Electronic Supplementary Material (ESI) for Soft Matter

Supporting information

Self-assembly of chiral block and gradient copolymers

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Contents:

I SEC traces

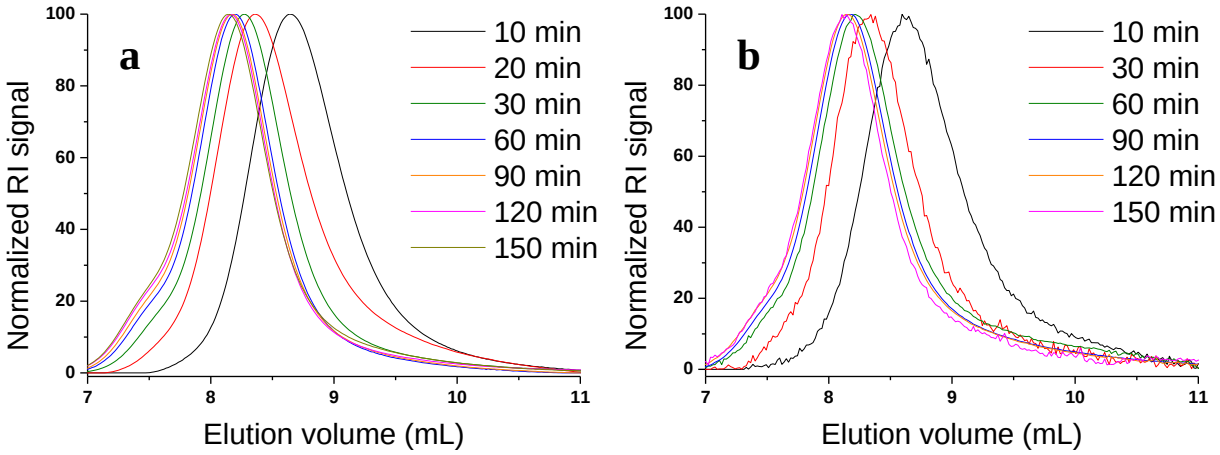

Fig. 1 SEC traces ($CHCl_3$) of the statistical copolymerization of EtOx with **a**) *R*-BuEtOx and **b**) *RS*-BuEtOx, (M/I = 100, EtOx:R(S)-BuEtOx = 70:30; M_0 = 4 M).

II Cryo-TEM

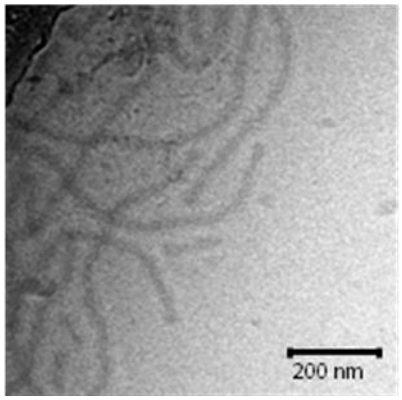

Fig. 2 Assembly of five tilted cryo-TEM images of pEtOx$_{56}$-*b*-*R*-BuEtOx$_{38}$-V that proves the formation of a 3-dimensional fiber-like structure.

III Angular dependent DLS results

Table 1 DLS results*****

Polymer	R_h (30°)	R_h (45°)	R_h (60°)	R_h (90°)	R_h (120°)	R_h (145°)
pEtOx$_{67}$-*R*-BuEtOx$_{12}$-I	14	13	14	13	14	15
pEtOx$_{62}$-*R*-BuEtOx$_{16}$-II	22	20	19	19	19	20
pEtOx$_{64}$-*R*-BuEtOx$_{30}$-III	91 and 230	85 and 210	95	86	104	90 and 205
pEtOx$_{59}$-*R*-BuEtOx$_{31}$-IV	95 and 230	132	121	116	135	85 and 210
pEtOx$_{56}$-*R*-BuEtOx$_{38}$-V	145	122	104	95	100	87 and 216
pEtOx$_{54}$-*R*-BuEtOx$_{34}$-VI	98 and 254	138	124	116	118	102 and 310
pEtOx$_{45}$-*RS*-BuEtOx$_{16}$-VII	18 and 123	18 and 110	82	15 and 85	17 and 87	115
pEtOx$_{41}$-*RS*-BuEtOx$_{19}$-VIII	18	17	18	17	17	18
pEtOx$_{70}$-*stat*-*R*-BuEtOx$_{30}$	12	11	12	12	12	13

* R_h (in nm) measured at different angles for the samples investigated in this study at a concentration of 5 mg mL^{-1}. The reported values correspond to the maxima of the populations calculated in the CONTIN histogram.

