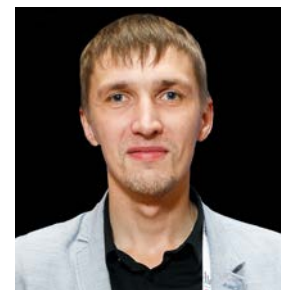


## MIKHAIL N. KHRIZANFOROV

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### GENERAL SUMMARY

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- PhD in Chemistry

- During work at the Institute, Mikhail Khrizanforov developed original composite systems that have no analogues in the world, which are used in various fields of world science and industry - as a result, a new type of supercapacitors was created; sensor systems operating on the principle of donor-acceptor pairs (detectors of explosives); various fuel cells and carbon dioxide reduction catalysts. All developments are based on a composite system developed by Mikhail based on phosphonium ionic liquids. Khrizanforov M.N. for his contribution to the development of modern physical chemistry and nanotechnology, since 2017 he has been a member of the scientific committee of The Applied Nanotechnology & Nanoscience International Conference. He is an expert of the Russian Science Foundation and a member of the international electrochemical community ISE. More than 14 years of laboratory and research experience in the field of electrochemistry, nanotechnology, physical chemistry, electrosynthesis, electroanalysis, electrocatalytic phenomena and organoelement chemistry. During this time, more than 84 publications (Scopus) have been published. h-index = 19 (Scopus). The number of citations is more than 1000

- Scientific Interests: electrosynthesis, energy storage, batteries, solid state electrochemistry, electrochemically induced reactions, catalysis, problems of electrolysis, electrochemical phenomena, electrodes, redox processes, HOMO/LUMO/, electroanalytical methods, electron transfer, intermediates, metal complex catalysis, coupling reactions, functionalization, ecological problems, organoelemental compounds, etc.

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### PROFESSIONAL EXPERIENCE

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#### SENIOR RESEARCHER

*Arbuzov Institute of Organic and Physical Chemistry, FRC Kazan Scientific Center, Russian Academy of Sciences, Kazan, Russia*

**2019- present**

#### VISITING RESEARCH ASSOCIATE

*Lehigh University, Bethlehem, PA, USA*

**2019- 2019**

#### RESEARCH OFFICER

*Russian Academy of Sciences, Arbuzov Institute of Organic and Physical Chemistry Kazan, Russia*

**2015- 2019**

#### JUNIOR RESEARCH OFFICER

*Russian Academy of Sciences, Arbuzov Institute of Organic and Physical Chemistry  
Kazan, Russia*

**2010-2015**

### EDUCATION

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**PhD in Chemistry**

Kazan State University, Kazan, Russia

**November 2013***Thesis titled: "Electrocatalytic fluoroalkylation of aromatic halides by transition metal complexes (Ni, Co, Cu, and Pd)"***M.Sc. IN ORGANIC CHEMYSTRY**

Kazan State University, Kazan, Russia

**June 2010***Thesis titled: "Electrocatalytic fluoroalkylation by transition metal complexes in low oxidation state"***EXPERTISE**

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- Electrochemistry
- Solid State Electrochemistry
- Physical Chemistry
- Organic Chemistry, Organoelemental Chemistry
- Electrosynthesis
- Electroanalysis (Voltammetry)
- Electrocatalytic Phenomena

**AWARDS, HONOURS, FELLOWSHIPS**

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- Laureate of the "Best Young Scientist FRC 2020"
- Member of the International Society of Electrochemistry (since 2019)
- Winner of the Scholarship of the President of the Russian Federation (2018-2020)
- Best young scientist in the field of natural sciences of Republic Tatarstan (2017)
- Young Arbuzovs Prize in the field of fundamental and applied chemistry of Kazan (2015)
- Winner of the III All-Russian Competition of Innovation in the field of green chemistry (2014)

**INTERNATIONAL COOPERATIONS**

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**Professor David Vicic** (Chemistry Department of Lehigh University, Bethlehem, PA, USA) E-mail: [vicic@lehigh.edu](mailto:vicic@lehigh.edu)

**Professor Martin Knupfer** (Leibniz institute for solid state and materials research, Department Electronic and Optical Properties at IFW Dresden, Germany) E-mail: [M.Knupfer@ifw-dresden.de](mailto:M.Knupfer@ifw-dresden.de)

