Soft matter - Supporting informations

Crystallisation-driven self-assembly of poly(2-isopropyl-2-oxazoline)-*block*-(2-methyl-2-oxazoline) above the LCST

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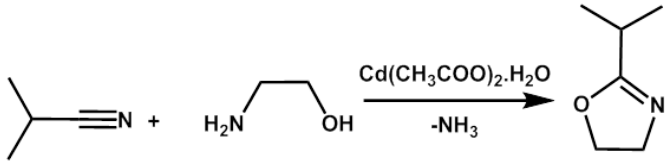

Scheme S 1 Synthesis of 2-isopropyl-2-oxazoline

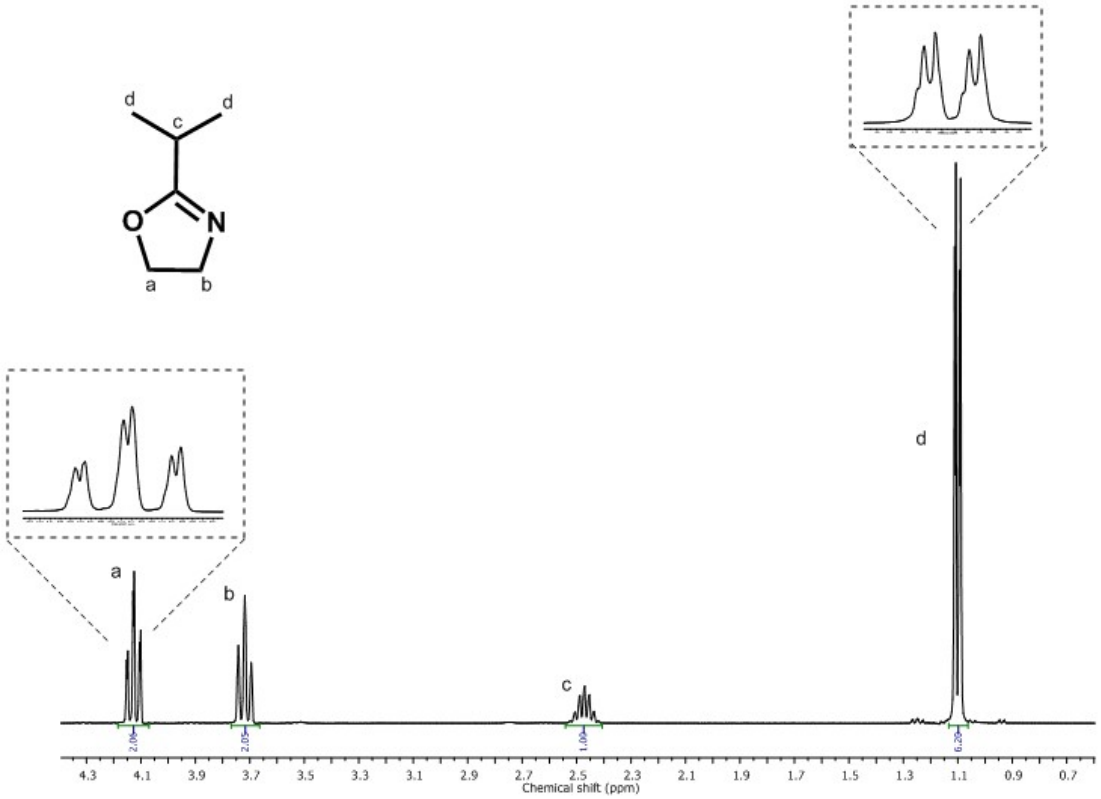

Figure S 1. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of 2-isopropyl-2-oxazoline (iPrOx)

