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Supporting information for *In – situ*  
monitoring Poly(3-hexylthiophene) nanowire  
formation and shape evolution in solution via  
Small Angle Neutron Scattering

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# 1 Fitting parameters

Table S1: *Parameters from Guinier-Porod fit for all the SANS measurements: scale, background, dimensionality factor ( $s$ ), radius of gyration ( $R_g$ ), Porod exponent ( $m$ ), and the quality of the fit ( $\chi^2$ )*

Sample	Scale ( $10^{-2}$ )	Background ( $10^{-3}cm^{-1}$ )	$s$ factor	$R_g$ (Å)	$m$	$\chi^2$
Fig. 3 (in main manuscript) 0h	$1.01 \pm 0.67$	$1.04 \pm 0.27$	$0.58 \pm 0.14$	$39.0 \pm 7.9$	$1.395 \pm 0.035$	0.75
Fig. 3 (in main manuscript) 9.32h	$0.272 \pm 0.099$	$1.21 \pm 0.31$	$0.878 \pm 0.082$	$23.1 \pm 4.3$	$1.443 \pm 0.047$	0.96
Fig. 3 (in main manuscript) 16.68h	$0.155 \pm 0.011$	$1.92 \pm 0.52$	$0.996 \pm 0.020$	$10.03 \pm 0.71$	$4.0 \pm 2.7$	0.79
Fig. 4 (in main manuscript) 168h	$0.182 \pm 0.098$	$1.93 \pm 0.33$	$1.29 \pm 0.11$	$32.1 \pm 7.6$	$1.832 \pm 0.026$	1.13
Fig. 4 (in main manuscript) 169.5h	$0.46 \pm 0.29$	$2.25 \pm 0.31$	$1.10 \pm 0.13$	$43.7 \pm 8.4$	$1.870 \pm 0.024$	1.29
Fig. 4 (in main manuscript) 181.57h	$0.1784 \pm 0.0032$	$2.45 \pm 0.27$	$1.39 \pm 0.19$	$35.3 \pm 1.3$	$2.043 \pm 0.021$	0.78
Fig. S1 3.45h	$2.0 \pm 1.1$	$3.21 \pm 0.45$	$0.48 \pm 0.12$	$36.8 \pm 6.1$	$1.353 \pm 0.039$	0.78
Fig. S1 6.75h	$3.2 \pm 2.4$	$2.31 \pm 0.45$	$0.38 \pm 0.16$	$43.6 \pm 8.7$	$1.295 \pm 0.033$	0.75
Fig. S2 9.5h	$2.0 \pm 1.3$	$0.08 \pm 0.47$	$0.52 \pm 0.14$	$42.2 \pm 7.9$	$1.365 \pm 0.033$	0.68
Fig. S2 17.5h	$0.386 \pm 0.055$	$0.88 \pm 0.27$	$1.394 \pm 0.033$	$60.0 \pm 0.1$	$2.045 \pm 0.010$	0.67
Fig. S2 36.5h	$0.57 \pm 0.14$	$-1.32 \pm 0.20$	$1.516 \pm 0.047$	$51.6 \pm 3.6$	$2.2828 \pm 0.0048$	1.03
Fig. S3 38.6h	$0.94 \pm 0.25$	$0.62 \pm 0.20$	$1.387 \pm 0.053$	$59.2 \pm 3.9$	$2.2958 \pm 0.0053$	1.09
Fig. S3 39.68h	$2.1 \pm 1.2$	$1.64 \pm 0.42$	$0.49 \pm 0.13$	$39.1 \pm 6.5$	$1.378 \pm 0.035$	0.84
Fig. S3 41.85h	$4.8 \pm 3.4$	$2.63 \pm 0.46$	$0.28 \pm 0.16$	$44.7 \pm 7.6$	$1.308 \pm 0.034$	0.79

