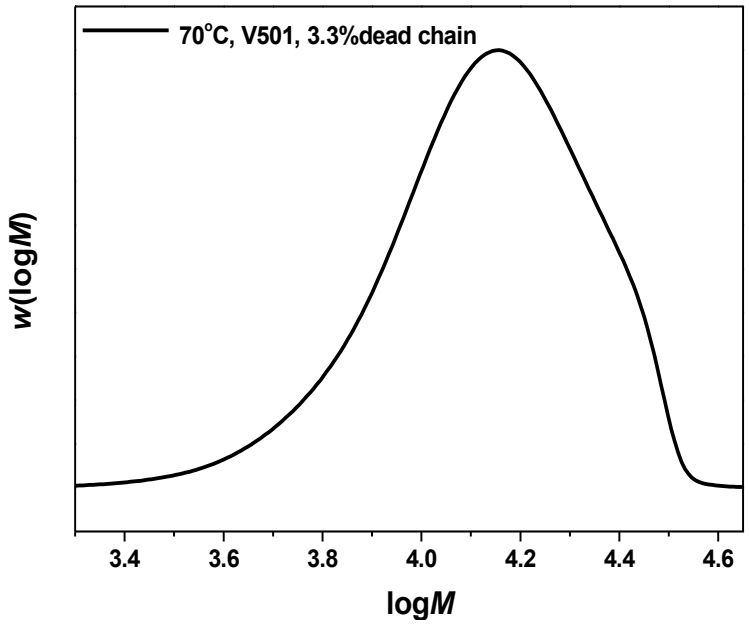

Figure S1. SEC chromatogram ($w(\log M)$ vs. $\log M$) of P($PEGA_{454}$)-TTC macro-RAFT agent obtained by RAFT polymerization at 70°C in dioxane. $[PEGA454]_0$: $[PABTC]_0$: $[V501]_0$ = 60 : 1 : 0.1. DMF was used as the eluent.

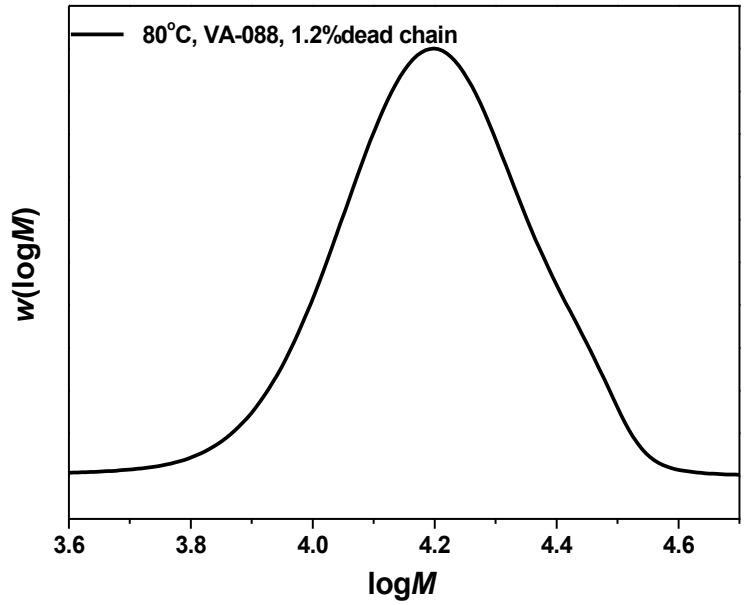

Figure S2. SEC chromatogram ($w(\log M)$ vs. $\log M$) of P($PEGA_{454}$)-TTC macro-RAFT agent obtained by RAFT polymerization at 80 °C in dioxane. $[PEGA_{454}]_0$: $[PABTC]_0$: $[VA\text{-}088]_0$ = 60 : 1 : 0.1. DMF was used as the eluent.