IV CONTIN size distribution histograms

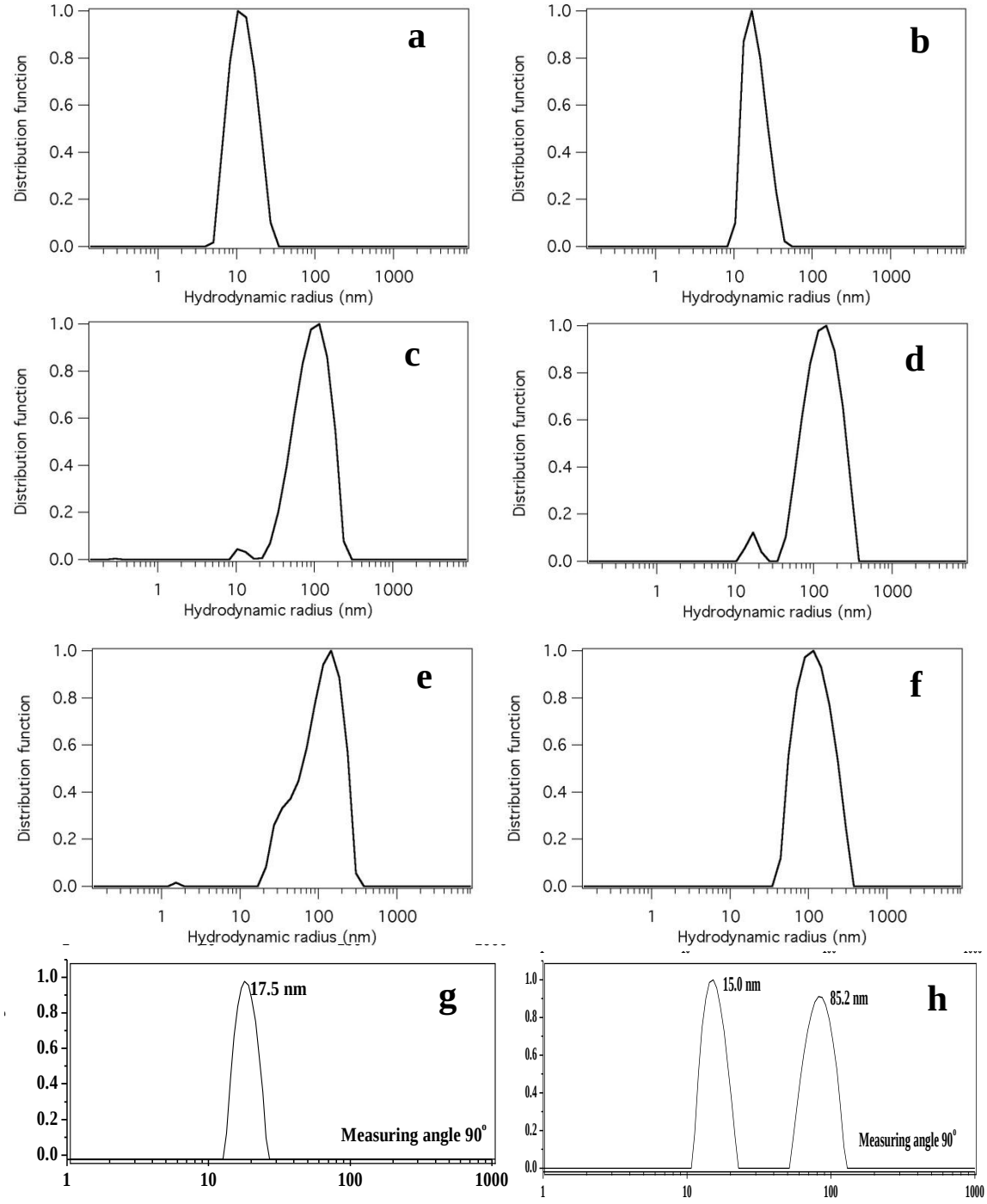

Fig. 3 CONTIN distribution functions measured by DLS (90°, 5 mg mL^{-1}) of **a**) $pEtOx_{67}$-

R-BuEtOx$_{12}$-I, **b**) pEtOx$_{62}$-*R*-BuEtOx$_{16}$-II, **c**) pEtOx$_{64}$-*R*-BuEtOx$_{30}$-III, **d**) pEtOx$_{59}$-*R*-BuEtOx$_{31}$-IV, **e**) pEtOx$_{56}$-*R*-BuEtOx$_{38}$-V, **f**) pEtOx$_{54}$-*R*-BuEtOx$_{34}$-VI, g) pEtOx$_{45}$-*RS*-BuEtOx$_{16}$-VII and h) pEtOx$_{41}$-*RS*-BuEtOx$_{19}$-VIII.