

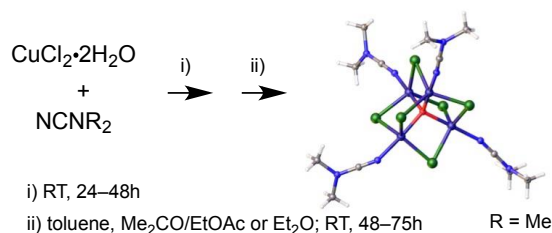
SYNTHESIS AND STRUCTURAL STUDY OF POLYNUCLEAR
COPPER(II) COMPLEXES WITH HALIDES AND DIALKYL
CYANAMIDE NCNR₂ LIGANDS

Toikka Y.N., Bokach N.A.

Saint Petersburg State University, Saint Petersburg, Russia
PhD student
helmi24@mail.ru

Catalysis by copper complexes containing halides and *N*-donors as ligands is actual field in chemical redox catalytic processes. Besides that, design of supramolecular structures for catalysis is a rapidly developing area today, and copper complexes can serve as building units for these compounds. Therefore in this work, tetranuclear clusters Cu₄Cl₆OL₄ (L is NCNR₂) were chosen for further design of supramolecular structures and the study of their catalytic activity that is relevant in developing selective catalysts for biochemical processes [1, 2].

The synthetic procedure for tetranuclear complexes is presented on the Scheme 1.



Scheme 1. Scheme of tetranuclear cluster synthesis

The chemical compositions of the synthesized complexes, geometric parameters of crystal structures, the thermal stability of the products, the solvent effect on the composition and structure of products and reactivity of coordinated NCNR₂ will be under discussion.

References

- [1] S. Sung, D. C. Braddock, A. Armstrong, C. Brennan, D. Sale, A. J. P. White, R. P. Davies // *Chem. Eur. J.* 2015, V. 21. P. 7179.
[2] G. Ondrejovic, A. Kotocova, M. Koman, P. Segl'a // *Chemical Papers.* 2010, V. 64. P. 329.

Acknowledgements. This work was supported by the Russian Science Foundation (project No 19-13-00013).