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**Article:**

Lopez-Oliva, A.P., Warren, N.J., Rajkumar, A. et al. (5 more authors) (2015)  
Polydimethylsiloxane-Based Diblock Copolymer Nano-objects Prepared in Nonpolar Media via RAFT-Mediated Polymerization-Induced Self-Assembly. *Macromolecules*, 48 (11). pp. 3547-3555. ISSN 0024-9297

<https://doi.org/10.1021/acs.macromol.5b00576>

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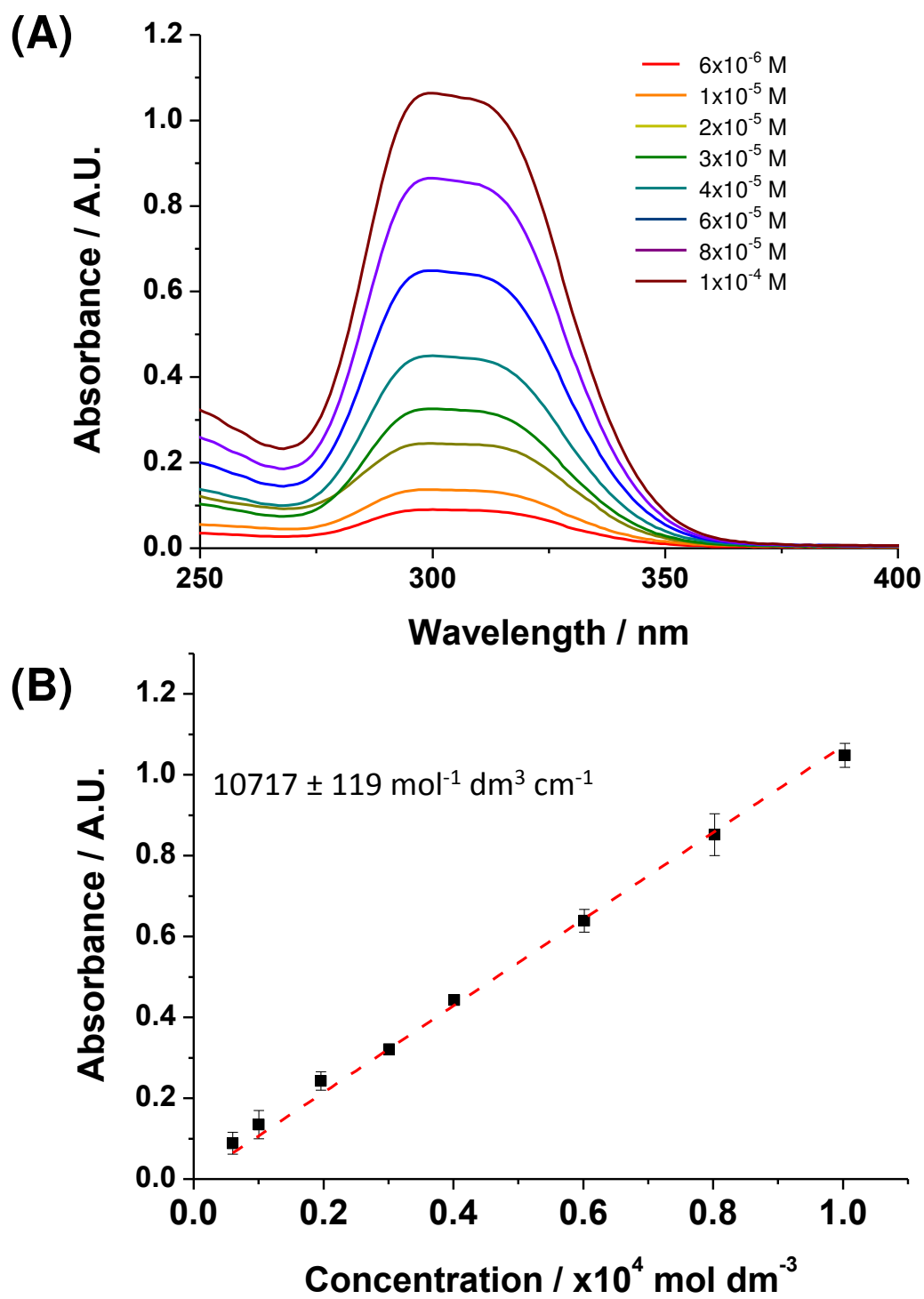
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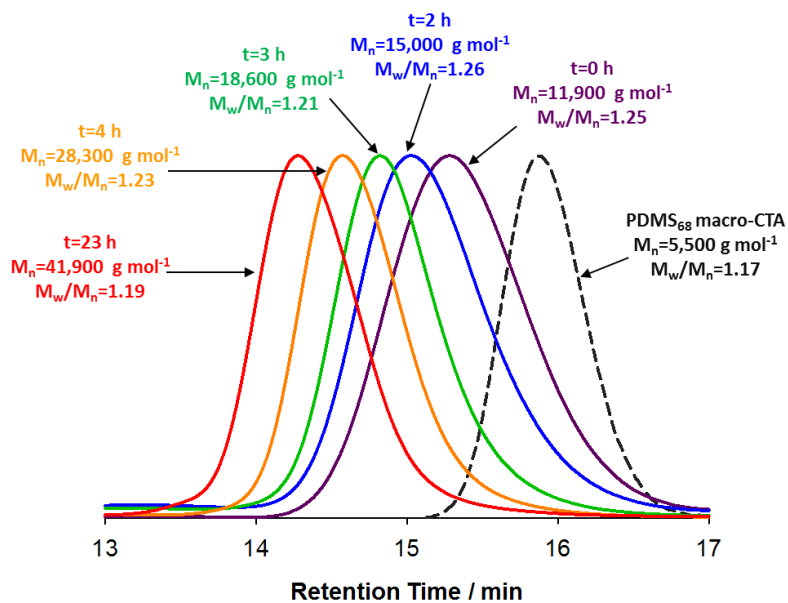
**Polydimethylsiloxane-based Diblock Copolymer Nano-objects**

