

YULIA H. BUDNIKOVA

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GENERAL SUMMARY

- Doctor of Chemical Sciences (Habilitation), h=21 (WoS, Scopus), 23 (RICC), more 1600 citations
- Over 30 years of laboratory and research experience in Organic Electrochemistry, Physical chemistry as well as Electrochemistry, Electrosynthesis, Electroanalysis, Electrocatalytic phenomena and organoelemental chemistry. Has more 160 publications and 15 inventor's certificates.
- Scientific Interests: electrosynthesis, electrochemically induced reactions, catalysis, problems of electrolysis, electrochemical phenomena, electrodes, redox processes, electroanalytical methods, electron transfer, intermediates, metal complex catalysis, coupling reactions, functionalization, chemistry of white phosphorus, ecological problems, organoelemental compounds, etc.

PROFESSIONAL EXPERIENCE

Head of Electrochemical Synthesis Laboratory Russian Academy of Sciences <i>Arbusov Institute of Organic and Physical Chemistry Kazan, Russia</i>	2007- present
Leading Research Officer Russian Academy of Sciences, <i>Arbusov Institute of Organic and Physical Chemistry</i> Laboratory of Organometallic Synthesis Kazan, Russia	2001 - 2008
SENIOR RESEARCH OFFICER Russian Academy of Sciences, <i>Arbusov Institute of Organic and Physical Chemistry</i> Laboratory of Organometallic Synthesis Kazan, Russia	1995 – 2001
SABATICAL LEAVE <i>CNRS, Laboratoire d'Electrochimie, Catalyse et Synthese Organique, Thiais, France.</i> <i>Spent one year at the laboratory of professor J.Perichon</i>	1997-1998
RESEARCH OFFICER Russian Academy of Sciences, <i>Arbusov Institute of Organic and Physical Chemistry Kazan, Russia</i>	1992-1995
JUNIOR RESEARCH OFFICER <i>Russian Academy of Sciences, Arbusov Institute of Organic and Physical Chemistry</i> Kazan, Russia	1990-1992

EDUCATION

Doctor of Chemical Sciences (Habilitation) <i>Kazan State University, A.E.Arbusov Institute of Organic and Physical chemistry of Kazan Scientific</i>	December 1999 <i>Thesis titled: "Mechanisms of Homogeneous Electrocatalytic Reactions of Rupture and Formation of the Phosphorous and Carbon Bonds"</i>
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Center of RAS, Kazan, Russia

**PhD in Chemistry (Candidate of
Chemical Sciences)**

Kazan State University, Kazan, Russia

May 1990

*Thesis titled: " Electrochemically Initiated Processes of
Formation of Phosphorus Acid Esters From White
Phosphorus"*

M.Sc. IN PHYSICAL CHEMISTRY

Kazan State University, Kazan, Russia

June 1987

*Thesis titled: "'Electrochemically Initiated Processes of
Formation of Phosphorus Acid Esters From White
Phosphorus in Alcohol Media"*

EXPERTISE

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

AWARDS, HONOURS, FELLOWSHIPS

- Russian President's special grant for young scientists (1995 – 1996)
- Financial Award from the Russian Government to a prominent scientist
- The state premium in the field of a science and technics of Republic Tatarstan , 2007
- Visiting professor of Zhengzhou University (China) since 2017;
- Laureate of the LA Chugaev Prize 2018 - for outstanding work in the field of chemistry of complex compounds, namely, "Coordination compounds in the electrochemical synthesis of effective catalysts and electrocatalysts of practically significant reactions."
- Honored Scientist of the Republic of Tatarstan

BOOKS

- 1) S.Krasnov, **Y.Budnikova**. Developments in Electrochemistry. Chapter title: Electrochemical Transformation of White Phosphorus as a Way to Compounds With Phosphorus-Hydrogen and Phosphorus-Carbon Bonds. Book edited by: Jang H. Chun, Ph.D. Kwangwoon University, South Korea. 2012. DOI: 10.5772/53886 Book edited by Jang H. Chun, ISBN 978-953-51-0851-1
- 2) **Y.H. Budnikova**. Modern organic electrosynthesis. Principles, research methods and practical applications. INFRA-M, Moscow, 2016, 440pp. ISBN 978-5-16-011761-4 (PRINT), ISBN 978-5-16-104171-0 (ONLINE)
- 3) **Y.H. Budnikova**, O.G.Sinyashin, Electrochemistry of organophosphorus compounds. In the book. "Electrochemistry of organic compounds in the early twenty-first century." Ed. Goulyai V.P., Krivenko A.G., Tomilov A.P. – M.: Satellite 2008, 577 pp.

