Title: **Synthesis and characterization of new coumarin-based caging groups**

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The use of light has enormous potential for controlling the outcome of molecular processes with high spatio-temporal precision. In this context, a promising approach consists of introducing photoremovable protecting groups (also referred to as caging groups) in key positions of the molecule whose activity has to be suppressed temporarily. Among photoremovable protecting groups described to date, dicyanocoumarin derivatives are particularly attractive since they exhibit a maximum absorption around 500 nm, which can be exploited to trigger uncaging with green light.

In this work, we have focused on the synthesis and characterization of three new dicyanocoumarin-caged model compounds with the aim of exploring how the uncaging process is affected both by the structure of the coumarin chromophore and by the nature of the leaving group.

Keywords: caged coumpounds, caging groups, coumarin, photoactivation.