**List of representative publications (Since 2017)**

1. SYNTHESIS, STRUCTURE AND ELECTROCHEMICAL PROPERTIES OF 3,4,5-TRIARYL-1,2-DIPHOSPHAFERROCENES, I.A. Bezkishko, A. Zagidullin, M. Khrizanforov, T. Gerasimova, K. Ivshin, O. Kataeva, Y. Ganushevich, V. Miluykov, P. Lönnecke, E. Hey-Hawkins, Inorg. Chem. Front. 2022, 10.1039/D2QI00446A
2. AEROGEL BASED ON NANOPOROUS ALUMINIUM FERROCENYL DIPHOSPHINATE METAL-ORGANIC FRAMEWORK, Khrizanforova V.V., Shekurov R.P., Nizameev I.R., Gerasimova T.P., Khrizanforov M.N., Bezkishko I.A., Miluykov V.A., Budnikova Y.H., Inorganica Chimica Acta. 2021. V. 518. P. 120240.
3. TOWARDS THE INTERCALATION OF LI CATIONS TO THE CO(II) AND MN(II) FERROCENYL-PHOSPHINIC MOFS, Gerasimova T.P., Khrizanforov M.N., Shekurov

- R.P., Budnikova Y.G., Miluykov V.A., Katsyuba S.A., *Journal of Organometallic Chemistry*. 2021. V. 932. P. 121641.
4. ONE-POT SYNTHESIS OF SODIUM 3,4,5-TRIPHENYL-1,2-DIPHOSPHOLIDE THROUGH DIRECT FUNCTIONALIZATION OF WHITE PHOSPHORUS, Zagidullin A.A., Khrizanforov M.N., Bezkishko I.A., Miluykov V.A., Lönnecke P., Hey-Hawkins E. *Journal of Organometallic Chemistry*. 2021. V. 956. P. 122122.
  5. FIRST EXAMPLE OF UGIS AMINE AS A PLATFORM FOR THE CONSTRUCTION OF CHIRAL COORDINATION POLYMERS: SYNTHESIS AND PROPERTIES, Gilmanova L., Shekurov R., Khrizanforov M., Ivshin K., Kataeva O., Vasily M., Bon V., Senkovska I., Kaskel S., *New Journal of Chemistry*. 2021. V. 45. № 5. P. 2791-2794.
  6. GENERATION OF A HETERO SPIN COMPLEX FROM IRON(II) IODIDE WITH REDOX ACTIVE ACENAPHTHENE-1,2-DIIMINE, Yambulatov D.S., Nikolaevskii S.A., Kiskin M.A., Babeshkin K.A., Efimov N.N., Eremenko I.L., Kholin K.V., Khrizanforov M.N., Budnikova Y.G., Goloveshkin A.S., Imshennik V.K., Maksimov Y.V., Kadilenko E.M., Gritsan N.P., *Molecules*. 2021. V. 26. № 10.
  7. A WATER-SOLUBLE SODIUM PECTATE COMPLEX WITH COPPER AS AN ELECTROCHEMICAL CATALYST FOR CARBON DIOXIDE REDUCTION, Kholin K.V., Khrizanforov M.N., Babaev V.M., Minzanova S.T., Kadirov M.K., Budnikova Y.H., Nizameeva G.R., *Molecules*. 2021. V. 26. № 18.
  8. MAGNESIUM AND NICKEL COMPLEXES WITH BIS(P-IMINOQUINONE) REDOX-ACTIVE LIGAND, Meshcheryakova I.N., Trofimova O.Y., Druzhkov N.O., Pashanova K.I., Piskunov A.V., Yakushev I.A., Dorovatovskii P.V., Khrizanforov M.N., Budnikova Y.G., Aisin R.R., *Russian Journal of Coordination Chemistry*. 2021. V. 47. № 5. 307-318.
  9. ZWITTERIONIC FORM OF UGI AMINE H-PHOSPHINIC ACID: STRUCTURE AND ELECTROCHEMICAL PROPERTIES, Khrizanforov M., Shekurov R., Zagidullin A., Gerasimova T., Ivshin K., Kataeva O., Miluykov V., *Electrochemistry Communications*. 2021. V. 126. 107019.
  10. SYNTHESIS, CRYSTAL STRUCTURE AND ELECTROCHEMICAL PROPERTIES OF POLY(CADMIUM 1,1'-FERROCENEDIYL-BIS(H-PHOSPHINATE)), Shekurov R., Khrizanforov M., Islamov D., Gerasimova T., Zagidullin A., Budnikova Y., Miluykov V., *Journal of Organometallic Chemistry*. 2020. V. 914. 121233.
  11. 2D-METAL-ORGANIC COORDINATION POLYMERS OF LANTHANIDES (LA(III), PR(III) AND ND(III)) WITH REDOX-ACTIVE DIOXOLENE BRIDGING LIGANDS, Kharitonov A.D., Trofimova O.Y., Meshcheryakova I.N., Fukin G.K., Piskunov A.V., Khrizanforov M.N., Budnikova Y.H., Bogomyakov A.S., Aysin R.R., Kovalenko K.A., *CrystEngComm*. 2020. V. 22. № 28. 4675-4679.

