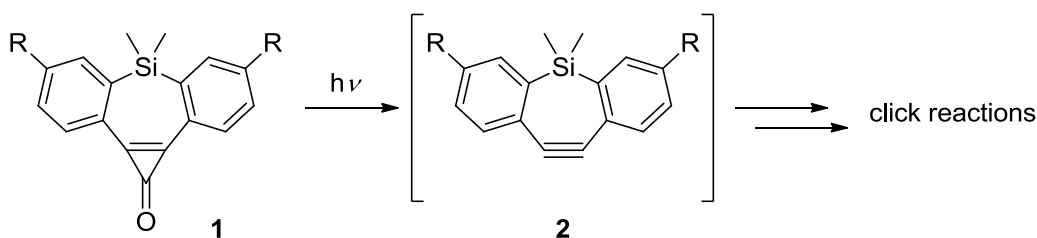


Light-Induced Click Reactions of Cyclopropenone Derivatives of Si-Xanthene

Marek Martínek, Lenka Filipová, Juraj Galeta, Petr Klán

Department of Chemistry and RECETOX, Faculty of Science, Masaryk University,
Kamenice 5, 625 00 Brno, Czech Republic
(marek.martinek@gmail.com)

Cyclopropenones are known for their ability to undergo clean and rapid photochemically-induced decarbonylation while generating alkynes.[1] Such a photochemical transformation offers outstanding spatial and temporal control over the release of these reactive species. Alkynes can undergo subsequent click reaction and be used in fluorescent labelling of molecules in living cells.[2] In this work we present the synthesis and utilization of new Si-xanthene-based cyclopropenones **1**. 1,3-Dipolar cycloaddition and [4+2] inverse electron-demand Diels-Alder reactions of the alkynes **2** have been investigated using laser flash photolysis, steady state photolysis, kinetic and quantum yield measurement studies.



[1] Poloukhine, A.; Popik, V. V. *J. Org. Chem.* **2003**, *68*, 7833-7840

[2] Poloukhine, A. A.; Mbua, N. E.; Wolfert, M. A.; Boons, G.-J.; Popik, V. V. *J. Am. Chem. Soc.* **2009**, *131*, 15769-15776