**Prepared in Non-polar Media via RAFT-mediated Polymerization-Induced Self-Assembly**

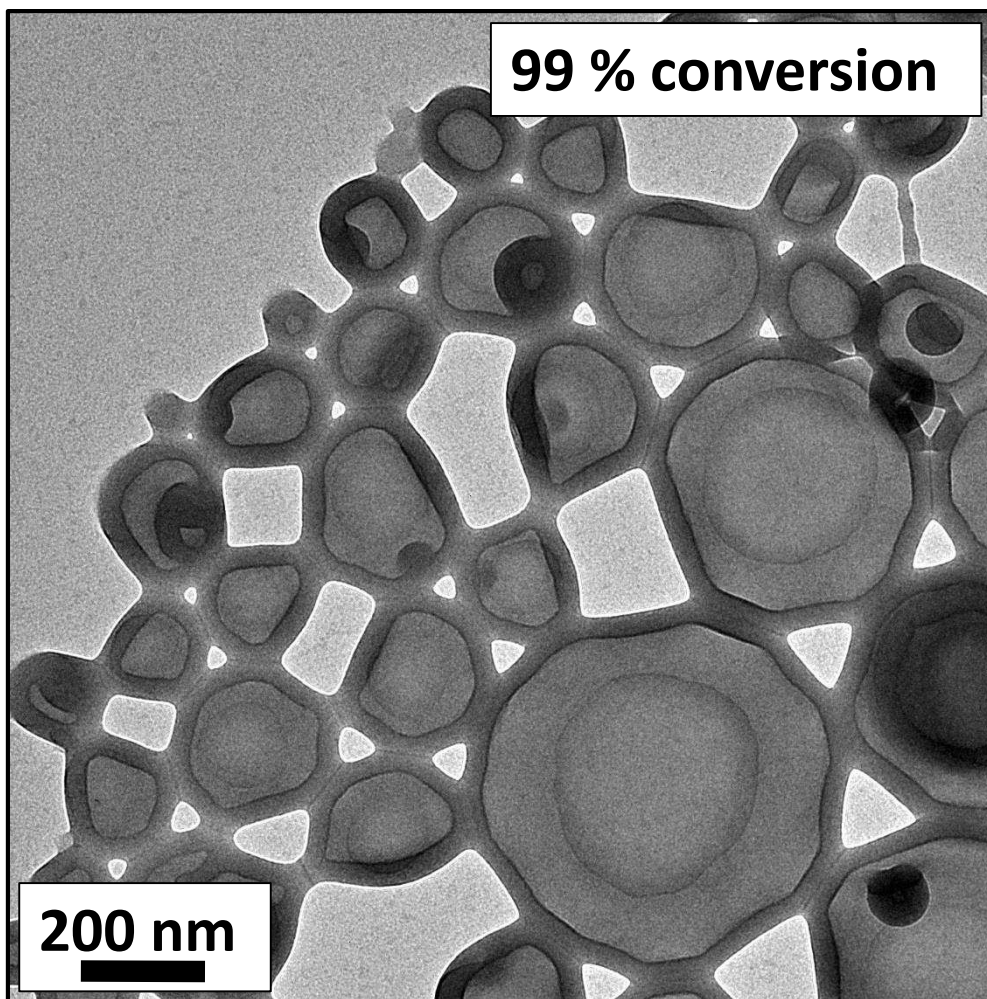
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**Figure S1.** (A) Visible absorption spectra for a range of PETTC solutions in dichloromethane. (B) Beer-Lambert calibration plot used to calculate the extinction coefficient.