12. SYNTHESIS OF THE FIRST CHIRAL POLYNUCLEAR COPPER(I) COMPLEX BASED ON (R)-1-(1-PHENYL)ETHYL-3-(O, O-DIETHYLTHIOPHOSPHORYL)THIOUREA AND ITS CHARACTERIZATION IN THE SOLID STATE AND SOLUTION, Metlushka K.E., Sadkova D.N., Nikitina K.A., Pashagin A.V., Khrizanforov M.N., Budnikova Y.H., Morozov V.I., Latypov S.K., Kataeva O.N., Alfonsov V.A., Islamov D.R., *New Journal of Chemistry*. 2020. V. 44. № 8. 3224-3231.
13. ELECTROCHEMICAL PROPERTIES AND STRUCTURE OF MULTI-FERROCENYL PHOSPHORUS THIOESTERS, Shekurov R., Khrizanforov M., Gerasimova T., Yamaleeva Z., Lakomkina A., Bezkishko I., Kononov A., Sinyashin O., Budnikova Y., Kataeva O., Miluykov V., Ivshin K., *Molecules*. 2020. V. 25. № 4. 939.
14. PDII(P-P) DERIVATIVES OF O-QUINONE ANNULATED WITH DITHIETE CYCLE: ELECTROCHEMICAL PROPERTIES AND COORDINATION REGIOISOMERISM, Martyanov K.A., Abakumov G.A., Baranov E.V., Kuropatov V.A., Cherkasov V.K., Khrizanforova V.V., Khrizanforov M.N., Kholin K.V., Budnikova Y.H., *European Journal of Inorganic Chemistry*. 2020. V. 2020. № 46. 4350-4357.
15. [NI(CF<sub>3</sub>)<sub>4</sub>]<sub>2</sub>:- FOUNDATIONS TOWARD THE DEVELOPMENT OF TRIFLUOROMETHYLATIONS AT UNSUPPORTED NICKEL, Shreiber S.T., Vicic D.A., Dimucci I.M., Lancaster K.M., Khrizanforov M.N., Dudkina Y., Budnikova Y., Titus C.J., Nordlund D., Cramer R.E., *Inorganic Chemistry*. 2020. V. 59. № 13. 9143-9151.
16. SYNTHESIS, STRUCTURE, AND ELECTROCHEMICAL PROPERTIES OF 4,5-DIARYL-1,2,3-TRIPHOSPHAFERROCENES AND THE FIRST EXAMPLE OF MULTI(PHOSPHAFERROCENE), Petrov A.V., Zagidullin A.A., Bezkishko I.A., Khrizanforov M.N., Kholin K.V., Gerasimova T.P., Shekurov R.P., Katsyuba S.A., Kataeva O.N., Budnikova Y.H., Miluykov V.A., Ivshin K.A., *Dalton Transactions: An International Journal of Inorganic Chemistry*. 2020. V. 49. № 47. 17252-17262.
17. 3D NI AND CO REDOX-ACTIVE METAL-ORGANIC FRAMEWORKS BASED ON FERROCENYL DIPHOSPHINATE AND 4,4'-BIPYRIDINE LIGANDS AS EFFICIENT ELECTROCATALYSTS FOR THE HYDROGEN EVOLUTION REACTION, Khrizanforova V., Shekurov R., Miluykov V., Khrizanforov M., Gubaidullin A., Sinyashin O., Budnikova Y., Bon V., Kaskel S., *Dalton Transactions: An International Journal of Inorganic Chemistry*. 2020. V. 49. № 9. 2794-2802.
18. ELECTROCHEMICALLY DRIVEN AND ACID-DRIVEN PYRIDINE-DIRECTED ORTHO-PHOSPHORYLATION OF C(SP<sup>2</sup>)-H BONDS, Gryaznova T.V., Khrizanforov M.N., Levitskaya A.I., Rizvanov I.Kh., Balakina M.Y., Ivshin K.A., Kataeva O.N., Budnikova Y.H., *Organometallics*. 2020. V. 39. № 13. 2446-2454.
19. SYNTHETIC TUNING OF COII-DOPED SILICA NANOARCHITECTURE TOWARDS ELECTROCHEMICAL SENSING ABILITY, Bochkova O., Khrizanforov M., Gubaidullin A., Gerasimova T., Nizameev I., Kholin K., Budnikova Y., Sinyashin O., Mustafina A., Laskin A., *Nanomaterials*. 2020. V. 10. № 7. 1-19.

