Silica-Mediated Synthesis of Indolinooxazolidine-Based Molecular Switches

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Résumé en anglais	A novel and convenient method for the synthesis of photochromic compounds is reported here. It is based on the use of commercially available untreated silica, as an efficient catalyst to perform the condensation between indolinooxazolidine derivatives and aromatic aldehydes under solvent-free conditions. The scope and limitations of this transformation were investigated and several novel photochromic indolinooxazolidines were synthesized. This methodology can also be applied to the synthesis of other photoactive compounds such as spiropyrans or spirooxazines. According to our working protocol the reaction did not require any solvent or additional reagents and gave the products within 10 min in isolated yields of up to 90%.
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[1] http://okina.univ-angers.fr/publications?f[author]=10739
[2] http://okina.univ-angers.fr/lionel.sanguinet/publications
[3] http://okina.univ-angers.fr/publications/ua10562
[4] http://dx.doi.org/10.1021/acs.joc.5b00282
[5] http://pubs.acs.org/doi/abs/10.1021/acs.joc.5b00282