## 2 SANS data and fits for thermal and temporal study on rr-P3HT nanowires

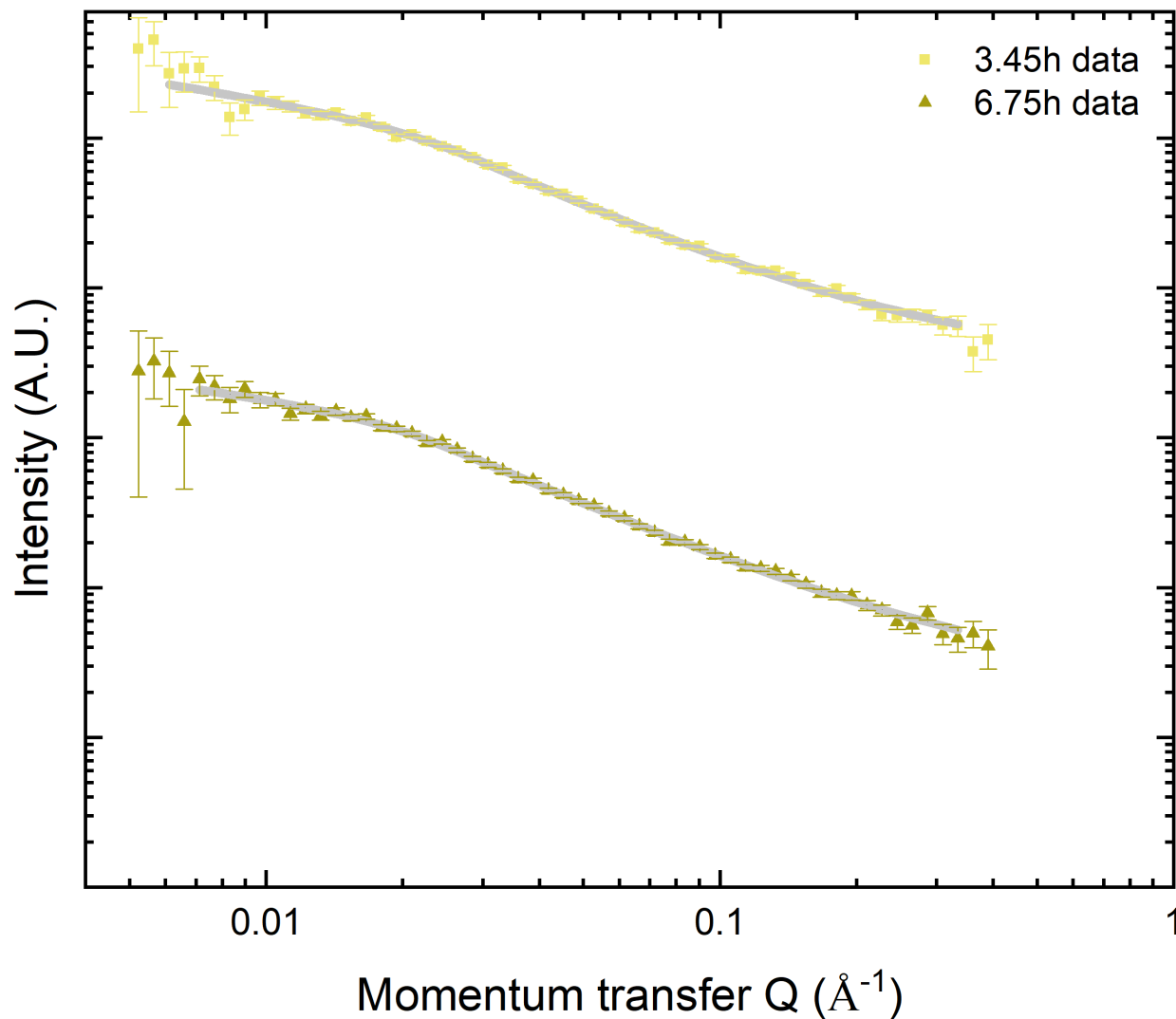


Figure S1: *SANS of P3HT solution part 1.* SANS data and their corresponding fits (gray) of the 5mg/mL rr-P3HT solution after 3.45 hours (light yellow), and 6.75 hours (ochre) at 74.8°C. The two measurements are shown offset by two decades from each other to enable comparison.