20. IR AND RAMAN MARKERS OF FE(II) SPIN STATE IN THE SPIN-CROSSOVER COMPLEX OF IRON(II) NITRATE WITH TRIS(3,5-DIMETHYLPYRAZOL-1-YL)METHANE, Gerasimova T.P., Vandyukov A.E., Katsyuba S.A., Shekurov R.P., Khrizanforov M.N., Lavrenova L.G., *Journal of Physics: Conference Series*. 2019. 012006.

21. REVERSIBLE TEMPERATURE-RESPONSIBLE EMISSION IN SOLUTIONS WITHIN 293-333 K PRODUCED BY DISSOCIATIVE BEHAVIOR OF MULTINUCLEAR CU(I) COMPLEXES WITH AMINOMETHYLPHOSPHINES, Elistratova Ju., Faizullin B., Dayanova I., Strel'nik I., Strel'nik A., Gerasimova T., Fayzullin R., Babaev V., Khrizanforov M., Budnikova Yu., Musina E., Katsyuba S., Karasik A., Mustafina A., Sinyashin O., *Inorganica Chimica Acta*. 2019. V. 498. 119125.

22. SUPRAMOLECULAR ARCHITECTURE OF DIAMMONIUM FERROCENE-1,1'-DIYLDI(METHYLPHOSPHINATE), Shekurov R., Khrizanforov M., Ivshin K., Miluykov V., Budnikova Y., Kataeva O., *Journal of Organometallic Chemistry*. 2019. V. 904. 121004.

23. UNUSUAL MAGNETIC RELAXATION BEHAVIOR OF HYDROPHILIC COLLOIDS BASED ON GADOLINIUM(III) OCTABUTOXYPHTHALOCYANINATE, Zairov R.R., Khrizanforov M., Nizameev I.R., Syakaev V.V., Gubaidullin A.T., Budnikova Y.H., Mustafina A.R., Kornev T., Yagodin A.V., Martynov A.G., Gorbunova Y.G., Kaman O. *Journal of Nanoparticle Research*. 2019. V. 21. № 1. 12.

24. EVALUATION OF TRANSITION METAL CATALYSTS IN ELECTROCHEMICALLY INDUCED AROMATIC PHOSPHONATION, Strekalova S., Khrizanforov M., Budnikova Y., *Molecules*. 2019. V. 24. № 9. 1823.

25. CATALYTIC PHOSPHORYLATION OF AROMATIC C-H BONDS: FROM TRADITIONAL APPROACHES TO ELECTROCHEMISTRY, Strekalova S., Khrizanforov M., Sinyashin O., Budnikova Y., *Current Organic Chemistry*. 2019. V. 23. № 16. 1756-1770.

26. IONIC LIQUIDS AS BENEFICIAL MEDIUM FOR ELECTROCHEMICALLY INDUCED TRANSFORMATION AND FUNCTIONALIZATION OF WHITE PHOSPHORUS, Gryaznova T.V., Nikanshina E.O., Khrizanforov M.N., Budnikova Yu.H., *Ionics*. 2019. V. 25. № 11. 5495-5500.

27. EXCELLENT SUPERCAPACITOR AND SENSOR PERFORMANCE OF ROBUST COBALT PHOSPHINATE FERROCENYL ORGANIC FRAMEWORK MATERIALS ACHIEVED BY INTRINSIC REDOX AND STRUCTURE PROPERTIES, Khrizanforov M., Shekurov R., Miluykov V., Gilmanova L., Kataeva O., Yamaleeva Z., Gerasimova T., Ermolaev V., Gubaidullin A., Budnikova Y., Laskin A., *Dalton Transactions* 2019. V. 48. № 45. 16986-16992.

