

Univerza  
v Ljubljani

Fakulteta *za kemijo*  
*in kemijsko tehnologijo*

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VABILO NA PREDAVANJE  
INVITATION TO THE LECTURE

**Prof. Dr. Mikhail V. Varaksin**

*Director of Chemical Engineering Institute,  
Department of Organic &  
Biomolecular Chemistry, Ural Federal University, Russia*

z naslovom / title:

**C-H functionalization in aromatic and non-  
aromatic azaheterocycles.  
An effective approach in the design of promising  
molecules for medicinal chemistry and  
molecular electronics**

v četrtek, 20. 01. 2022 ob 12. uri / on Thursday, 20. 01.  
2022 at 12.00,

v predavalnici 3 v 3. nadstropju Fakultete za kemijo  
in kemijsko tehnologijo, Večna pot 113 / *in lecture  
room 3, 3rd floor at the Faculty of Chemistry and  
Chemical Technology, Večna pot 113*

*Vljudno vabljeni! / Kindly invited!*

**Abstract:**

The presentation covers the recent advances of our group in the field of C(sp<sup>2</sup>)-H bond functionalization to provide the directed structural modification of both aromatic and non-aromatic azaheterocyclic substrates at late synthetic stages. There are 3 general synthetic strategies in the design of novel heterocyclic derivatives of nitroxide radicals, calixarenes, carboranes, organofluorine compounds, etc. and also advanced materials for molecular electronics and medicinal chemistry to be discussed:

- Nucleophilic substitution of hydrogen reactions according to "Addition-Oxidation" S<sub>N</sub><sup>H</sup>(AO) and "Addition-Elimination" S<sub>N</sub><sup>H</sup>(AE) protocols;
- Transition metal-mediated cross-dehydrogenative coupling (CDC) reactions;
- Metal-free radical-mediated cross-dehydrogenative coupling (CDC) reactions.