Thematic Section: Preparative Research. ______ Full Paper

Subsection: Electrochemistry. Reference Object Identifier – ROI: jbc-02/16-46-4-145

Publication is available for discussion in the framework of the on-line Internet conference "*Butlerov readings*". http://butlerov.com/readings/

In memory of Professor E.A. Berdnikov dedicated. Submitted on July 01, 2016.

Electrochemical synthesis and X-ray structure of new organonickel sigma-complex [NiBr(Dipp)(bpy)], where Dipp – 2,6-diisopropylphenyl, bpy – 2,2'-bipyridine

© Zufar N. Gafurov, 1,2 Ilias F. Sakhapov, 1,2 Vasily M. Babaev, 2 Alexey B. Dobrynin, 2* Dmitry G. Yakhvarov 1,2*

¹ Department of Physical Chemistry. A.M. Butlerov Institute of Chemistry. KFU. Kremlevskaya St., 18. Kazan, 420008. Tatarstan Republic. Russia. Phone: +7 (843) 233-74-16. E-mail: zufargo@gmail.com

² A.E. Arbuzov Institute of Organic and Physical Chemistry. Akad. Arbuzova St., 8. Kazan, 420088. Tatarstan Republic. Russia. Phone: +7 (843) 273-22-53. E-mail: yakhvar@jopc.ru

*Supervising author; *Corresponding author

Keywords: organonickel sigma-complex electrochemical synthesis, 2,6-diisopropyl bromide, 2,2 'bipyridine, X-ray analysis.

Abstract

The electrochemical reduction of $[NiBr_2(bpy)]$, where bpy - 2,2'-bipyridine, in the presence of 2,6-diisopropylphenylbromide (DippBr) in undivided electrochemical cell supplied with a sacrificial nickel anode results in formation of new organonickel sigma-bonded complex [NiBr(Dipp)(bpy)]. The synthesized complex was characterized by various methods including single crystal X-ray analysis.