

GORBACHUK ELENA

Kazan Federal University
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Kazan, Russian Federation
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Date of birth: October 3, 1991

GENERAL SUMMARY

- **Research activity** has been started in 2011 in the Laboratory of organometallic and coordination compounds of A.E.Arbusov Institute of Organic and Physical Chemistry of Russian Academy of Sciences being a student of the A.M. Butlerov Institute of Chemistry of the Kazan Federal University.
- **Scientific interests:** organophosphorous chemistry, organometallic chemistry, electrochemistry.

PROFESSIONAL EXPERIENCE

ASSISTANT RESEARCHER **09.2014 – 11.2016**
Russian Academy of Sciences
A.E.Arbusov Institute of Organic and Physical Chemistry
Kazan, Russia

ASSISTANT RESEARCHER **10.2014 - present**
A.M. Butlerov Institute of Chemistry
Kazan Federal University
Kazan, Russia

EDUCATION

Student of Kazan Federal University **09.2009-07.2014**
(04.05.01 – Fundamental and applied chemistry: Physical chemistry)
PhD student of Kazan Federal University **09.2014 – present**
Kazan Federal University
Kazan, Russia

Thesis titled: "Electrochemical reduction of white phosphorus: synthesis of phosphine oxide H₃PO and investigation of its reactivity"

EXPERTISE

- Electroanalytical Chemistry
- Electrosynthesis
- Inorganic Chemistry
- Organic Chemistry
- Organometallic Chemistry

SPOKEN LANGUAGES

English – fluently

German – basic

SCIENTIFIC VISITS

University Leipzig, Department of Chemistry and Mineralogy, Institute of Inorganic Chemistry, Leipzig, Germany

17.10.16 - 17.12.16

PUBLICATIONS

1. Yakhvarov D.G., **Gorbachuk E.V.**, Kagiroy R.M., Sinyashin O.G. Electrochemical reactions of white phosphorus // *Russ. Chem. Bull.*- 2012.- V.7.- P. 1285-1298.
DOI: 10.1007/s11172-012-0176-5
2. Yakhvarov D.G., **Gorbachuk E.V.**, Sinyashin O.G. Electrode Reactions of Elemental (White) Phosphorus and Phosphane PH₃ // *European Journal of Inorganic Chemistry.* -2013.- V. 2013.- P. 4709–4726.
DOI: 10.1002/ejic.201300845
3. **Gorbachuk E.V.**, Khayarov Kh.R., Sinyashin O.G., Yakhvarov D.G. Effect of a sacrificial anode material on the electrochemical generation of phosphane oxide (H₃PO) // *Mendeleev Commun.* - 2014. - V. 24. - P. 334-335.
DOI: <http://dx.doi.org/10.1016/j.mencom.2014.11.005>
4. Yakhvarov D.G., **Gorbachuk E.V.**, Khayarov Kh.R., Morozov V.I., Rizvanov I.Kh., Sinyashin O.G. Electrochemical generation of [P₄]²⁻ dianion from white phosphorus // *Russ. Chem. Bull.* - 2014. - V. 63. - 2423-2427.
DOI: 10.1007/s11172-014-0757-6
5. **Gorbachuk E.V.**, Badeeva E.K., Babaev V.M., Rizvanov I.Kh., Zinnatullin R.G., Pavlov, P.O., Khayarov Kh.R., Yakhvarov D.G., The reactivity of phosphine oxide H₃PO towards ketones // *Russ. Chem. Bull.* – 2016. – P. 1289-1294.
DOI: 10.1002/anie.201100822
6. **Gorbachuk E.V.**, Badeeva E.K., Zinnatullin R.G., Pavlov P.O., Dobrynin A.B., Gubaidullin A.T., Ziganshin M.A., Gerasimov A.V. Sinyashin O.G., Yakhvarov D.G., Polymorphism and thermodynamic properties of chloro(cyclopentadienyl)bis(triphenylphosphine)ruthenium(II) complex // *Journal of Organometallic Chemistry.* – 2016. – V. 805. – P. 49-53.
DOI: <http://dx.doi.org/10.1016/j.jorganchem.2016.01.008>
7. **Gorbachuk E.V.**, Badeeva E.K., Katsyuba S.A., Pavlov P.O., Khayarov Kh.R., Sinyashin O.G., Yakhvarov D.G., Thermal stability of primary and secondary phosphine oxides formed as a reaction of phosphine oxide with ketones // *Phosphorus, Sulfur Silicon Relat. Elem.* –2016. – V. 191. – P. 1480-1481.
DOI: <http://dx.doi.org/10.1080/10426507.2016.1212047>
8. Mindubaev A.Z., Alimova F.K., Voloshina A.D., **Gorbachuk E.V.**, Kulik N.V., Minzanova S.T., Tukhbatova R.I., Yakhvarov D.G., KFU, RU, *Method of detoxification of white phosphorus using a strain of microorganisms Trichoderma*

- asperellum* VKPM F-1087, Russian Federation, Pat. No. 2015131380/10.
9. **Gorbachuk E.V.**, Sinyashin O.G., Yakhvarov D.G. The formation of P_4^{2-} in the reaction of electrochemical reduction of white phosphorus, XXVI International Chugaev Conference on Coordination chemistry, Kazan, Russia, October 6-10, 2014, Book of abstracts, P. 630.
 10. **Gorbachuk E.V.**, Badeeva E.K., Zinnatullin R.G., Pavlov P.O., Dobrynin A.B., Sinyashin O.G., Yakhvarov D.G. New polymorph of $[RuCl(PPh_3)_2(\eta^5-C_5H_5)]$ complex – synthesis, X-ray crystal structure and electrochemical properties, // XXI EuCheMS International Conference on Organometallic Chemistry (EuCOMC XXI) Bratislava, Slovak Republic, July 5–9.,2015, Book of Abstracts, P. 033.
 11. **Gorbachuk, E.V.**, Badeeva, E.K., Pavlov, P.O., Zinnatullin, R.G., Babaev V.M., Rizvanov I.Kh., Sinyashin O.G., Yakhvarov D.G. The reactivity of phosphine oxide H_3PO towards ketones // 21st International Conference on Phosphorus Chemistry (ICPC 2016) Kazan, Russia, June 5-10, 2016, Book of abstracts, P. 99.
 12. **Gorbachuk E.V.**, Badeeva E.K., Pavlov P.O., Zinnatullin R.G., Babaev V.M., Rizvanov I. Kh., Sinyashin O.G., Yakhvarov D.G. First example of electrochemical synthesis of mono- and bis-(alpha-oxyalkyl)phosphine oxides from white phosphorus via phosphine oxide H_3PO // 67th Annual Meeting of the International Society of Electrochemistry (ISE 2016), August 21-26, 2016, Hague, the Netherlands.