Web of Science: <http://www.researcherid.com/rid/A-9843-2011>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=7003733025>

ORCID: <http://orcid.org/0000-0001-9497-4006>

LATEST PAPERS

1. Redox Trends in Cyclometalated Palladium(II) Complexes. Yulia B. Dudkina, Kirill V. Kholin, Tatyana V. Gryaznova, Daut R. Islamov, Olga N. Kataeva, Ildar Kh. Rizvanov, Alina I. Levitskaya, Olga D. Fominykh, Marina Yu. Balakina, Oleg G. Sinyashin, Yulia H. Budnikova. *Dalton Transactions*, 2017, 2017, 46, 165 – 177 DOI: 10.1039/C6DT03786K IF 4.177 (2016) Q1
2. Eco-efficient Electrocatalytic C-P bond Formation, Yulia H. Budnikova, Tatyana V. Gryaznova, Valeriya V. Grinenko, Yulia B. Dudkina and Mikhail N. Khrizanforov, *Pure and Applied Chemistry, Pure Appl. Chem.* 2017; 89(3): 311–330 <http://dx.doi.org/10.1515/pac-2016-1001> IF 5.294 (2017) Q1
3. A nickel-based pectin coordination polymer as an oxygen reduction reaction catalyst for proton-exchange membrane fuel cells. M. K. Kadirov, S.Minzanova, I. Nizameev, L. G. Mironova, I. Gilmutdinov, M. Khrizanforov, K. V. Kholin, A.R. Khamatgalimov, V.Semenov, V. Morozov, D. M. Kadirov, A. Mukhametzyanov, Y. H. Budnikova and O. G. Sinyashin, *Inorg. Chem. Front.*, 2018, 5(4), 780-784 DOI: 10.1039/C7QI00770A. IF 5.106 (2017) Q1
4. Heterocyclic eight-membered P-pyridylbisphosphines as novel functional chelating ligands for the construction of catalysts for electrochemical hydrogen transformations. Musina, E.; Strelnik, I.; Khrizanforova, V.; Valitov, M.; Spiridonova, Y.; Krivolapov, D.; Kadirov, M.; Litvinov, Igor; Lönnecke, Peter; Hey-Hawkins, Evamarie; Budnikova, Yulia; Karasik, Andrey; Sinyashin, Oleg. *Chemistry - A European Journal*, 2014; 20(11):3169-82 DOI:10.1002/chem.201304234 Q1 IF 5.831 (2016)
5. Synthetic organometallic models of iron-containing hydrogenases as molecular electrocatalysts for hydrogen evolution or oxidation. V. V Khrizanforova, A. A Karasik, Y. H Budnikova. *Russ. Chem. Rev.*, 2017, 86 (4) 298 – 317 DOI: 10.1070/RCR4676 IF 3.991 (2017) Q1
6. Electrooxidative CH/PH functionalization as a novel way to benzo[b]phosphole oxides mediated by catalytic amounts of silver acetate. V. V. Khrizanforova, K. V. Kholin, M. N. Khrizanforov, M. K. Kadirov and Yu. H. Budnikova *New J. Chem.*, 2018,42, 930-935 DOI: 10.1039/C7NJ03717A Impact factor: 3.269 (2017) Q1