**Figure S2.** Normalized GPC curves (THF eluent, refractive index detector; series of near-monodisperse PMMA standards) obtained for representative samples of the kinetic study of the synthesis of PDMS<sub>66</sub>-PBzMA<sub>250</sub> prepared via RAFT dispersion polymerization of BzMA at 70 °C in *n*-heptane at 25% solids.



**Figure S3.** TEM image obtained for the kinetic sample at 99 % benzyl methacrylate conversion

**Table S1.** Characterization data obtained for PDMS<sub>66</sub>-PBzMA<sub>x</sub> diblock copolymers prepared via RAFT dispersion polymerization in *n*-heptane at various solids concentrations at 70°C using AIBN as an initiator, where [PDMS<sub>66</sub>]/[AIBN] = 5. GPC molecular weight values were obtained relative to a series of near monodisperse poly(methyl methacrylate) standards.

Conc. / %	Target DP	Conversion / %	THF GPC			DLS	
			M <sub>n</sub> / g mol <sup>-1</sup>	M <sub>w</sub> / g mol <sup>-1</sup>	M <sub>w</sub> /M <sub>n</sub>	D <sub>i</sub> / nm	PDI
30	50	99	21,100	27,200	1.29	353	0.496
30	80	100	13,900	18,300	1.32	976	0.483
30	90	100	15,800	20,700	1.31	342	0.500
30	100	100	34,000	43,600	1.28	329	0.191
30	200	100	55,800	72,600	1.30	345	0.174
30	300	100	71,100	95,300	1.34	572	0.350
25	25	100	11,400	13,000	1.14	77	0.631
25	50	99	14,500	17,000	1.18	58	0.262
25	60	99	13,100	16,200	1.24	276	0.356
25	70	100	14,100	17,700	1.26	1080	0.668
25	80	99	15,000	18,800	1.26	258	0.446
25	90	99	16,700	21,400	1.29	107	0.181
25	100	98	24,000	27,500	1.15	136	0.230
25	100	100	17,100	22,300	1.30	154	0.722
25	110	100	18,100	23,700	1.31	150	0.108
25	120	100	19,900	25,100	1.26	221	0.185
25	130	99	20,200	26,500	1.31	297	0.257
25	140	98	22,100	29,000	1.31	447	0.519
25	150	99	21,400	28,300	1.32	90	0.074
25	150	98	26,600	31,500	1.19	91	0.078
25	200	91	34,600	40,400	1.17	145	0.043
25	250	94	36,100	43,000	1.19	130	0.211
25	300	99	47,700	56,700	1.19	210	0.112
25	400	90	42,000	53,600	1.28	371	0.150
20	25	98	10,600	12,100	1.14	78	0.557
20	50	99	14,900	17,300	1.16	517	0.310
20	100	99	18,500	21,200	1.15	133	0.228
20	150	98	25,100	29,600	1.18	90	0.334
20	200	98	33,500	40,000	1.20	93	0.071
20	250	98	33,100	39,900	1.20	85	0.095
20	300	99	44,400	53,600	1.21	65	0.049
20	400	90	55,900	68,600	1.23	101	0.060

**Table S1** continued

Conc. / %	Target DP	Conversion / %	THF GPC			DLS	
			$M_n$ / $\text{g mol}^{-1}$	$M_w$ / $\text{g mol}^{-1}$	$M_w/M_n$	$D_z$ / nm	PDI
15	25	95	11,400	13,400	1.18	35	0.183
15	50	100	14,800	17,800	1.20	34	0.110
15	100	99	21,900	26,500	1.21	42	0.124
15	150	100	30,900	36,600	1.18	47	0.072
15	200	100	34,700	42,800	1.23	51	0.031
15	250	98	42,400	51,000	1.20	59	0.110
15	300	96	48,000	58,500	1.22	58	0.011
10	25	96	9,800	12,500	1.28	25	0.049
10	50	98	19,000	24,400	1.28	34	0.191
10	100	98	32,400	40,100	1.24	38	0.088
10	150	96	37,300	45,900	1.23	43	0.035
10	200	94	46,900	59,100	1.26	48	0.039
10	250	97	58,522	73,646	1.26	51	0.015
10	300	94	66,500	84,800	1.27	55	0.015