

Design of improved photoswitches and articulated nanowires

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Molecular photoswitches are key elements for the construction of light-responsive systems with potential applications in materials science, biochemistry, and nanotechnology. In this presentation we will discuss the design of azobenzene photoswitchable compounds with improved properties such as the possibility to isomerize with visible light only, nearly quantitative *E/Z* photoconversions, and remarkably high thermal stability of the *Z* isomers.[1-2] We will additionally show how to connect azobenzenes most efficiently for the construction of articulated molecular wires,[3] in which dramatic contractions and extensions can be reversibly triggered by light and have been directly visualized on modified graphite surfaces.[4]

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