7. External Oxidant-Free Cross-Coupling: Electrochemically Induced Aromatic C-H Phosphonation of Azoles with Dialkyl-H-Phosphonates Under Silver Catalysis, E.O.Yurko , T.V.Gryaznova , K.V.Kholin , V.V.Khrizanforova, Y.H.Budnikova. *Dalton Transactions*, 2018, 47, 190–196 DOI: 10.1039/C7DT03650G IF 4.099 (2017) Q1
8. Organometallic Polymer Electrolyte Membrane Fuel Cell Bis-Ligand Nickel(II) Complex of 1,5-Di-P-Tolyl-3,7-Dipyridine-1,5,3,7-Diazadiphosphacyclo-Octane Catalyst. Marsil Kadirov, Andrey Karasik, Irek Nizameev, Igor Strelnik, Kirill Kholin, Danis Kadirov, Timur Ismaev, Yulia Budnikova, Oleg Sinyashin. *Energy Technology*, 2018, 6, P. 1088 – 1095 DOI: 10.1002/ente.201700711 IF 3.175 (2017) Q1
9. Iron-Catalyzed Electrochemical C-H Perfluoroalkylation of Arenes Mikhail Khrizanforov, Sofia Strekalova, Vera Khrizanforova, Valeriya Grinenko, Kirill Kholin, Marsil Kadirov, Timur Burganov, Aidar Gubaidullin, Tatyana Gryaznova, Oleg Sinyashin, Long Xu, David A. Vicic, Yulia Budnikova. DOI: 10.1039/C5DT03009A *Dalton Trans.*, 2015, 44, 19674–19681 IF: 4.177 (2016) Q1
10. Novel approach to metal-induced oxidative phosphorylation of aromatic compounds, M.N. Khrizanforov, S.O. Strekalova, K.V. Kholin, V.V. Khrizanforova, M.K. Kadirov, T.V. Gryaznova, Y.H. Budnikova, *Catalysis Today*, 2017, Volume 279, Part 1, 1 January 2017, Pages 133–141 10.1016/j.cattod.2016.06.001 IF 4,312 (2016) Q1
11. Ni (III) Complex Stabilized by Silica Nanoparticles as an Efficient Nanoheterogeneous Catalyst for Oxidative C-H Fluoroalkylation. M. Khrizanforov, S. V. Fedorenko, S.O Strekalova, K. V. Kholin, A.a Mustafina, M. Ye. Zhilkin, V. Khrizanforova, Y. N. Osin, V. V. Salnikov, T. Gryaznova and Y. H Budnikova, *Dalton Trans.*, 2016, 45, 11976-11982, DOI: 10.1039/C6DT01492E IF: 4.177 (2016) Q1
12. Modern organic electrosynthesis. Principles, research methods and practical applications. Y.H. Budnikova. *Series Scientific Thought, Infra-M, Moscow*, 2016, 440p. ISBN 978-5-16-011761-4 (print), ISBN 978-5-16-104171-0 (online)
13. Budnikova Yu. H., Sinyashin O. G., Phosphorylation of aromatic C–H bonds involving metals and metal complexes // *Russ. Chem. Rev.* –2015. –Vol.84. –N.9. –P.917–951 DOI: 10.1070/RCR4525 IF 2.346 (2016) Q1

