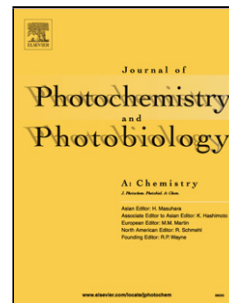


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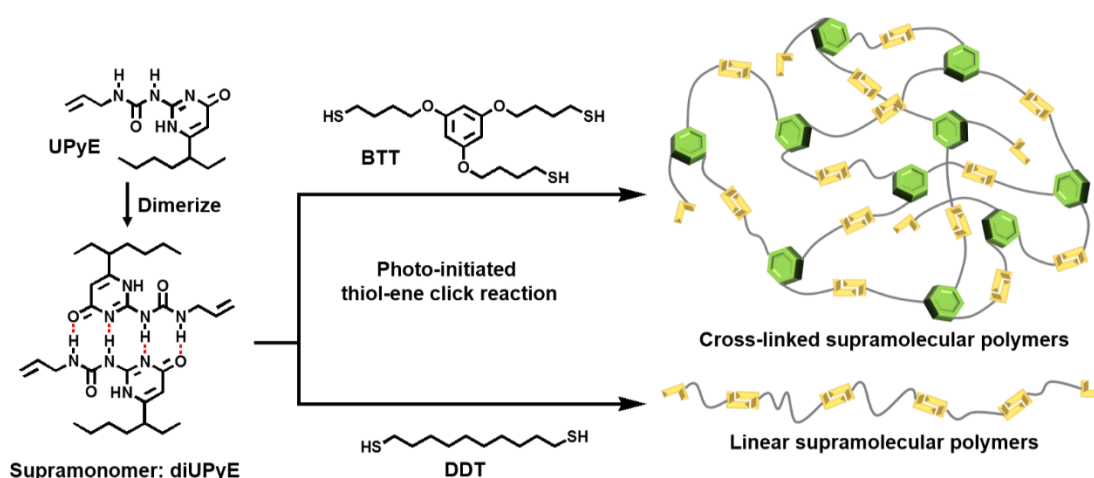
Cross-linked supramolecular polymers synthesized by photo-initiated thiol-ene click reaction of supramonomers

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Graphical Abstract



Highlights

- Cross-linked supramolecular polymers are fabricated through thiol-ene reaction.
- Self-assembly properties of supramolecular polymers are studied.
- Cross-linked supramolecular polymers are not easily formed at low concentrations.

Abstract

Supramonomers refer to monomers fabricated via noncovalent interactions and can be polymerized through conventional covalent methods. In this article, we realized the fabrication of cross-linked supramolecular polymers through photo-initiated thiol-ene click reaction of quadruple hydrogen bonded supramonomers. It is found that the cross-linked supramolecular polymer has a higher critical polymerization concentration than the linear supramolecular polymer, because the orientation of the trifunctional monomer leads to cyclize at low concentrations. It is anticipated that this research can enrich the methodology of fabricating cross-linked supramolecular polymers and provide a new phenomenon to understand the self-assembling behavior of cross-linked supramolecular polymers.

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