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Deciphering Internal and External π -Conjugation in C3-Symmetric Multiple Azobenzene Title:

Connected Systems in Self-Assembly

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> Azobenzene photoisomers

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Abstract:

Two tripodal C3-symmetric photoswitchable molecular systems T1 and T2 are reported that have extended conjugation at external and internal positions using an acryl group. The influence of the extended π-bonds in their absorption properties, thermal relaxation of the photoisomers and their propensities in forming supramolecular self-assemblies have been explored through spectroscopy, and microscopic studies. In particular, the investigations on the self-assembly have been carried out using scanning electron microscopy (SEM), transmission electron microscopy (TEM), polarized optical microscopy (POM), X-ray diffraction studies (XRD) and atomic force microscopy (AFM). Remarkably, the position of the acryl group influences the behaviour of the two target molecules in supramolecular assembly, and also in the formation of photoresponsive organic hydrogels or microcrystals.

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