14. Electrochemical nickel-induced fluoroalkylation: synthetic, structural and mechanistic study. Dmitry Mikhaylov, Tatyana Gryaznova, Yulia Dudkina, Mikhail Khrizanphorov, Shamil Latypov, Olga Kataeva, David A. Vivic, Oleg G. Sinyashin and Yulia Budnikova. *Dalton Trans.*, 2012, 41, N1, 165-172. IF: 4.177 (2016) Q1
15. MII/MIII-Catalyzed ortho-Fluoroalkylation of 2-Phenylpyridine. Yulia B. Dudkina, Dmitry Y. Mikhaylov, Tatyana V. Gryaznova, Oleg G. Sinyashin, David A. Vivic, Yulia H. Budnikova. *Eur. J. Org. Chem.* 2012, 2114–2117 IF 3.068 (2016) Q1
16. Aromatic perfluoroalkylation with metal complexes in electrocatalytic conditions. Mikhail Khrizanforov, Tatyana Gryaznova, Oleg Sinyashin, Yulia Budnikova. *Journal of Organometallic Chemistry.* 718 (2012) 101-104 IF 2.336 (2016) Q1 (2016)
17. Electrochemical Ortho Functionalization of 2-Phenylpyridine with Perfluorocarboxylic Acids Catalyzed by Palladium in Higher Oxidation States. Yulia B. Dudkina, Dmitry Y. Mikhaylov, Tatyana V. Gryaznova, Artem I. Tufatullin, Olga N. Kataeva, David A. Vivic, Yulia H. Budnikova. *Organometallics*, 2013, 32, 4785–4792 DOI: 10.1021/om400492g IF 4.186 (2016) Q1
18. One-step synthesis of rccc- and rctt-diastereomers of novel calix[4]resorcinols based on a parathiophosphorylated derivative of benzaldehyde. I. R. Knyazeva, V. I. Sokolova, M. Gruner, W. D. Habicher, V. V. Syakaev, V. V. Khrizanforova, B.M. Gabidullin, A T. Gubaidullin, Yulia H. Budnikova, A. R. Burirov, M. A. Pudovik. *Tetrahedron Letters* 54 (2013) 3538–3542 IF 2.347 (2016)
19. Prospects of Synthetic Electrochemistry in the Development of New Methods of Electrocatalytic Fluoroalkylation. Dudkina Y.B., Khrizanforov M.N., Gryaznova T.V., Budnikova Y.H., *Journal of Organometallic Chemistry.* 2014. Volume 751, Pages 301–305 DOI 10.1016/j.jorganchem.2013.10.012 Q1 IF 2.336 (2016)
20. N,N'-Fused Bisphosphole: Heteroaromatic Molecule with Two-Coordinate and Formally Divalent Phosphorus. Synthesis, Electronic Structure, and Chemical Properties. Alexander N. Kornev, Vyacheslav V. Sushev, Yulia S. Panova, Olga V. Lukoyanova, Sergey Yu. Ketkov, Evgenii V. Baranov, Georgy K. Fukin, Mikhail A. Lopatin, Yulia G. Budnikova, and Gleb A. Abakumov, *Inorg. Chem.* 2014, 53, 3243–3252 Q1 IF 4.820 (2016)