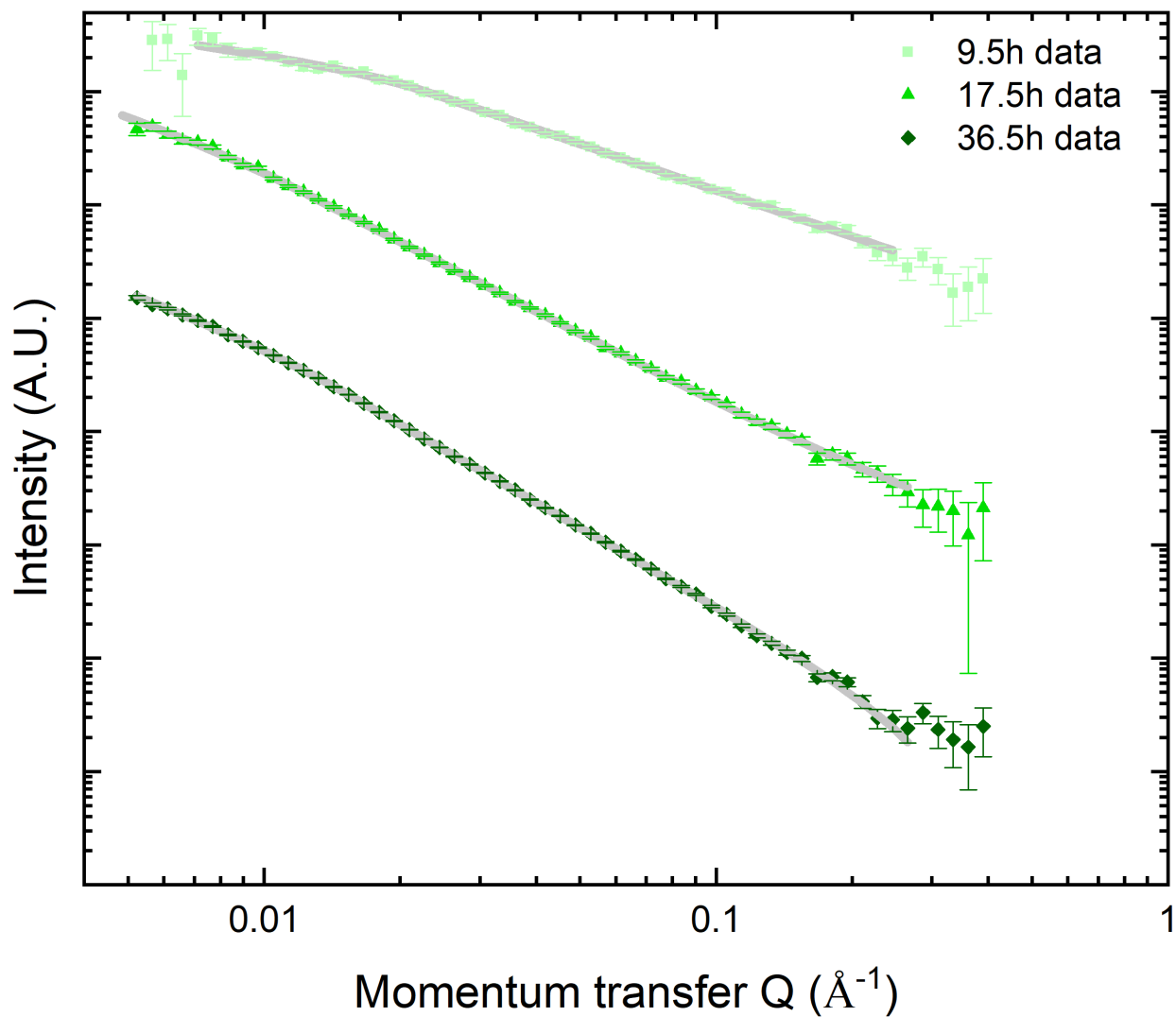


Figure S2: *SANS of P3HT solution part 2.* SANS data and their corresponding fits (gray) of the 5mg/mL rr-P3HT solution at 9.5 hours (pale green), 17.5 hours (lemon green), and 36.5 hours (dark green), during the period kept at 4°C. The three measurements are shown offset by two decades from each other to enable comparison.

