Self-Assembly Studies of Anthracene-Containing Oligomers

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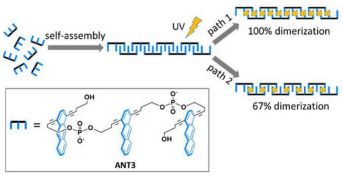
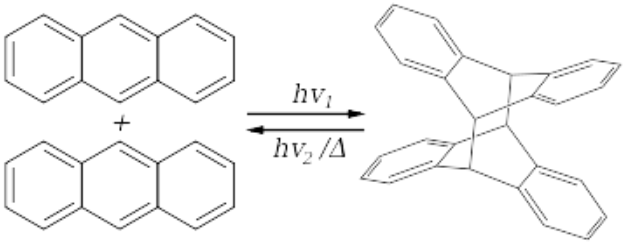
Dimers and trimers containing different isomers of anthracene were successfully synthesized through automated solid-phase synthesis and phosphoramidite chemistry. These oligomers displayed a self-assembly behavior in water, giving rise to supramolecular polymers. Atomic Force Microscopy revealed that these polymers are nanofibers, with lengths of several micrometers. One of the dimers showed a peculiar temperature-dependent spectroscopic behavior. [4+4]-cycloadditions between anthracenes did not result in a change of shape for one of the trimers, but a dimer changed dramatically, and this could give us better understanding of the self-assembly behavior of these oligomers.





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