28. AN UNUSUAL DONOR-ACCEPTOR SYSTEM MNIIPC-TCNQ/F4-TCNQ AND THE PROPERTIES OF THE MIXED SINGLE CRYSTALS OF METAL PHTHALOCYANINES WITH ORGANIC ACCEPTOR MOLECULES, Kataeva O.,

Metlushka K., Ivshin K., Nikitina K., Alfonsov V., Vandyukov A., Khrizanforov M., Budnikova Y., Sinyashin O., Krupskaya Y., Kataev V., Büchner B., Knupfer M., Dalton Transactions 2019. V. 48. № 46. 17252-17257.

29. ZN AND CO REDOX ACTIVE COORDINATION POLYMERS AS EFFICIENT ELECTROCATALYSTS, Shekurov R.P., Khrizanforova V.V., Gilmanova L., Khrizanforov M., Miluykov V., Kataeva O., Yamaleeva Z., Burganov T., Gerasimova T., Khamatgalimov A., Katsyuba S., Kovalenko V., Krupskaya Yu., Kataev V., Büchner B., Bon V., Senkovska I., Kaskel S., Gubaidullin A., Sinyashin O. et al. Dalton Transactions. 2019. V. 48. № 11. 3601-3609.

30. ELECTROCHEMICAL PROPERTIES OF POLY([EU OR DY OR Y] 1,1'-FERROCENEDIYL-BIS(H-PHOSPHINATES)), Khrizanforov M.N., Shekurov R.P., Gilmanova L.H., Gerasimova T.P., Miluykov V.A., Budnikova Y.H., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 10. 1010-1012.

31. INHIBITORY PROPERTY OF POLY(MANGANESE 1,1'-FERROCENEDIYL-BIS(H-PHOSPHINATE)), Khrizanforov M.N., Shekurov R.P., Gilmanova L.H., Miluykov V.A., Budnikova Y.H., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 10. 1013-1014.

32. C-P BOND FORMATION VIA SELECTIVE ELECTROCATALYTIC C-H PHOSPHORYLATION, Khrizanforov M.N., Strekalova S.O., Grinenko V.V., Kononov A.I., Dolengovski E.L., Budnikova Y.H., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 4-6. 384-385.

33. PHOSPHONIUM-BASED IONIC LIQUIDS AS ELECTROLYTE FOR SUPERCAPACITORS, Khrizanforov M.N., Grinenko V.V., Strekalova S.O., Budnikova Y.H., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 4-6. 388-390.

34. SYNTHESIS AND CHARACTERIZATION OF POLY([EU OR DY] 1,1'-FERROCENEDIYL-BIS( H -PHOSPHINATES)), Shekurov R.P., Gilmanova L.H., Khrizanforov M.N., Strekalova S.O., Budnikova Y.H., Gerasimova T.P., Katsyuba S.A., Miluykov V.A., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 4-6. 459-462

35. FERROCENE-CONTAINING COORDINATION POLYMERS AS WAY FOR PREPARATION OF ENERGY CARRIERS, Strekalova S.O., Shekurov R.P., Gilmanova L.H., Gerasimova T.P., Grinenko V.V., Kononov A.I., Dolengovski E.L., Budnikova Y.H., Khrizanforov M.N., Phosphorus, Sulfur and Silicon and the Related Elements. 2019. V. 194. № 4-6. 571-574.

36. SELECTIVE C(SP<sup>2</sup>)-H AMINATION CATALYZED BY HIGH-VALENT COBALT(III)/(IV)-BPY COMPLEX IMMOBILIZED ON SILICA NANOPARTICLES, Budnikova Y., Bochkova O., Khrizanforov M., Nizameev I., Kholin K., Gryaznova T.,

Dudkina Y., Strekalova S., Fedorenko S., Kononov A., Mustafina A., Laskin A., *ChemCatChem*. 2019. V. 11. № 22. 5615-5624.

37. NANO-ARCHITECTURE OF SILICA NANOPARTICLES AS A TOOL TO TUNE BOTH ELECTROCHEMICAL AND CATALYTIC BEHAVIOR OF NiIII@SiO<sub>2</sub>, Khrizanforov M.N., Fedorenko S.V., Mustafina A.R., Khrizanforova V.V., Kholin K.V., Nizameev I.R., Gryaznova T.V., Grinenko V.V., Budnikova Y.H., *RSC Advances*. 2019. V. 9. № 39. 22627-22635.

