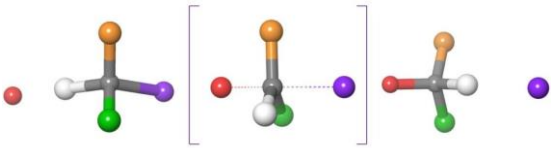
13th Paul Walden Symposium

September 14th-15th, 2023

Program and abstracts



Riga, Latvia

D-4

Synthesis of a cyclen containing purine derivative as a potential photo-catalyst

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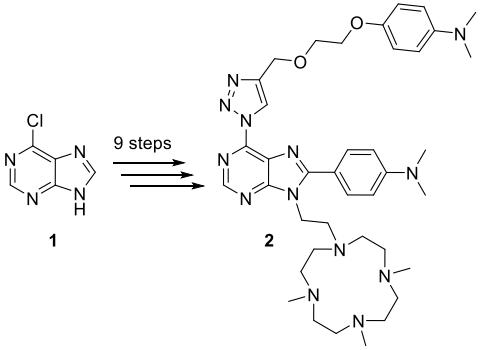
Fluorescent purine derivatives can be used in analytics as a metal ion[1] and pH sensors.[2] They also can be used as photo-catalysts.[3]

Target purine derivative **2** was designed as a potential system for photo-catalysis. For the synthesis of **2**, derivatization of *C*(6), *C*(8) and *N*(9) positions of 6-chloropurine (**1**) is required. Several synthetic pathways were designed and have been tested. In the end, target compound **2** was obtained in 9 steps, using the combinations of S_NAr, S_N2, CuAAC, C-C metal catalyzed coupling, alkylation and Mitsunobu reactions (Scheme 1).



Scheme 1. Starting material **1** and target compound **2**.

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Acknowledgements: The authors thank MEPS co-project LV-LT-TW/2022/9 for financial support. A.B. thanks the European Social fund within project Nr. 8.2.2.0/20/l/008 and Riga Technical University.

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