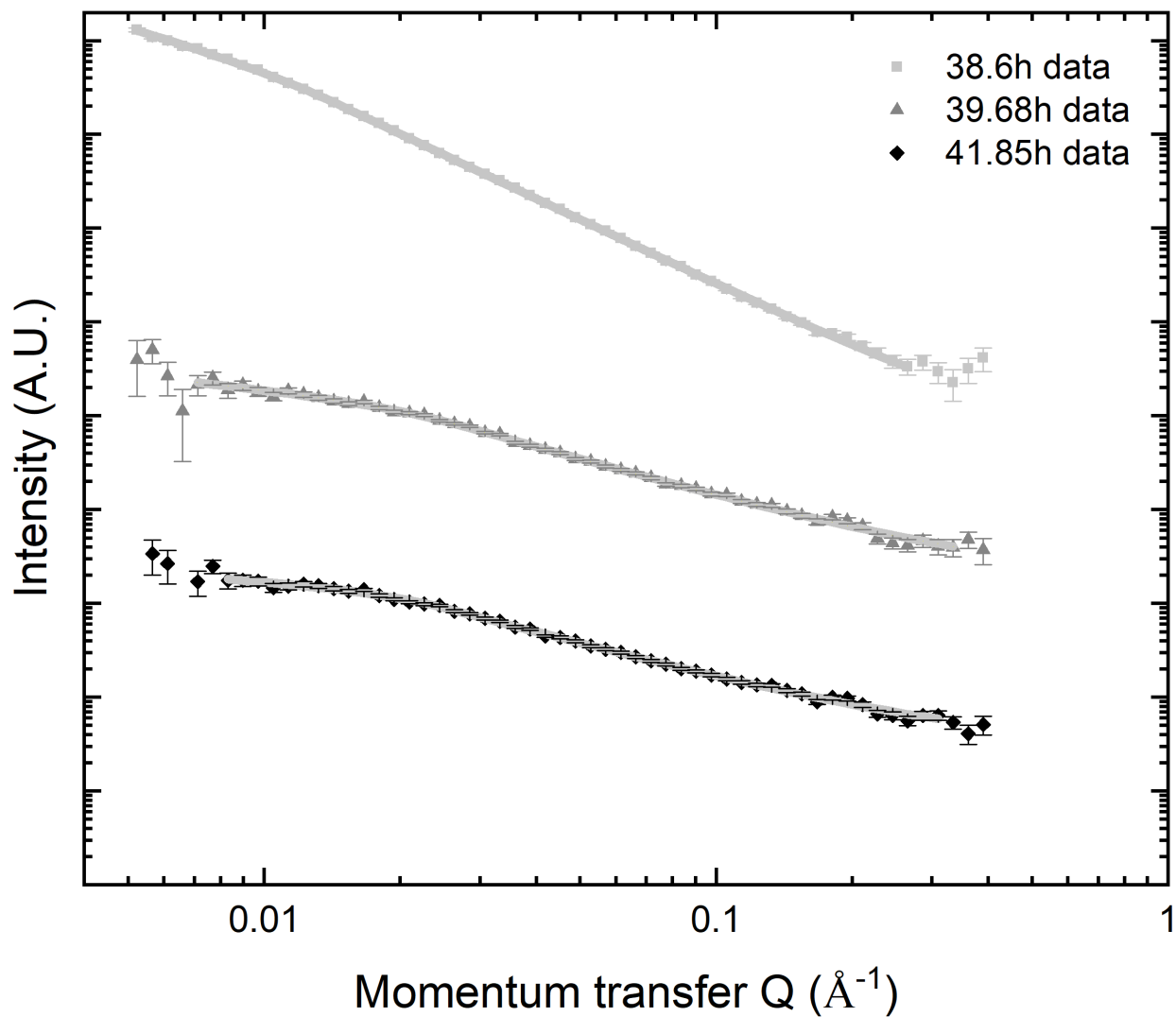


Figure S3: *SANS of P3HT solution part 3.* SANS data and their corresponding fits (gray) of the 5mg/mL rr-P3HT solution at the times of 38.6 hours (light gray), 39.68 hours (dark gray), and 41.85 hours (black) while the temperatures were 20°C, 40°C, and 80°C, respectively. The three measurements are shown offset by two decades from each other to enable comparison.