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Supporting Information

Uniform Polyselenophene Block Copolymer Fiber-like Micelles and Block Co-micelles via Living Crystallization-Driven Self-Assembly

Emily L. Kynaston,¹ Ali Nazemi,¹ Liam R. MacFarlane, George R. Whittell, Charl F. J. Faul, and Ian Manners^{*}

School of Chemistry, University of Bristol, Cantock's Close, Bristol, BS8 1TS, UK

¹These authors contributed equally to this work

Figure S1. ¹H-NMR (400 MHz, CDCl₃) spectrum of ethynyl-capped P3DSe₁₇. Residual solvent peaks are marked with an *.

	H/H / %	H/ethynyl / %	Ethynyl/ethynyl / %	Br/H / %	Br/ethynyl / %
P3DSe₁₇	11.1	23.1	7.9	11.2	12.5

Figure S2. MALDI-TOF spectrum of ethynyl-capped P3DSe₁₇ and table of end-capping efficiency as determined by integration of the peaks using Bruker PolyTools software.

Figure S3. GPC trace (refractive index) of bromo-terminated PDMS₂₄₀ eluted in THF (1 mL/min) at 35 °C. The low signal-to-noise ratio is due to PDMS having a similar refractive index to THF.

Figure S4. ^1H -NMR (400 MHz, CDCl_3) of bromo-terminated PDMS_{240} . Residual H_2O and THF peaks are marked with an *. The two singlet satellites, flanking the main SiMe_2 peak at 0.07 ppm arise from coupling to abundant ^{29}Si isotopes.

Figure S5. ^1H -NMR (400 MHz, CDCl_3) of azide-terminated PDMS_{240} . Residual H_2O peak is marked with an *. The two singlet satellites, flanking the main SiMe_2 peak at 0.07 ppm arise from coupling to abundant ^{29}Si isotopes.

Figure S6. ^1H -NMR (400 MHz, CDCl_3) of $\text{P3DSe}_{17}\text{-}b\text{-PDMS}_{240}$. Residual CHCl_3 , THF and H_2O are marked with an *.

Figure S7. GPC traces (UV response) eluted in THF (1 mL/min) at 35 °C of P3DSe_{17} homopolymer (red trace) and $\text{P3DSe}_{17}\text{-}b\text{-PDMS}_{240}$ BCP after SEC purification (black trace).

Figure S8. WAXS diffraction pattern of dried P3DSe₁₇-PDMS₂₄₀ micelles.

Figure S9. WAXS diffraction pattern of an unannealed bulk sample of P3DSe₁₇ homopolymer.

Figure S10. Optical absorption spectra of P3DSe₁₇-*b*-PDMS₂₄₀ unimer in THF (solid line, 0.02 mg/mL) and micelles in EtOAc (dashed line, 0.02 mg/mL).

Figure S11. Photoluminescence spectra of P3DSe₁₇-*b*-PDMS₂₄₀ unimer in THF (solid line, 0.02 mg/mL) and micelles in EtOAc (dashed line, 0.02 mg/mL).

Figure S12. Bright-field TEM images of polydisperse P3DSe₁₇-*b*-PDMS₂₄₀ micelles self-seeded at 60 °C in EtOAc (0.5 mg/mL) which had been aged for 24 h and drop-cast onto carbon-coated copper grids. Scale bar is 1000 nm.

Scheme S1. Synthesis of P3DSe₁₇-*b*-PS₁₄₀. PMDETA = *N,N,N',N'',N''*-pentamethyldiethylenetriamine.

Figure S13. GPC traces (UV response) eluted in THF (1 mL/min) at 35 °C of P3DSe₁₇-*b*-PDMS₂₄₀ before (left) and after sonication for 1 h at 0 °C (right).

Figure S14. GPC traces (UV response) eluted in THF (1 mL/min) at 35 °C of P3DSe₁₇ homopolymer (red trace) and P3DSe₁₇-*b*-PS₁₄₀ after SEC purification (black trace).

Figure S15. ^1H -NMR (400 MHz, CDCl_3) of bromo-capped PS₁₄₀. Residual CHCl_3 , THF and H_2O are marked with an *.

Figure S16. MALDI-TOF spectrum of bromo-capped PS₁₄₀.

Figure S17. ^1H -NMR (400 MHz, CDCl_3) of azide-capped PS_{140} . Residual CHCl_3 and H_2O are marked with an *.

Figure S18. ^1H -NMR (400 MHz, CDCl_3) of P3DSe₁₇-b-PS₁₄₀. Residual CHCl_3 and H_2O are marked with an *.