

Hydrogen Bonding Interactions Affect the Hierarchical Self-Assembly and Secondary Structures of Comb-Like Polypeptide Supramolecular Complexes Displaying Photoresponsive Behavior

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Table S1: Summarized the values of T_{d5} , T_{d10} , and char yield of PTyr, AzoPy-C16 and PTyr-AzoPy-C16(x) supramolecular complexes were determined through thermogravimetric analysis (TGA).

Samples			
PTyr/AzoPy-C16(x)	T_{d5} (°C)	T_{d10} (°C)	Char Yield (%)
x = 0	123	180	28
x = 0.25	253	253	26
x = 0.7	238	254	19
x = 1	246	262	14
x = 1.5	245	263	13
x = 4	250	267	12
AzoPy-C16	275	292	2

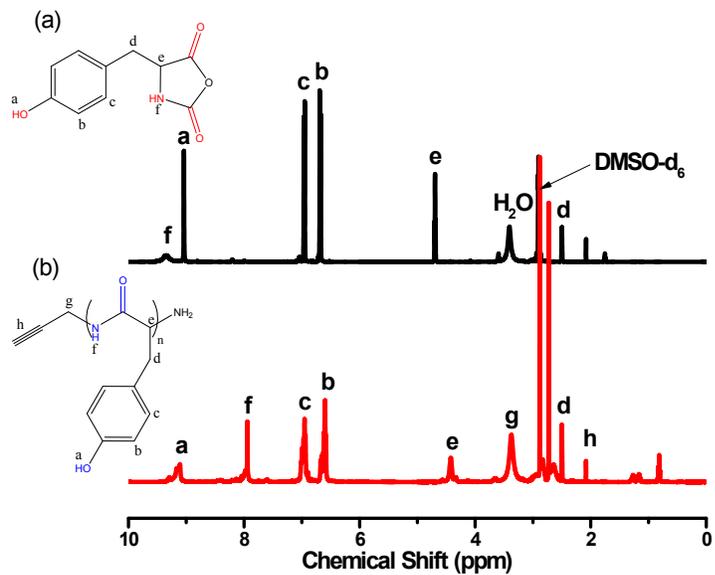


Figure S1: ^1H NMR spectra of (a) Tyr-NCA and (b) PTyr in $\text{DMSO-}d_6$.

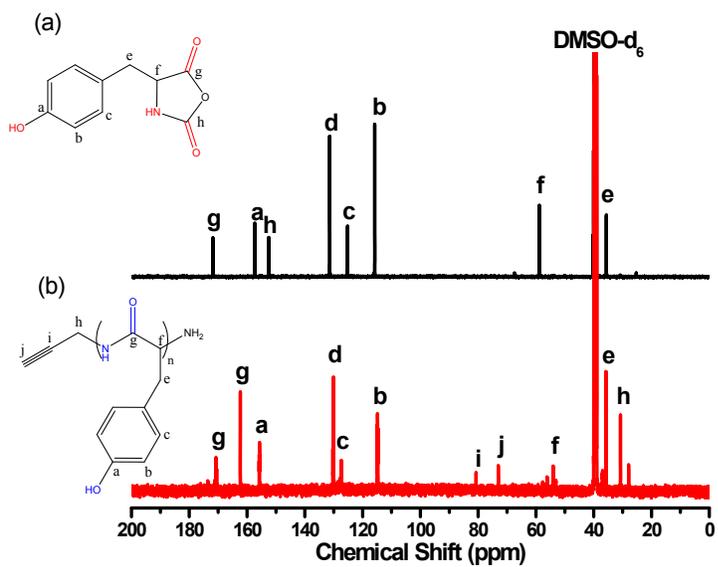


Figure S2: ^{13}C NMR spectra of (a) Tyr-NCA and (b) PTyr in $\text{DMSO-}d_6$.

