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Azobenzene-based Polymers for Solar Thermal Batteries .

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Azobenzene exists as two isomers, a higher energy cis-isomer and a lower energy trans-isomer. The isomers interconvert under light or heat. Recently, there is a renewed interest in capturing the difference in the energies of the isomers and using azobenzene-based molecules as active layers for solar thermal batteries. My research group has been exploring azobenzene-based polymers as candidates for solar thermal batteries. In this talk, I will show that the azo-benzene moieties can be converted to the cis-form using light and converted back to the trans form using mechanical force. I will provide some of our recent results that indicate that high energy densities can be achieved in these polymers.