## **Supporting Information to**

## Polymerization-Induced Self-Assembly (PISA) -Control over the Morphology of <sup>19</sup>F-containing Polymeric Nano-objects for Cell Uptake and Tracking

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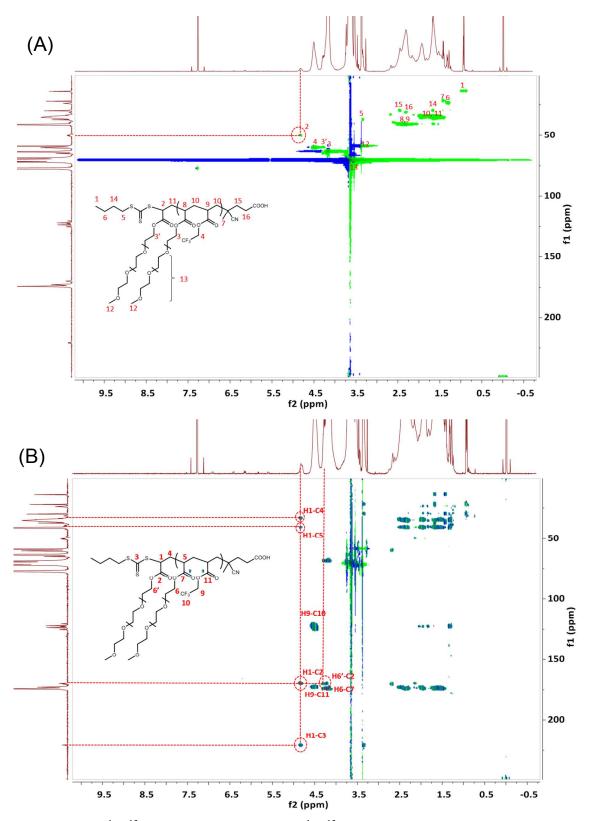
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**Table S1.**  $T_1$  and  $T_2$  relaxation times in water of poly(OEGA-*co*-TFEA) with different fluorine contents at a polymer concentration of 20 mg mL<sup>-1</sup> at 25 °C.

Entry	[OEGA] <sub>0</sub> :[TFEA] <sub>0</sub>	<sup>19</sup> F content (wt.%)	$T_l$ (ms)	$T_2$ (ms)
	feed ratio			
1	5:1	2.22	550.6	209.2
2	4:1	2.68	534.6	183.0
3	3:1	3.6	516.3	158.2
4	2:1	5.09	504.2	136.7
5	1:1	8.75	436.8	70.5
6	1:2	13.91	414.7	26.4



**Figure S1.** (A) <sup>1</sup>H-<sup>13</sup>C HSQC spectrum and (B) <sup>1</sup>H-<sup>13</sup>C HMBC spectrum of poly((OEGA-*co*-TFEA) macro CTA in CDCl<sub>3</sub>. The red circles highlight the correlations that are related to trithiocarbonate group and its neighboring carbon and proton.

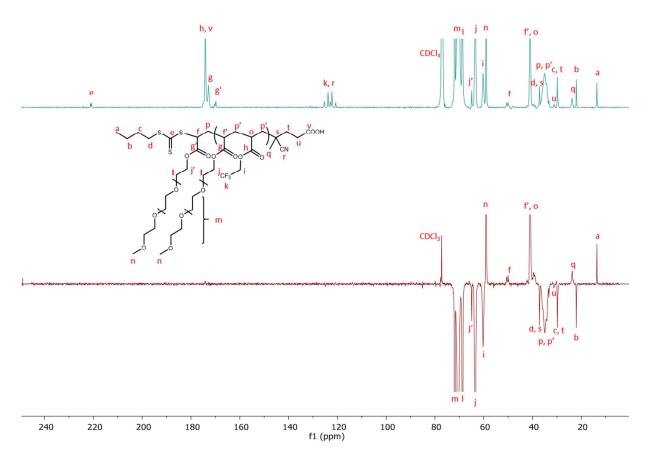
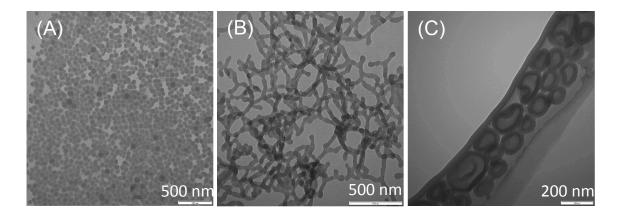


Figure S2. DEPT-135 C NMR spectrum of poly(PEGA-co-TFEA) macro CTA in CDCl<sub>3</sub>.



**Figure S3.** TEM images of nano-objects prepared with different polymerization times after conjugation with Cy5.5 dye: (A) 3h, (B) 5h and (C) 7h.