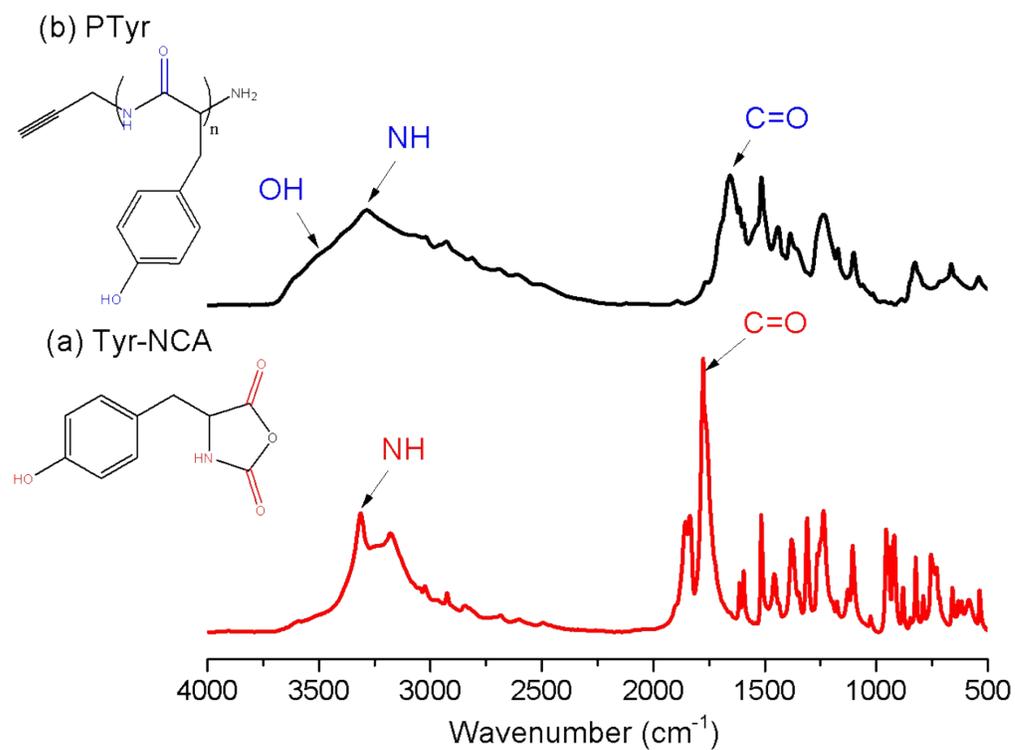


Figure S3: FTIR spectra of (a) Tyr-NCA and (b) PTyr, recorded at room temperature.

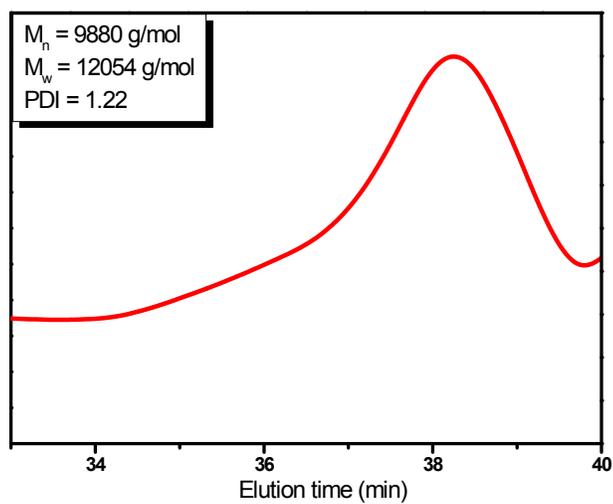


Figure S4: GPC traces of PTyr; eluent: DMF.

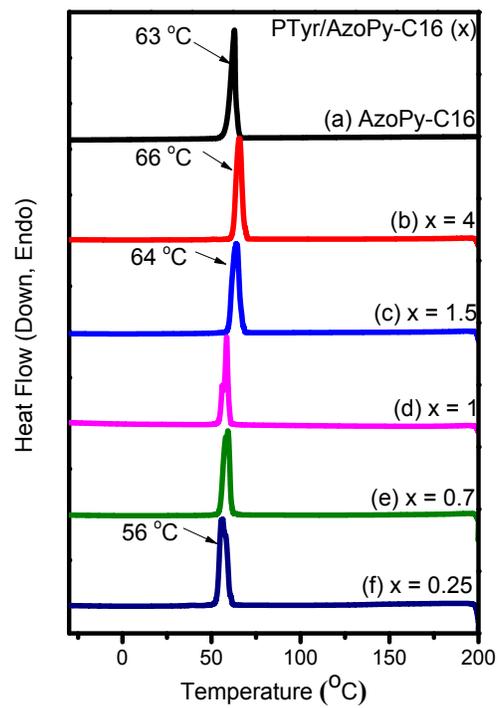


Figure S5: DSC profiles of AzoPy-C16, PTyr, and PTyr/AzoPy-C16 supramolecular complexes.