21. Pyridine-directed palladium-catalyzed electrochemical phosphonation of C(sp²)-H bond T.V. Grayaznova, Y.B. Dudkina, D.R. Islamov, O.N. Kataeva, O.G. Sinyashin, D.A. Vivic, Yu.H. Budnikova. *J.Organomet. Chem.* 785 (2015) 68-71. doi:10.1016/j.jorganchem.2015.03.001 Q1 IF 2.336 (2016)
22. First iron and cobalt(II) hexabromocyclorhathelates: structural, magnetic, redox, and electrocatalytic behavior. A. V. Dolganov, A. S. Belov, V. V. Novikov, A. V. Vologzhanina, G. V. Romanenko, Y. G. Budnikova, Genrikh E. Zelinskii, M. I. Buzin, Yan Z. Voloshin. *Dalton Trans.*, 2015, 44, 2476-2487 DOI: 10.1039/C4DT03082F Q1 IF: 4.177 (2016)
23. Nanoheterogeneous Catalysis in Electrochemically Induced Olefin Perfluoroalkylation. Yulia B. Dudkina, Tatyana V. Gryaznova, Yuri N. Osin, Vadim V. Salnikov, Nikolay A. Davydov, Svetlana V. Fedorenko, Asia R. Mustafina, David A. Vivic, Oleg G. Sinyashin, Yulia H. Budnikova. *Dalton Transactions*, 2015, 44, 8833 – 8838 DOI: 10.1039/C5DT00269A IF: 4.177 (2016) Q1
24. Unexpected ligand effect on the catalytic reaction rate acceleration for hydrogen production using biomimetic nickel electrocatalysts with 1,5-diaza-3,7-diphosphacyclooctanes. V. V. Khrizanforova, V. I. Morozov, E. I. Musina, M. N. Khrizanforov, D. A. Mironova, D. R. Islamov, O. N. Kataeva, A. A. Karasik, O. G. Sinyashin, Y. H. Budnikova. *J.Organomet. Chem.* 2015, V. 789–790, P. 14–21 <http://dx.doi.org/10.1016/j.jorganchem.2015.04.044> Q1 IF 2.336 (2016)
25. Electrochemical properties of diphosphonate-bridged palladacycles and their reactivity in arene phosphonation. T. Gryaznova, Y. Dudkina, M. Khrizanforov, O. Sinyashin, O. Kataeva, Y. Budnikova. *J.Solid State Electrochem.* 2015, 19:2665–2672 DOI 10.1007/s10008-015-2875-y Impact Factor 2.509 (2017)
26. Cyclic Phosphino Amino Pyridines—Novel Instrument for Construction of Catalysts and Luminescent Materials. Phosphorus, Sulfur, and Silicon and the Related Elements. V. 190, Issue 5-6, 2015, pages 729-732 A. A. Karasik, E. I. Musina, I. D. Strelnik, A. S. Balueva, Y. H. Budnikova, O. G. Sinyashin DOI: 10.1080/10426507.2014.989431 Impact Factor: 0.723 (2016)
27. Novel paste electrodes based on phosphonium salt room temperature ionic liquids for studying the redox properties of insoluble compounds. M. N. Khrizanforov, D. M. Arkhipova, R. P. Shekurov, T. P. Gerasimova, V. V. Ermolaev, D. R. Islamov, V. A. Miluykov, O. N. Kataeva, V. V. Khrizanforova, O.