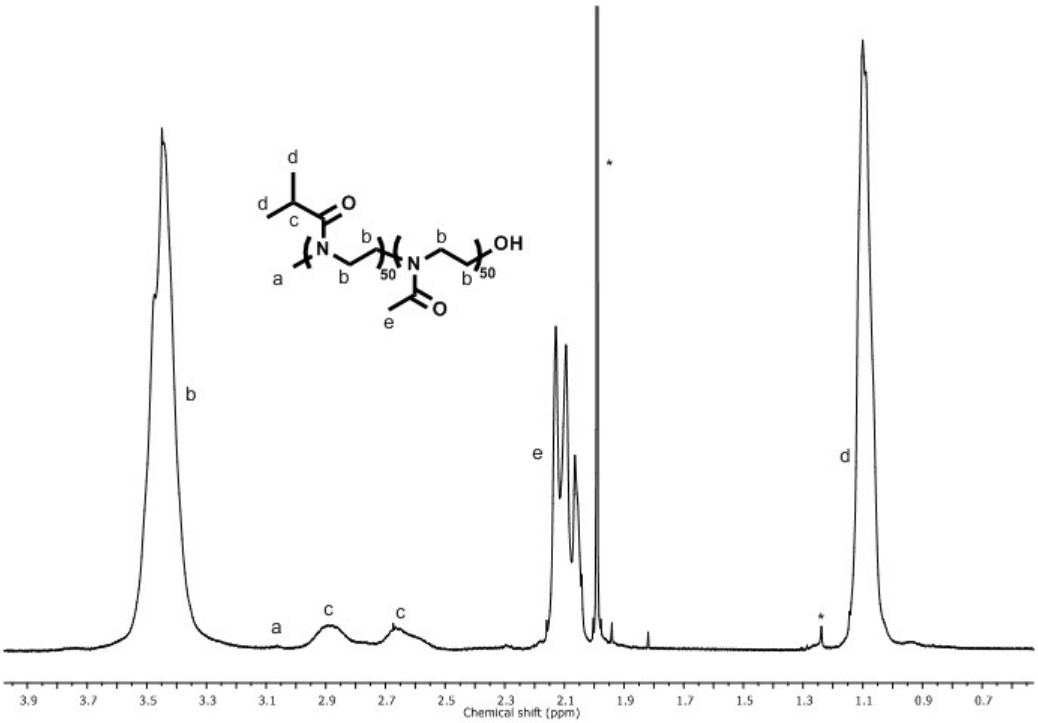

Figure S 2. ^{1}H NMR spectrum (400 MHz, $CDCl_3$) of poly[(2-isopropyl-2-oxazoline)-*b*-(2-methyl-2-oxazoline)] (P(iPrOx-*b*-MeOx))

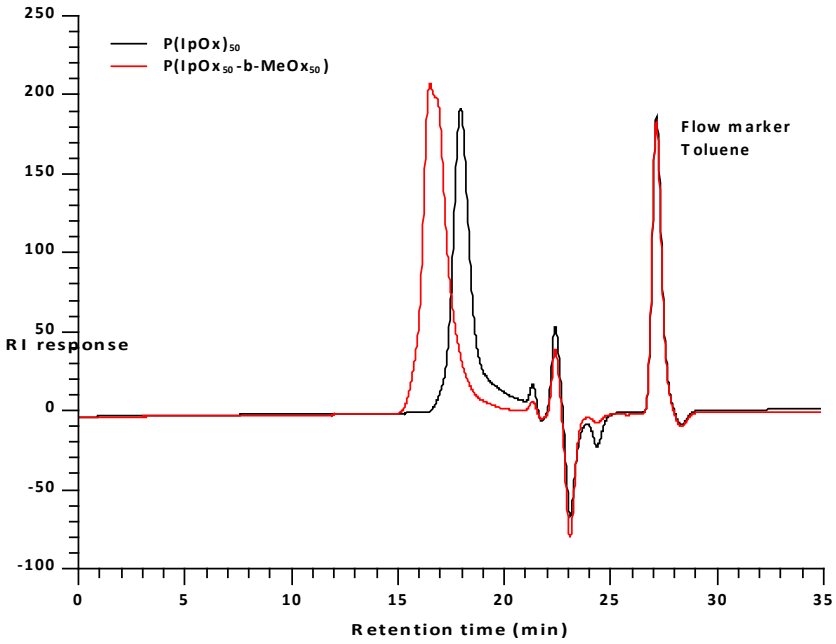

Figure S 3. SEC trace of P(iPrOx-*b*-MeOx) in DMF

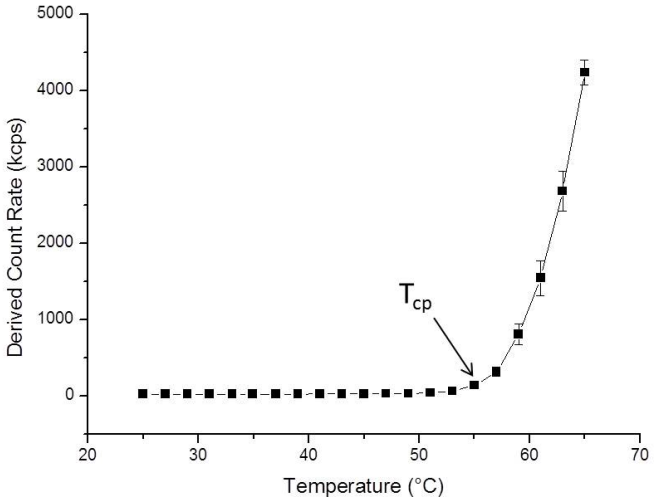

Figure S 4. DLS measurements determining the cloud point of P(iPrOx-*b*-MeOx) (cloud point = 57 °C)

Table S 1. DLS measurements determined at 65 and 25 °C of aliquots taken at a various annealing times after annealing at 65 °C

