

Electronic supplementary information to

**Long PEO-based nanoribbons generated in a polystyrene matrix
through reaction-induced microphase separation
followed by a fast crystallization process**

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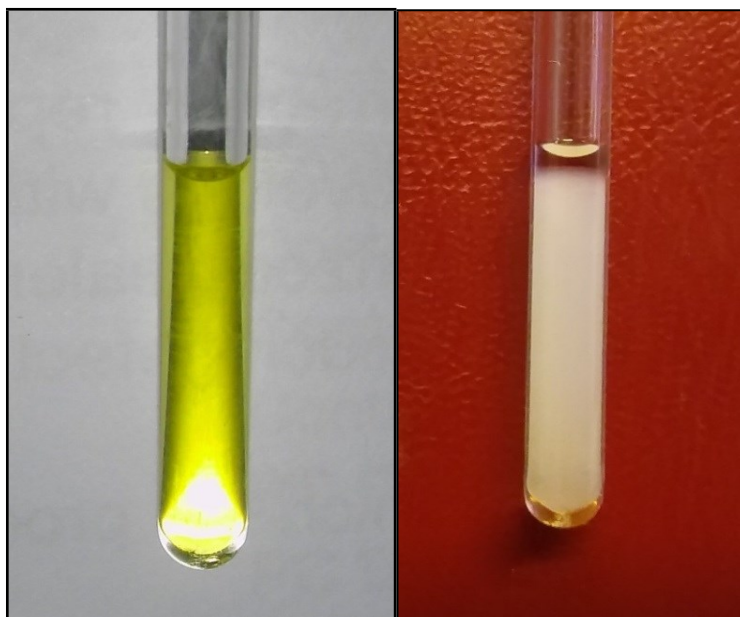


Fig. S-1. Photographs taken during the photopolymerization of St in a blend containing 2.55 wt% PEO homopolymer. Left: initially transparent sample (yellow color due to the photoinitiators); right: opacity observed after 2 h of irradiation.

Calculations S-2. Estimated values of ϕ_1 as a function of photoirradiation time.

$$\frac{1}{T_m} - \frac{1}{T_m^0} = \frac{R}{\rho_u * V_1 * \Delta H_u} * \phi_1 - \frac{B}{\rho_u * \Delta H_u * T_m} * \phi_1^2 \quad (2)$$

Equation (2) was used to estimate the values of ϕ_1 as a function of photoirradiation time by using T_m (H=0) values of Table 1 and the following parameters: $\Delta H_u=196.6$ J/g; $V_1=114.6$ cm³/mol; $\rho_u=1.125$ gr/cm³; $R=8.314$ J/molK; $T_m^0=336$ K and $B=6.25$ MPa. Calculations were done using Levenberg-Marquardt algorithm implemented in the Mathcad software package. The obtained results are listed in the following Table:

Irradiation time (min)	T_m(H=0), K	φ₁
90	293.4	1.703
180	294.2	1.708
270	294.8	1.710
330	295.3	1.714



Fig. S-3. Photograph of the photocured sample containing 10 wt% BCP.