- G. Sinyashin, Y. H. Budnikova. *J Solid State Electrochem* (2015) 19:2883–2890 DOI 10.1007/s10008-015-2901-0 Impact Factor 2.509 (2017)
28. Accessing perfluoroalkyl nickel(II), (III), and (IV) complexes bearing a readily attached [C4F8] ligand. S. Yu, Y. Dudkina, H. Wang, K. V. Kholin, M. K. Kadirov, Y. H. Budnikova and D. A. Vicic. : *Dalton transactions*, 2015, 44, 19443-19446 Q1 DOI: 10.1039/c5dt01771h. IF: 4.177 (2016)
29. Spectroelectrochemistry: ESR of Paramagnetic Intermediates in the Electron Transfer Series [Cr(bpy)₃]ⁿ (n = 3+, 2+, 1+, 0, 1-). K. Kholin, M. Valitov, V. Burirov, E. Tselischeva, S. Strekalova, A. Mustafina, Y. Budnikova, M. Kadirov (2015) *Electrochimica Acta* (2015), Volume 182, pp. 212-216 DOI information: 10.1016/j.electacta.2015.09.073 IF 4.803 (2016) Q1
30. Surface decoration of silica nanoparticles by Pd(0) deposition for catalytic application in aqueous solutions. S. Fedorenko, M. Jilkin, N. Nastapova, V. Yanilkin, O. Bochkova, V. Burirov, I. Nizameev, G. Nasretdinova, M. Kadirov, A. Mustafina, Y. Budnikova. *Colloids and Surfaces A: Physicochemical and Engineering Aspects*. Volume 486, 5 December 2015, Pages 185–191. doi:10.1016/j.colsurfa.2015.09.044 IF 2.834 (2016)
31. Nickel Complexes Based on Thiophosphorylated Calix[4]resorcinols as Effective Catalysts for Hydrogen Evolution. V. V. Khrizanforova, I. R. Knyazeva, V. I. Matveeva (Sokolova), I. R. Nizameev, T. V. Gryaznova, M. K. Kadirov, A. R. Burirov, O. G. Sinyashin, Y. H. Budnikova. *Electrocatalysis*, 2015, V. 6, Issue 4, pp 357-364 (IF 2.089) (2016) DOI: 10.1007/s12678-015-0251-4
32. Crystal growth, dynamic and charge transfer properties of new coronene charge transfer complexes. Olga Kataeva, Mikhail Khrizanforov, Yulia Budnikova, Daut Islamov, Timur Burganov, Alexander Vandyukov, Konstantin Lyssenko, Benjamin Mahns, Markus Nohr, Silke Hampel, and Martin Knupfer. *Cryst. Growth Des.*, 2016, 16 (1), pp 331–338 DOI 10.1021/acs.cgd.5b01301 IF 4.425 (2016) Q1
33. New Sterically-hindered o-Quinones Annelated with Metaldithiolate: Regiospecificity in Oxidative Addition Reactions of Bifacial Ligand to the Pd and Pt Complexes, K. A. Martyanov, V. K. Cherkasov, G. A. Abakumov, M. A. Samsonov, V. V. Khrizanforova, Y. H. Budnikova and V. A. Kuropatov, *Dalton Trans.*, 2016, 45, 7400–7405 DOI: 10.1039/C6DT00769D Impact factor: 4.177 (2016) Q1
34. One-stage Synthesis of FcP(O)(OC₂H₅)₂ from Ferrocene and α -Hydroxyethylphosphonate, Mikhail N. Khrizanforov, Sofia O. Strekalova, Kirill V. Kholin, Vera V. Khrizanforova, Valeriya V. Grinenko, Tatyana V. Gryaznova, Yulia H. Budnikova, DOI: 10.1039/C6RA04480H *RSC Adv.*, 2016, 6, 42701-42707 Impact Factor: 3.289 (2016) Q1
35. Single-stage synthetic route to perfluoroalkylated arenes via electrocatalytic cross-coupling of organic halides using Co and Ni complexes. Mikhail Khrizanforov, Vera Khrizanforova, Vahid Mamedov, Nataliya Zhukova, Sofia Strekalova, Valeriya Grinenko, Tatyana Gryaznova, Oleg Sinyashin, Yulia Budnikova. *Journal of Organometallic Chemistry* 820 (2016) 82-88. IF 2.336 (2016) Q1 <http://dx.doi.org/10.1016/j.jorganchem.2016.08.003>
36. New one-pot method for the synthesis of pyrrolidinofullerenes. A. R. Tuktarov, Z. R. Shakirova, Yu. G. Budnikova, R. B. Salikhov and U. M. Dzhemilev, *RSC Adv.*, 2016, 6, 81847-81851 DOI: 10.1039/C6RA15519G Impact Factor: 3.289 (2016)
37. Oxygen Reduction Reaction Catalyzed by Nickel Complexes Based on Thiophosphorylated Calix[4]Resorcinols and Immobilized in Membrane Electrode Assembly of Fuel Cell. *Dalton Transactions*, 2016, 45, 16157 – 16161 DOI: 10.1039/C6DT02881K IF: 4.099 (2017) Q1
38. Push-pull isomeric chromophores with vinyl- and divinylquinoxaline-2-one units as π -electron bridge: Synthesis, photophysical, thermal and electro-chemical properties. Alexey A. Kalinin, Sirina M. Sharipova, Timur I. Burganov, Yulia B. Dudkina, Ayrat R. Khamatgalimov, Sergey A. Katsyuba, Yulia H. Budnikova, Marina Yu. Balakina, *Dyes and Pigments* 146 (2017) 82-91 IF 3.767 (2017) Q1
39. V V Khrizanforova, A A Karasik, Yu H Budnikova, "Synthetic organometallic iron hydrogenase models as molecular electrocatalysts for hydrogen evolution or oxidation", *RUSS CHEM REV*, 2017, 86, N 4, 298–317 IF 3.991 (2017) Q1
40. Electron transfer and unusual chemical transformations of F4-TCNQ in the reaction with Mn-phthalocyanine. Olga Kataeva, Kirill Metlushka, Kamil Ivshin, Airat Kiiamov, Vladimir Alfonsov, Mikhail Khrizanforov, Yulia Budnikova, Oleg Sinyashin, Yulia Krupskaya, Vladislav Kataev,

