

## Supplementary information

# Deciphering molecular mechanisms of interface buildup and stability in porous Si/eumelanin hybrids

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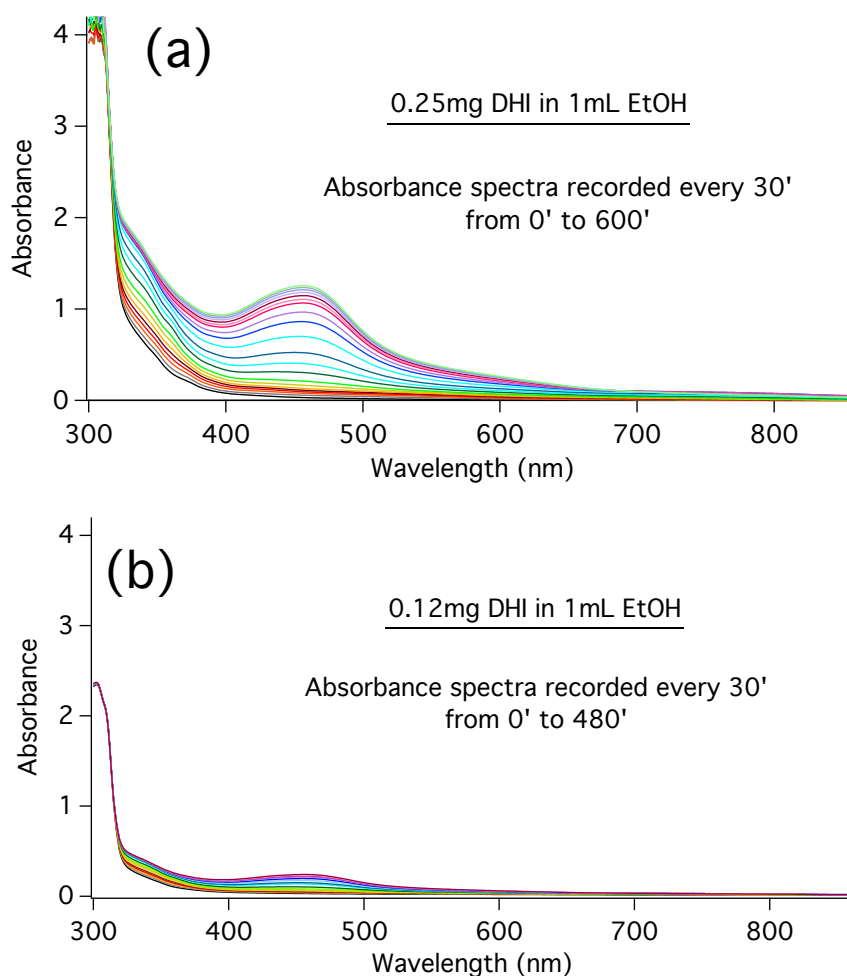


Figure S1: Absorbance spectra as a function of time for two different concentrations of DHI in EtOH. (a) 0.25 mg/mL and (b) 0.12 mg/mL. The vertical axis has been kept identical to that of Figure 5 for easier comparison.

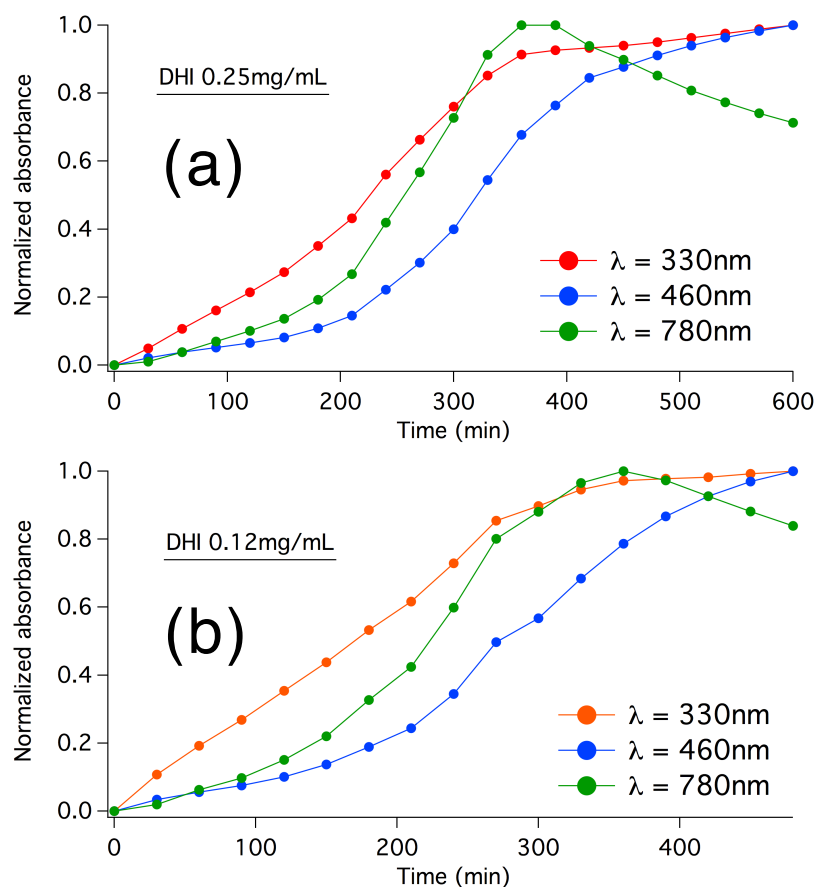


Figure S2. Analysis of the evolution of the absorbance spectra of the DHI in EtOH solutions shown in Figure S1 at three different spectral positions: 330 nm, 460 nm and 780 nm. The curves represent the normalized evolution of the absorbance for (a) 0.25 mg/mL and (b) 0.12 mg/mL.

