

Enhanced Crystallinity and Film Retention of P3HT Thin-Films for Efficient Organic Solar Cells by use of Preformed Nanofibers in Solution

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Supporting Information

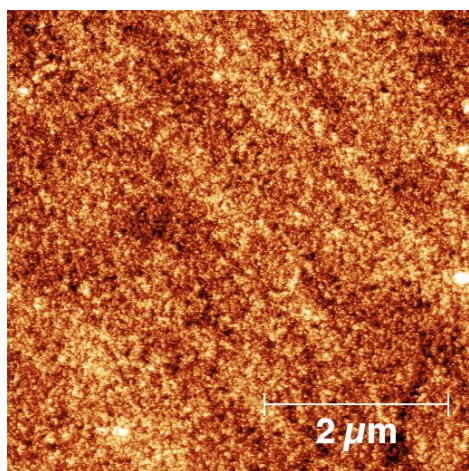


Figure 1. AFM image of a thin film (~ 30 nm) of P3HT on fused silica, spin-cast from a 10 mg ml^{-1} solution in chlorobenzene. The height scale of the image is 7 nm and the root mean square roughness $R_q = 1.04$ nm.

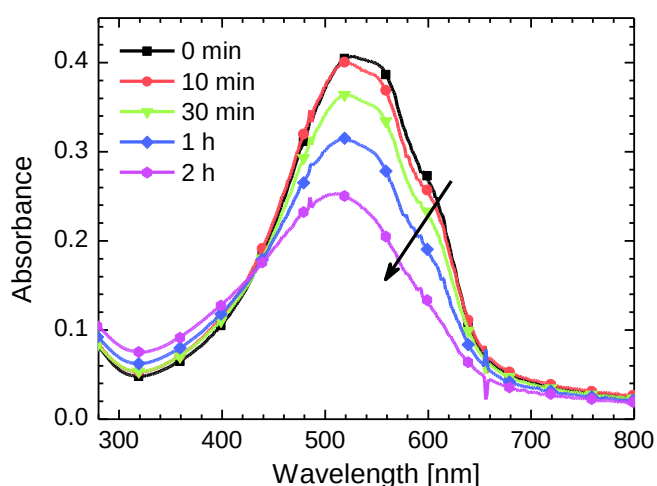


Figure 2. Absorbance of a film of P3HT after annealing at 170°C in DTBP vapor for a different amount of time. The exposure to DTBP at elevated temperature results in a loss of vibronic structure, a blue-shift of the main peak, and an overall loss in absorption strength due to a decrease of conjugation length and interrupted interchain-coupling.

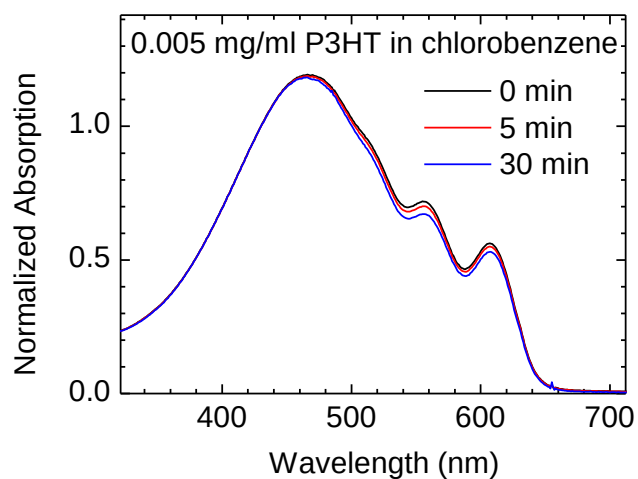


Figure 3. Absorption spectra of a solution of P3HT nanofibers, grown from a 10 mg ml^{-1} solution in chlorobenzene by adding 20 vol% DTBP and then diluted to 0.005 mg ml^{-1} in chlorobenzene, monitored over 30 min after adding the additional chlorobenzene.