

# Synthesis and characterization of polydiacetylene films and nanotubes

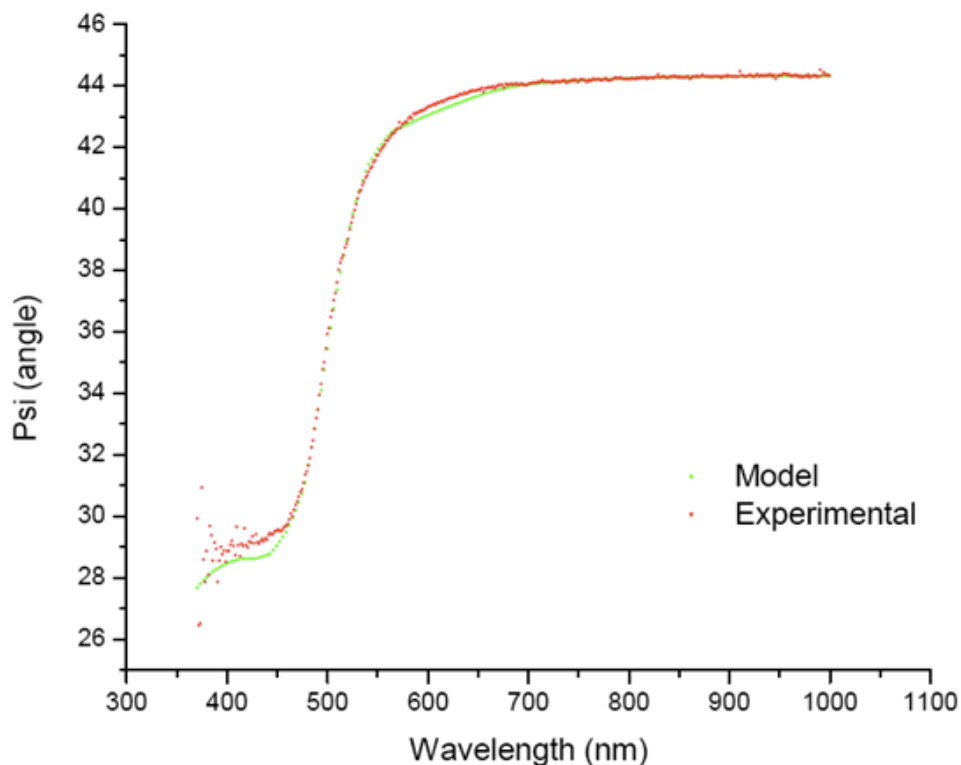
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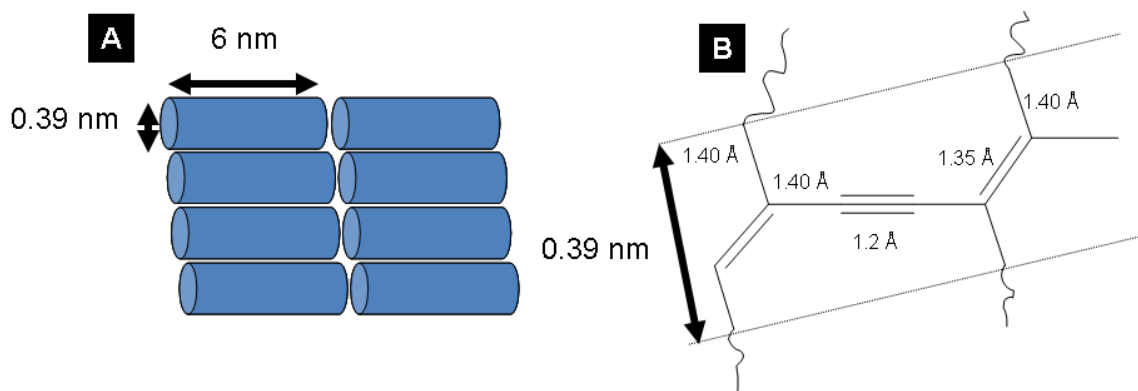
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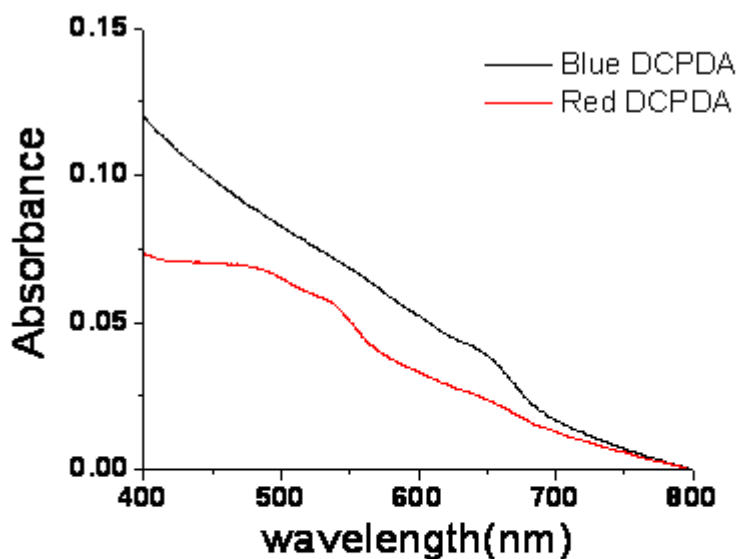
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**Figure 1S.** Comparison of experimental and theoretical ellipsometric  $\psi$ -versus- $\lambda$  data for a 47 nm thick PDCDA film.



**Figure 2S.** The chromophore density is calculated by assuming that the PDCDA are: (1) cylindrical in shape; (2) closed packed; and (3) laying parallel to one another on the surface. The dimensions of the cylinder are 6 nm x 0.39 nm. The molecular modeling of DCDA and PDCDA was performed on Gaussian 03 (basis set ZDO and the method used was PM3).



**Figure 3S.** Comparison of absorption spectra of as-prepared and heated PDCDA films grown on glass substrate. The films are heated with heat gun for 2 minutes.