	65 °C			25 °C		
Annealing time	Size d (nm)	PdI	Count rate (kcps)	Size d (nm)	PdI	Count rate (kcps)
1h30	423	0.69	1898	796	0.28	1947
3 h	2666	0.71	4810	2712	0.62	9879
4h30	2956	1	4580	3793	0.85	9546
7 h	3140	1	4510	2725	1	4676

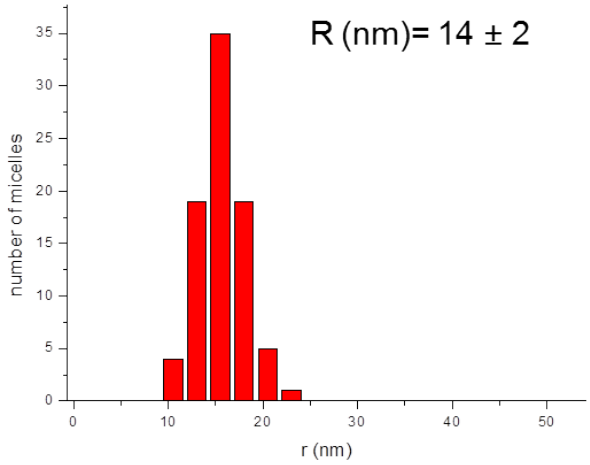

Figure S 5. P(iPrOx$_{50}$-*b*-MeOx$_{50}$) micelle characterization at 65 °C, distribution of micelle size by TEM, determined by Image J.

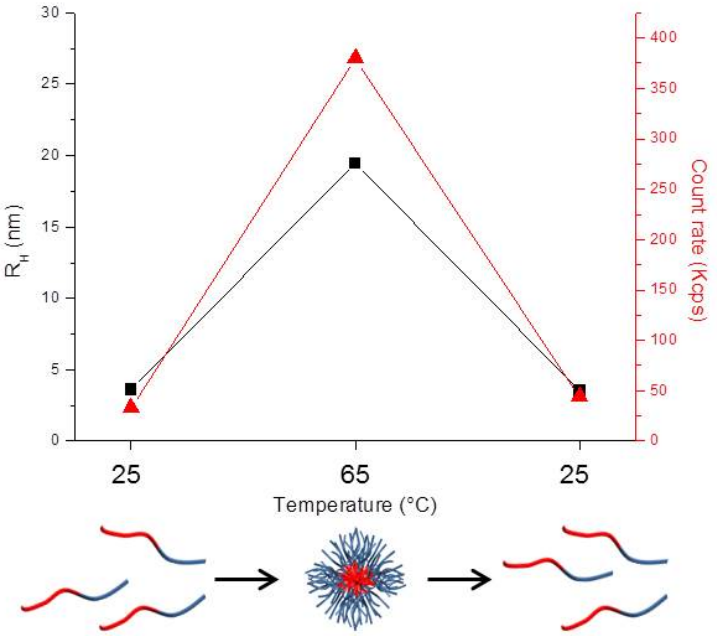

Figure S 6. P(iPrOx$_{50}$-*b*-MeOx$_{50}$) micelles size evolution with temperature measured by DLS

Table S 2. WAXS scattering angles and corresponding spacing between the crystallographic planes obtained from Bragg's law

Crystallographic planes	2θ (°)	d (Å)
(100)	7.89	11.21
?	15.05	5.89
(101)	16.56	5.35
(010)	18.28	4.86
?	19.22	4.62
(201)	21.72	4.09
(011)	23.59	3.77
(210)	24.38	3.65

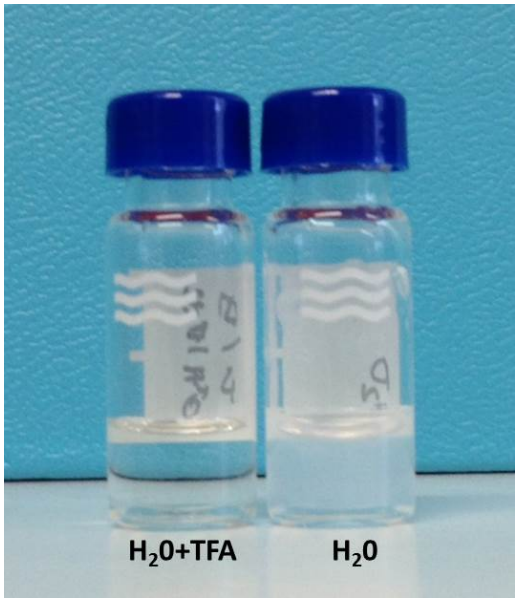

Figure S 7. Appearance of P(iPrOx$_{50}$-*b*-MeOx$_{50}$) in pure water and in water/trifluoroacetic acid mixture (1/5 v/v)