38. 1,5-DIAZA-3,7-DIPHOSPHACYCLOOCTANE BIS-PHOSPHONATE-LIGAND NICKEL(II) COMPLEXES AS OXYGEN REDUCTION CATALYSTS FOR PROTON-EXCHANGE MEMBRANE FUEL CELLS, Kadirov M., Karasik A., Nizameev I., Spiridonova Yu., Khrizanforov M., Kadirov D., Nizameeva G., Khrizanforova V., Mukhametzhanova D., Budnikova Yu., Sinyashin O., *Energy Technology*. 2019. V. 7. № 7. 1900020.

39. A NICKEL-BASED PECTIN METAL-ORGANIC FRAMEWORK AS A HYDROGEN OXIDATION REACTION CATALYST FOR PROTON-EXCHANGE-MEMBRANE FUEL CELLS, Kadirov M.K., Minzanova S.T., Nizameev I.R., Khrizanforov M.N., Mironova L.G., Kholin K.V., Kadirov D.M., Nefed'ev E.S., Morozov M.V., Gubaidullin A.T., Budnikova Yu.H., Sinyashin O.G., *ChemistrySelect*. 2019. V. 4. № 16. 4731-4734.

40. IR AND UV STUDY OF REVERSIBLE WATER-INDUCED STRUCTURAL TRANSFORMATIONS OF POLY(MANGANESE 1,1'-FERROCENEDIYL-BIS(H-PHOSPHINATE)) AND POLY(COBALT 1,1'-FERROCENEDIYL-BIS(H-PHOSPHINATE)), Gerasimova T., Shekurov R., Gilmanova L., Katsyuba S., Kovalenko V., Khrizanforov M., Milyukov V., Sinyashin O., Laskin A., *Journal of Molecular Structure*. 2018. V. 1166. 237-242.

41. NEW Pt(II) COMPLEX WITH EXTRA PURE GREEN EMISSION FOR OLED APPLICATION: SYNTHESIS, CRYSTAL STRUCTURE AND SPECTRAL PROPERTIES, Taidakov I., Saifutyarov R., Mozhevitina E., Khomyakov A., Avetissov I., Ambrozevich S., Lyssenko K., Avetisov R., Khrizanforov M., Budnikova Y., *Journal of Organometallic Chemistry*. 2018. V. 867. 253-260.

42. IRON COMPLEXES OF BIANS: REDOX TRENDS AND ELECTROCATALYSIS OF HYDROGEN EVOLUTION, Khrizanforova V.V., Morozov V.I., Khrizanforov M.N., Lukoyanov A.N., Kataeva O.N., Fedushkin I.L., Budnikova Yu.H., *Polyhedron*. 2018. V. 154. 77-82.

43. COBALT-CATALYZED GREEN CROSS-DEHYDROGENATIVE C(SP<sup>2</sup>)-H/P-H COUPLING REACTIONS, Khrizanforov M., Strekalova S., Khrizanforova V., Dobrynin A., Kholin K., Gryaznova T., Grinenko V., Gubaidullin A., Kadirov M.K., Budnikova Y., *Topics in Catalysis*. 2018. V. 61. № 18-19. 1949-1956.

44. PALLADIUM NANOPARTICLES-POLYPYRROLE COMPOSITE AS EFFECTIVE CATALYST FOR FLUOROALKYLATION OF ALKENES, Gryaznova T.V., Khrizanforov