- BerndBüchner, and Martin Knupfer. *Eur. J. Inorg. Chem.* 2018, 3344–3353 DOI 10.1002/ejic.201800641 IF 2.507 (2017) Q1
41. Silica-Supported Silver Nanoparticles as an Efficient Catalyst for Aromatic C-H Alkylation and Fluoroalkylation. *Dalton Transactions*, 2018, 47, 9608 – 9616 DOI: 10.1039/C8DT01090K IF 4.099 (2017) Q1
42. G.A.Abakumov, A.V.Piskunov, V.K.Cherkasov, I.L.Fedushkin, V.P.Ananikov, D.B.Eremin, E.G.Gordeev, I.P.Beletskaya, A.D.Averin, M.N.Bochkarev, A.A.Trifonov, U.M.Dzhemilev, V.A.Dyakov, M.P.Egorov, A.N.Vereshchagin, M.A.Syroeshkin, V.V.Jouikov, A.M.Muzafarov, A.A.Anisimov, A.V.Arzumanyan, Yu.N.Kononevich, M.N.Temnikov, O.G.Synyashin, Yu.H.Budnikova, A.R.Burilov, A.A.Karasik, V.F.Mironov, P.A.Storozhenko, G.I.Shcherbakova, B.A.Trofimov, S.V.Amosova, N.K.Gusarova, V.A.Potapov, V.B.Shur, V.V.Burlakov, V.S.Bogdanov, and M.V.Andreev. *Russ. Chem. Rev.* 2018, 87, 393-507. IF 3.991 (2017) Q1
43. High thermally stable D- π -A chromophores with quinoxaline moieties in the conjugated bridge: Synthesis, DFT calculations and physical properties Alexey A. Kalinin* , Sirina M. Sharipova, Timur I. Burganov, Alina I. Levitskaya, Yulia B. Dudkina, Ayrat R. Khamatgalimov, Sergey A. Katsyuba, Yulia H. Budnikova, Marina Yu. Balakina. *Dyes and Pigments* 156 (2018) 175–184 IF 3.767 (2017) Q1
44. In situ electrochemical synthesis of Ni(I) complexes with aminomethylphosphines as intermediates for hydrogen evolution. V.V. Khrizanforova, V.I. Morozov, A.G. Strel'nik, Yu.S. Spiridonova, M.N. Khrizanforov, T. Burganov, S.A. Katsyuba, Sh.K. Latypov, M.K. Kadirov, A.A. Karasik, O.G. Sinyashin, Y.H. Budnikova <http://dx.doi.org/10.1016/j.electacta.2016.12.081> *Electrochimica Acta.* 2017, V. 225, 20, 467–472 IF 5.116 (2017) Q1
45. Cobalt-Catalyzed Green Cross-Dehydrogenative C(sp²)-H/P-H Coupling Reactions. M. Khrizanforov, • S. Strekalova, • V. Khrizanforova, • A. Dobrynin, • K. Kholin, T. Gryaznova, • V. Grinenko, • A. Gubaidullin, •M. K. Kadirov, • Y. Budnikova. *Topics in Catalysis.* – 2018. – P. 1-8. <https://doi.org/10.1007/s11244-018-1014-2> Q1
46. Iron complexes of BIANs: Redox trends and electrocatalysis of hydro-gen evolution. V.V. Khrizanforova, V.I. Morozov, M.N. Khrizanforov, A.N. Lukoyanov, O.N. Kataeva, I.L. Fedushkin, Yu.H. Budnikova. *Polyhedron* 154 (2018) 77–82
47. Palladium Nanoparticles–Polypyrrole Composite as Effective Catalyst for Fluoroalkylation of Alkenes. T.V.Gryaznova, M.N.Khrizanforov, K.V.Kholin, M.A.Vorotyntsev, K.V.Gor'kov, N.V.Talagaeva, M.V.Dmitrieva, E.V.Zolotukhina, Y.H.Budnikova, *Catalysis Letters.* – 2018. – 148. – №. 10. – P. 3119-3125. DOI: 10.1007/s10562-018-2524-z
48. Budnikova, Y. H. Transition metal-promoted reactions of diarylphosphine oxides as a synthetic method for organophosphorus heterocyclic compounds *Chem. Heterocycl. Compd.* 2018, 54, 269. [*Khim. Geterotsikl. Soedin.* 2018, 54, 269.] DOI 10.1007/s10593-018-2261-7 <https://link.springer.com/article/10.1007/s10593-018-2261-7>