

SYNFACTS Highlights in Current Synthetic Organic Chemistry

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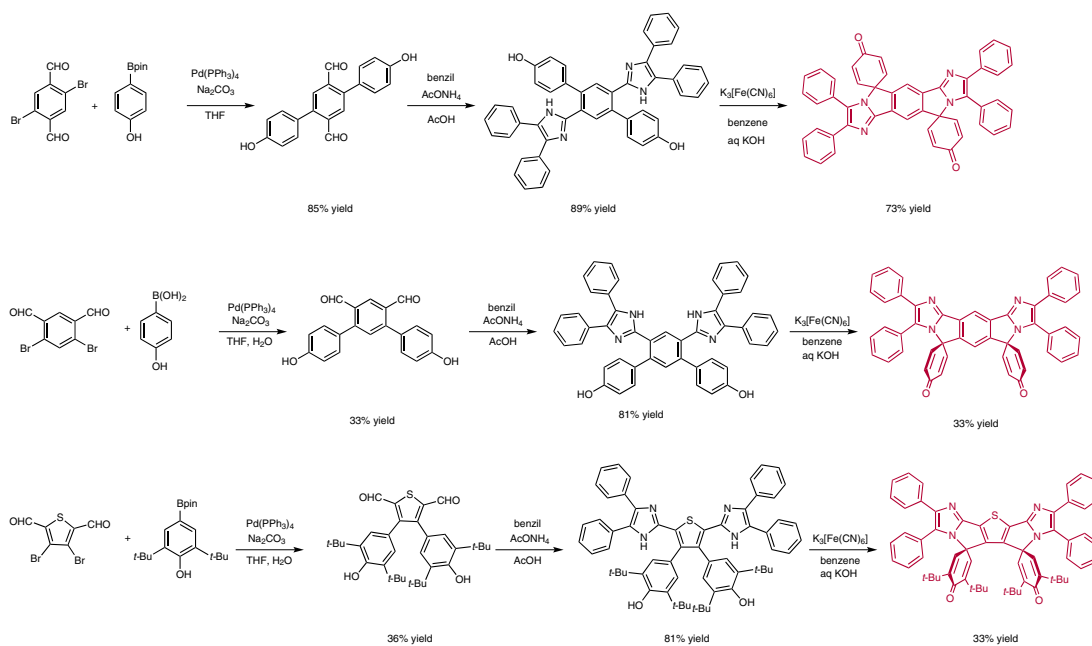
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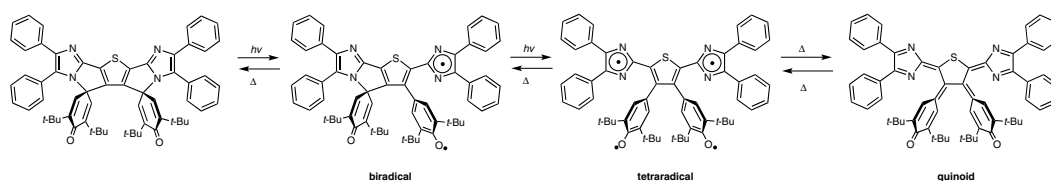
Rate-Tunable Stepwise Two-Photon-Gated Photoresponsive Systems Employing a Synergetic Interaction between Transient Biradical Units

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Stepwise Two-Photon Photochemical Reactions



Selected example of stepwise photochromic reaction:



Significance: The two-photon absorption is a well-known phenomenon for the efficient usage of photons. The authors report the synthesis of three photochromic bis(phenoxy-imidazolyl radical complex) (bisPIC) derivatives. Double-pulse laser flash photolysis and time-resolved Fourier transform infrared spectroscopy were used to investigate the stepwise photochromic properties of the bisPIC derivatives.

Comment: The stepwise photochromic properties of the bisPIC derivatives were systematically investigated. Whereas photogenerated biradical species rapidly go back to the neutral state, additional photon absorption by biradicals forms long-lived quinoid species.

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