- M.N., Kholin K.V., Vorotyntsev M.A., Gorkov K.V., Talagaeva N.V., Dmitrieva M.V., Zolotukhina E.V., Budnikova Y.H., *Catalysis Letters*. 2018. V. 148. № 10. 3119-3125.
45. ELECTROOXIDATIVE CH/PH FUNCTIONALIZATION AS A NOVEL WAY TO SYNTHESIZE BENZO[ B ]PHOSPHOLE OXIDES MEDIATED BY CATALYTIC AMOUNTS OF SILVER ACETATE, Khrizanforova V.V., Kholin K.V., Khrizanforov M.N., Kadirov M.K., Budnikova Yu.H., *New Journal of Chemistry*. 2018. V. 42. № 2. 930-935.
46. FERROCENE-CONTAINING STERICALLY HINDERED PHOSPHONIUM SALTS, Ermolaev V., Gerasimova T., Kadyrgulova L., Shekurov R., Dolengovski E., Kononov A., Miluykov V., Sinyashin O., Katsyuba S., Budnikova Yu., Khrizanforov M., *Molecules*. 2018. V. 23. № 11. 2773.
47. ELECTROCHEMICAL OXIDATIVE PHOSPHORYLATION OF AZOLES IN THE PRESENCE OF SILVER CATALYSTS, Yurko E.O., Gryaznova T.V., Khrizanforova V.V., Khrizanforov M.N., Toropchina A.V., Budnikova Y.H., Sinyashin O.G., *Russian Chemical Bulletin*. 2018. V. 67. № 1. 102-107.
48. ELECTRON TRANSFER AND UNUSUAL CHEMICAL TRANSFORMATIONS OF F4-TCNQ IN A REACTION WITH MN-PHTHALOCYANINE, Kataeva O., Metlushka K., Ivshin K., Alfonsov V., Khrizanforov M., Budnikova Y., Sinyashin O., Kiiamov A., Krupskaya Y., Kataev V., Büchner B., Knupfer M., *European Journal of Inorganic Chemistry*. 2018. V. 2018. № 28. 3344-3353.
49. SILICA-SUPPORTED SILVER NANOPARTICLES AS AN EFFICIENT CATALYST FOR AROMATIC C–H ALKYLATION AND FLUOROALKYLATION, Khrizanforov M.N., Fedorenko S.V., Mustafina A.R., Kholin K.V., Nizameev I.R., Strekalova S.O., Grinenko V.V., Gryaznova T.V., Zairov R.R., Mazzaro R., Morandi V., Vomiero A., Budnikova Yu.H., *Dalton Transactions* 2018. V. 47. № 29. 9608-9616.
50. A NICKEL-BASED PECTIN COORDINATION POLYMER AS AN OXYGEN REDUCTION REACTION CATALYST FOR PROTON-EXCHANGE MEMBRANE FUEL CELLS, Kadirov M.K., Minzanova S.T., Nizameev I.R., Mironova L.G., Khrizanforov M.N., Kholin K.V., Khamatgalimov A.R., Morozov V.I., Budnikova Y.H., Sinyashin O.G., Semyonov V.A., Kadirov D.M., Mukhametzyanov A.R., Gilmutdinov I.F. *Inorganic Chemistry Frontiers*. 2018. V. 5. № 4. 780-784.
51. NOVEL APPROACH TO METAL-INDUCED OXIDATIVE PHOSPHORYLATION OF AROMATIC COMPOUNDS, Khrizanforov M.N., Strekalova S.O., Kholin K.V., Khrizanforova V.V., Kadirov M.K., Gryaznova T.V., Budnikova Y.H., *Catalysis Today*. 2017. V. 279. № P1. 133-141.
52. IN SITU ELECTROCHEMICAL SYNTHESIS OF NI(I) COMPLEXES WITH AMINOMETHYLPHOSPHINES AS INTERMEDIATES FOR HYDROGEN EVOLUTION, Khrizanforova V.V., Morozov V.I., Strelnik A.G., Spiridonova Y.S., Khrizanforov M.N., Burganov T.I., Katsyuba S.A., Latypov S.K., Kadirov M.K., Karasik A.A., Sinyashin O.G., Budnikova Y.H., *Electrochimica Acta*. 2017. V. 225. 467-472.



53. FE AND NI-CATALYZED ELECTROCHEMICAL PERFLUOROALKYLATION OF C-H BONDS OF COUMARINS, Khrizanforov M.N., Strekalova S.O., Grinenko V.V., Khrizanforova V.V., Gryaznova T.V., Budnikova Y.H., Russian Chemical Bulletin. 2017. V. 66. № 8. 1446-1449.
54. ECO-EFFICIENT ELECTROCATALYTIC C-P BOND FORMATION, Budnikova Y.H., Gryaznova T.V., Grinenko V.V., Dudkina Y.B., Khrizanforov M.N., Pure and Applied Chemistry. 2017. V. 89. № 3. 311-330.
55. REDOX-INDUCED AROMATIC C-H BOND FUNCTIONALIZATION IN METAL COMPLEX CATALYSIS FROM THE ELECTROCHEMICAL POINT OF VIEW, Budnikova Yu., Dudkina Yu., Khrizanforov M., Inorganics. 2017. V. 5. № 4. 70.