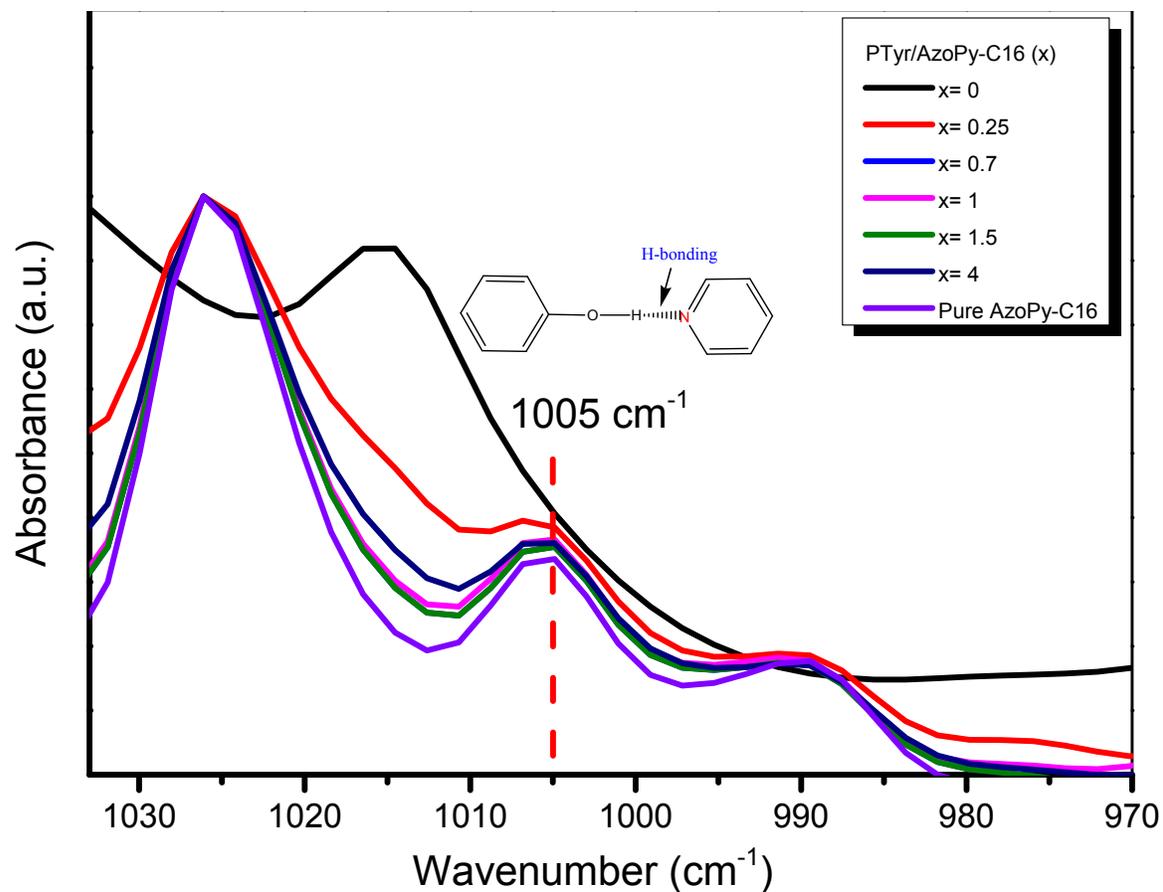


Figure S6: FTIR spectra, recorded at room temperature, of PTyr/AzoPy-C16(x) supramolecular complexes, displaying the region between 1030 and 970 cm⁻¹ that is characteristic of specific intermolecular hydrogen bonding interactions between the pyridyl groups of the AzoPy-C16 moieties and the OH groups of PTyr.

