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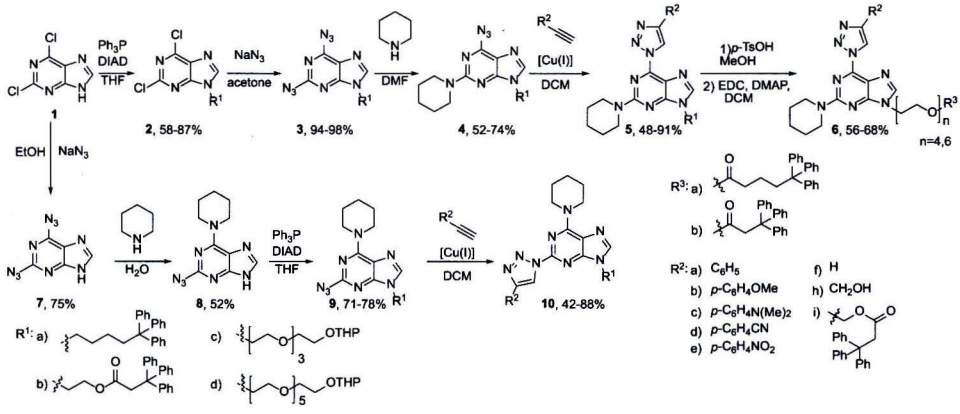
SYNTHESIS AND PHOTOPHYSICAL PROPERTIES OF *N*(9)-ALKYLATED PURINE DERIVATIVES

Zigfrīds Kapilinskis, Armands Sebris, Irina Novosjolova, Māris Turks

Institute of Technology of Organic Chemistry, Faculty of Materials Science and Applied Chemistry, Riga Technical University, P. Valdena Street 3, Riga, LV-1048, Latvia
E-mail: z.kapilinskis@gmail.com; armands.sebris_1@rtu.lv

Earlier we reported the synthesis of fluorescent 6-triazolyl purine nucleosides [1]. Now we developed the synthesis of 2/6-triazolyl purine derivatives with amorphous groups at *N*(9) position. Different electron-donor and electron-acceptor groups were introduced in the purine structure and enhanced fluorescent properties, while the trityl group increased amorphous properties [2].

In this work, the synthetic routes for *C*(6) and *C*(2) substituted purines were designed. Final products have been obtained with 19-34% total yield. The fluorescent properties were studied in the solution and in the film. Quantum yields in DCM reached up to 91%. Compounds **5**, **6**, **10** had quantum yields up to 59% in the films.



Scheme 1. General scheme for 2/6-amino-6/2-triazolyl purine derivatives

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References:

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[2] Traskovskis, K., Mihailovs, I., Tokmakovs, A., Kokars, V., Rutkis, M. *Proceedings of SPIE.* **2012**, *8434*: Nonlinear Optics and Applications VI, 1.