

SYNTHESIS AND PHOTOPHYSICAL PROPERTIES OF FLUORESCENT PURINE-AZOLE CONJUGATES

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Earlier we reported the synthesis of fluorescent 6-triazolyl purine nucleosides [1]. We have developed the synthesis of 2/6-1,2,3-triazolyl, 2-imidazolyl, 2-(1,2,4-triazolyl) and 2-tetrazolyl purine derivatives with amorphousing groups at *N*(9) position. Different electron-donor and electron-acceptor groups were introduced in the purine structure to modify their photophysical properties and to achieve highly efficient blue fluorescence. Target compounds were obtained in 11–54% overall yields. Their fluorescent properties were studied in the solution and in the film. Quantum yields in DCM solution reached up to 91% and up to 58% in the films.

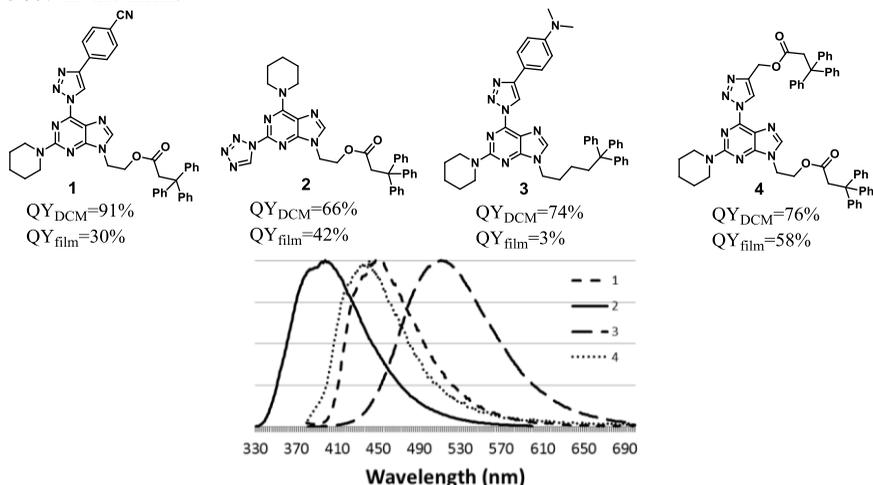


Figure 1. Target compounds and their normalized emission spectra

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References: 1. Kovaļovs, A.; Novosjolova, I.; Bizdēna, Ē.; Bižāne, I.; Skardziute, L.; Kazlauskas, K.; Jursenas, S.; Turks, M. *Tetrahedron Lett.* **2013**, 54, 850.