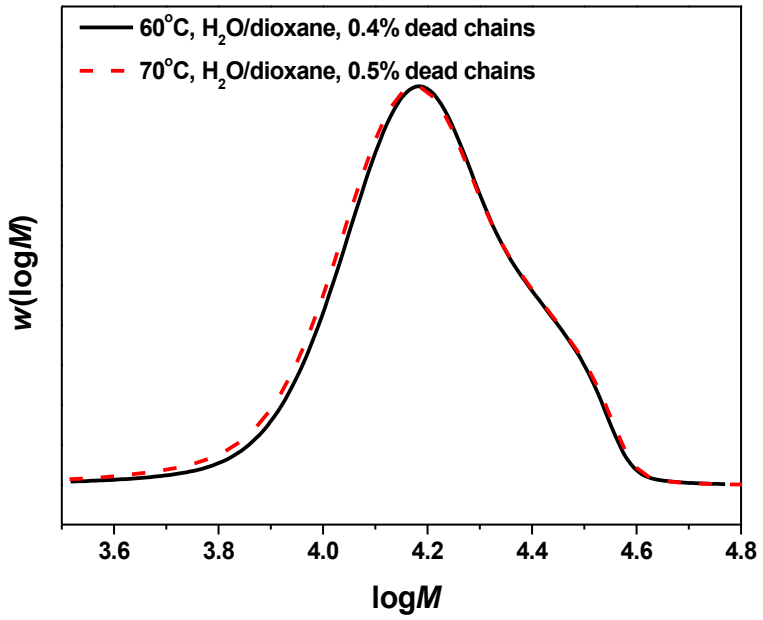

Figure S3. SEC chromatograms ($w(\log M)$ vs. $\log M$) of P($PEGA_{454}$)-TTC macro-RAFT agent obtained by RAFT polymerization at 60 °C, $[PABTC]_0 : [V501]_0 = 8$ (straight line) and 70 °C, $[PABTC]_0 : [V501]_0 = 34$ (desh line) in H_2O : dioxane = 9 : 1, $[PEGA_{454}]_0$: $[PABTC]_0 = 60 : 1$. DMF was used as the eluent.

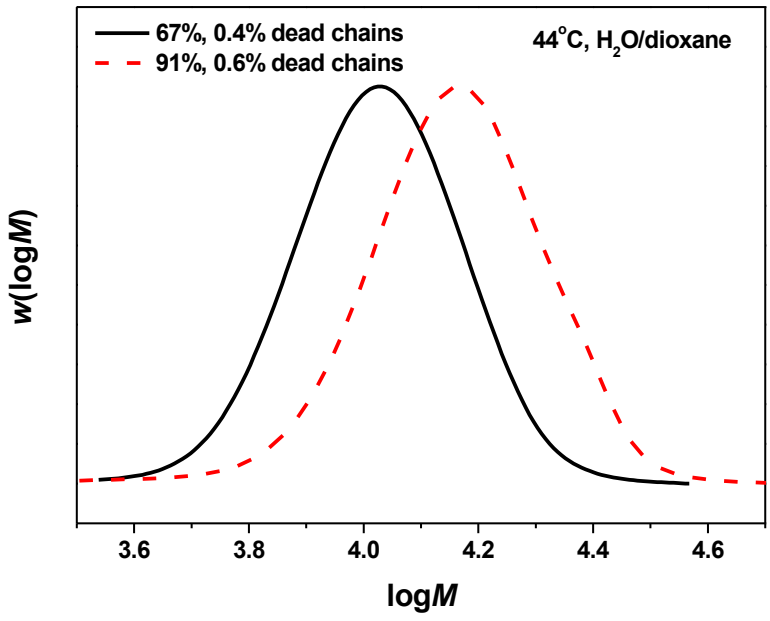

Figure S4. SEC chromatograms ($w(\log M)$ vs. $\log M$) of P($PEGA_{454}$)-TTC macro-RAFT agent obtained by RAFT polymerization at 44 °C in H_2O : dioxane = 9 : 1, $[PEGA_{454}]_0$: $[PABTC]_0$: $[VA\text{-}044]_0 = 60 : 1 : 0.03$. DMF was used as the eluent.