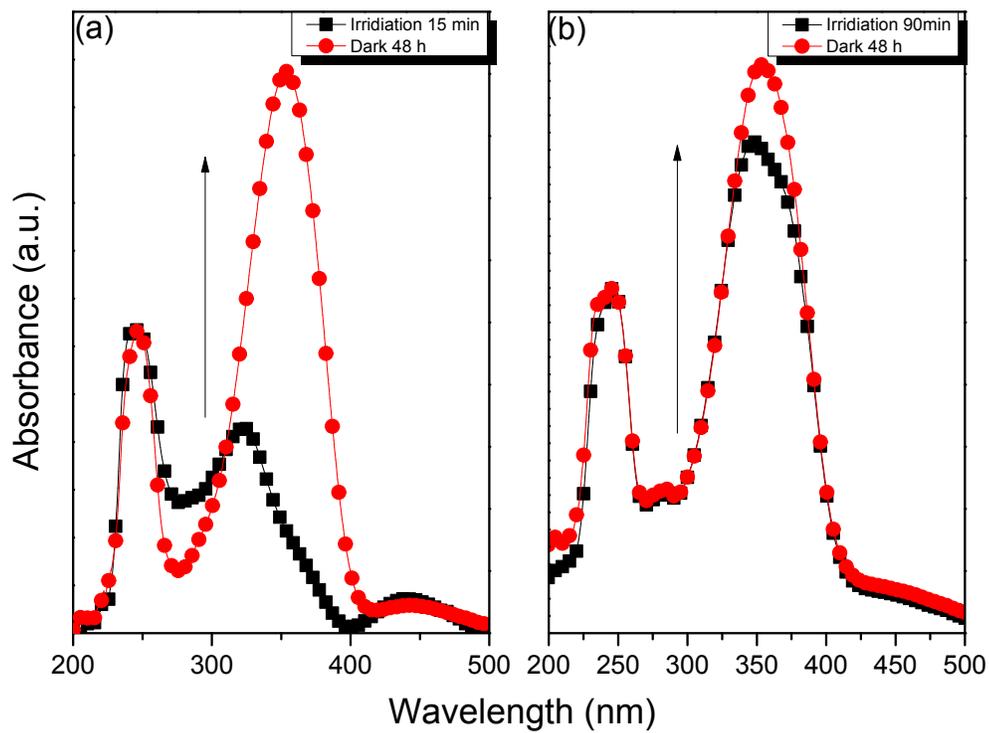


Figure S7: UV-Vis profile of (a) AzoPy-C16 and (b) PTyr/AzoPy-C16(1) supramolecular complex after UV irradiation at 365 nm and standing in the dark for 2 days at room temperature.

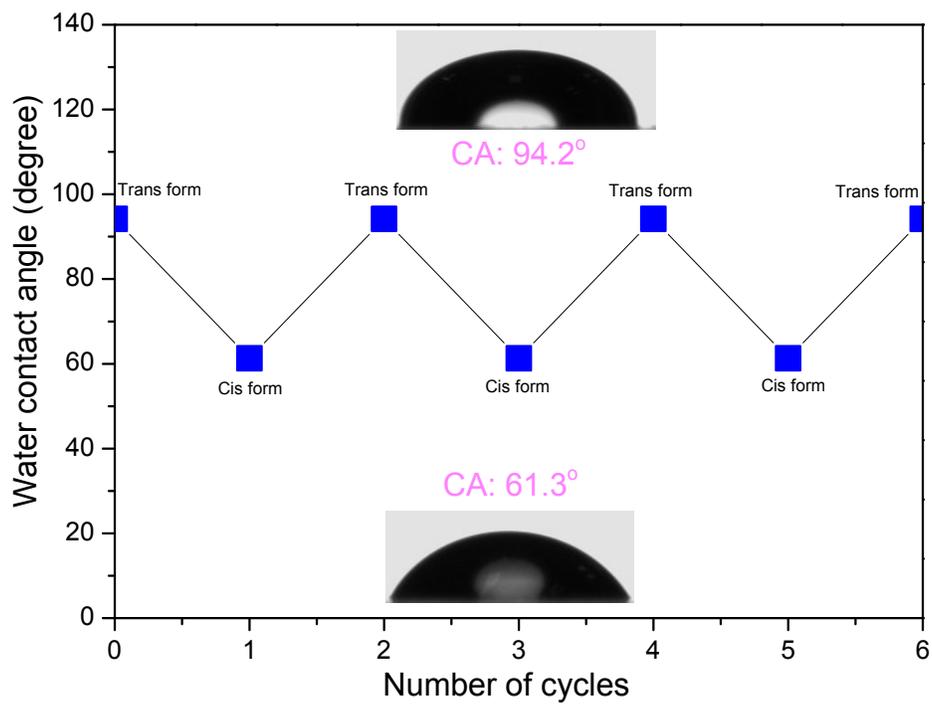


Figure S8: Water contact angles (WCAs) of PTyr/AzoPy-C16(1) supramolecular complexes of several cycles of UV irradiation at 365 nm and leaving in dark for 2 days.