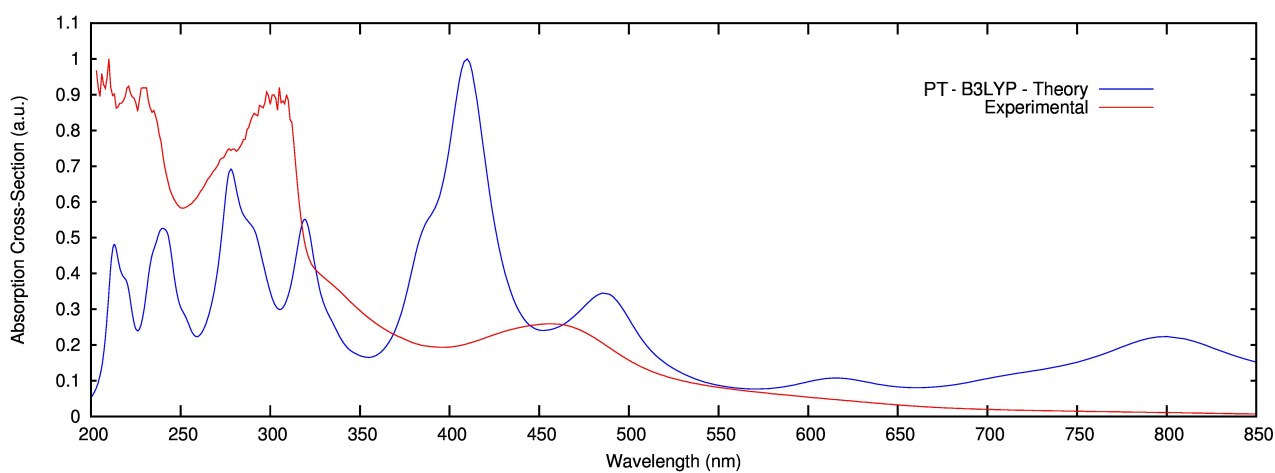


Figure S3. Comparison between the calculated spectra for the PT structure (blue line) and the experimental absorption of 0.25 mg/mL solution of DHI in EtOH (red line, curve corresponding to the absorbance of after 600').

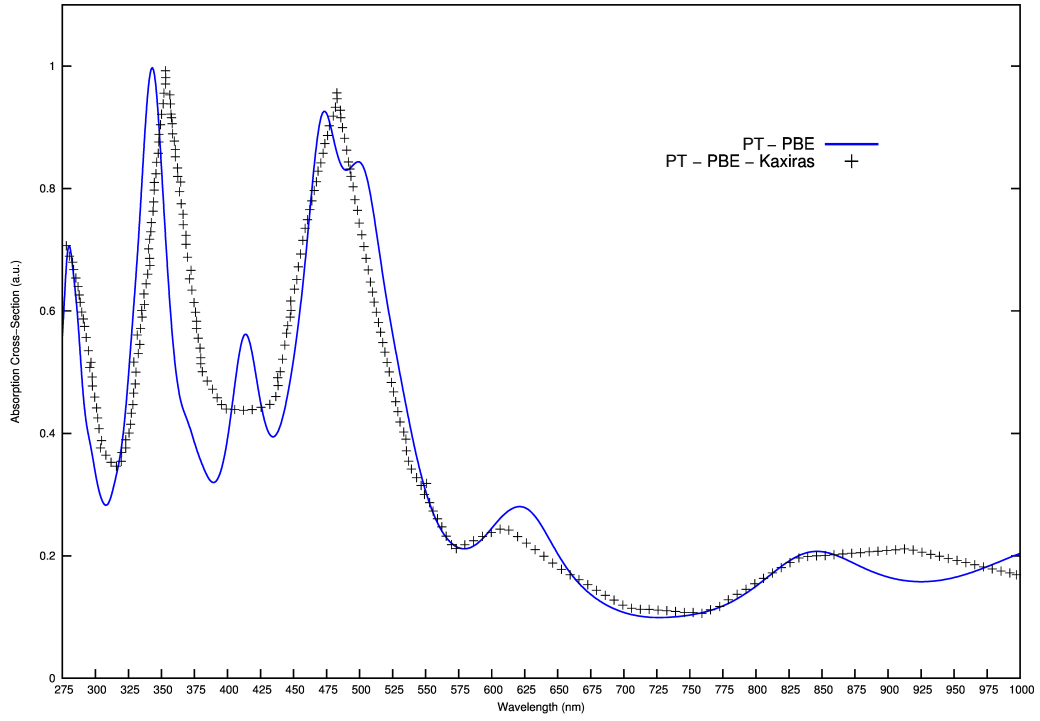


Figure S4. Comparison of the theoretical/computational spectrum for the PT structure calculated in this work with that reported by Meng and Kaxiras [44].