**EXPLORING THE REACTIVITY OF C(sp)2-H ACTIVATED AMINO ACID COBALT COMPLEXES: A FACILE ROUTE TOWARDS INDOLES**

**C(sp2)-H AKTIVĒTU AMINOSKĀBJU KOBALTA KOMPLEKSU REAģētspējas IZPĒTE EFEKTĪVAI INDOLU SINTĒZEI**

**M. Sc. Chem. Aleksandrs Čižikovs1\***

*1Latvian Institute of Organic Synthesis, Aizkraukles 21, LV-1006, Riga, Latvia*

*e-mail: aleksandrs.cizikovs@osi.lv*

In the last few decades transition metal-catalyzed direct C-H bond functionalization has served as a valuable tool for the construction of complex molecules from more simple starting materials, mainly due to its atom- and step-economical nature.1 Nowadays, the field of third row transition metal catalyzed C-H functionalization is being extensively studied as a cheaper and attractive alternative to noble metal catalysts.2

Our current work is dedicated to the development of cobalt-catalyzed picolinamide-directed C-H bond functionalization of amino acid derivatives. Starting from α,β-unsaturated amino acids **1** we were able to synthesize different C-H activated Co(III) complexes **2** in very good yields (fig. 1.). Moreover, using *N*-fluorobenzenesulfonimide, indole **3** derivatives can be obtained.

**Fig. 1.**  Cobalt-catalyzed, picolinamide-directed indole **3** synthesis.

***Supervisor:*** *Dr. Chem. Liene Grigorjeva*

***References:***

[1] Gandeepan, P.; Muller, T.; Zell, D.; Cera, G.; Warratz, S.; Ackermann, L. *Chem. Rev*. **2019**, *119*(4), 2192.

[2] Lukasevics, L.; Cizikovs, A.; Grigorjeva, L. *Chem. Commun.* **2022**, *58*, 9754-9757.

***Acknowledgments:***

This research is funded by Latvian Institute of Organic synthesis internal grant Nr. IG-2023-05.