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GENERAL SUMMARY

- **PhD student of** Kazan Federal University A.M. Butlerov Institute of Chemistry (Specialty: 04.06.01 - Chemical sciences, Specialization: 02.00.04 - Physical chemistry)

- **Scientific activity** is connected with coordination, organoelemental, physical chemistry, electrochemistry and catalysis**.** The dissertation work is devoted to the synthesis of mono-, bi- and polynuclear compounds of transition metals of the VIII group, the study of properties and application of these compounds

- **Scientific interests:** organometallic sigma-complexes, homogeneous catalysis, electrochemistry, nanoparticles of transition metals, binuclear complexes

WORK EXPERIENCE

JUNIOR RESEARCHER — **02.2017 – PRESENT TIME**
Kazan Federal University — *Kazan, Russia*
A.M. Butlerov Institute of Chemistry
Research laboratory "Industrial Catalysis"
Project "Homogeneous catalysis"

ASSISTANT RESEARCHER — **10.2013 – PRESENT TIME**
Russian Academy of Sciences — *Kazan, Russia*
A.E.Arbuzov Institute of Organic and Physical Chemistry
Laboratory of Organometallic and Coordination Compounds

ASSISTANT RESEARCHER — **06.2016 – 02.2017**
Kazan Federal University — *Kazan, Russia*
A.M. Butlerov Institute of Chemistry
Research laboratory "Industrial Catalysis"
Project "Homogeneous catalysis"

ASSISTANT RESEARCHER **05.2014 – 06.2016**
Kazan Federal University *Kazan, Russia*
A.M. Butlerov Institute of Chemistry
Research laboratory "New catalysts for petrochemistry"

EDUCATION

Kazan Federal University **09.2016 – PRESENT TIME**
A.M. Butlerov Institute of Chemistry *Kazan, Russia*
PhD student (Specialty: 04.06.01 - Chemical sciences,
Specialization: 02.00.04 - Physical chemistry)

Kazan Federal University **June 2016**
A.M. Butlerov Institute of Chemistry *Kazan, Russia*
Diploma of excellence

Thesis titled: «Electrochemical generation of transition metal nanoparticles»

LANGUAGES

- Russian
- English

EXPERTISE

- Physical chemistry
- Coordination chemistry
- Electrochemistry
- Catalysis
- Mass spectrometry

ACHIEVEMENTS, AWARDS, GRANTS

- Letter of Appreciation from the Export Corporation of the Republic of Tatarstan for participation in the International Exhibition ChemTECH Word Expo 2017 with a collective stand from the Republic of Tatarstan, Mumbai, India
- Winner of the Open Innovations Startup Tour 2017, Almetyevsk
- Winner of the Conference of students and graduate students "Science and Innovations in the solution of the current problems of Kazan-2016"
- Winner of the Contest "The 50 Best Innovative Ideas for the Republic of Tatarstan-2016"
- Winner of the Contest "The 10 Best Innovative Ideas of KFU", 2016
- VI Russian Conference on Nanomaterials "NANO-2016", Moscow
- XVI Scientific-practical Conference of young scientists PJSC Tatneft 2016, Bavly
- Diploma of the Winner of the Competition of scientific works of PJSC Tatneft in the section "Refining of oil and gas, petrochemistry" 2016
- The best graduate of the year - 2016 of the Republic of Tatarstan
- The best graduate of the year - 2016 of KFU
- Finalist of the VI Republican Youth Forum "Our Tatarstan" 2016
- Certificate of participation 80th Prague meeting on macromolecules "Self-assembly in the world of polymers" 2016, Prague.
- Certificate of participation Workshop "Career in Polymers VIII" 2016, Prague
- Certificate of participation "21st International Conference on Phosphorus Chemistry" 2016, Kazan, Russia
- Diploma of the winner of the Annual Student Prize of the Republic of Tatarstan "Student of the Year 2015" in the nomination "Intelligence of the Year", 2015
- Special State scholarship of the Republic of Tatarstan for outstanding abilities in educational and scientific activities 2015

- Diploma of the winner of the "Student of the Year 2015 KFU" in the nomination “Intelligence of the Year in the field of natural and physical and mathematical sciences” 2015
- Diploma for the best poster presentation of IV international school-conference on catalysis for young scientists “Catalysts Design. From molecular to industrial level”2015, Kazan
- Winner of the company's scholarship program “British Petroleum Exploration Operating Company Limited” 2015
- Winner of the grant “The new organometalic catalysts for petrochemistry” of the company “British Petroleum” 2015
- The winner of the Sagdeev brothers' scholarship of 2015
- Scholarship of the Mayor of Kazan for excellent study and progress in research work following the results of 2013/14 academic year. Diploma of the winner of the Conference of students and graduate students “The Science and Innovations in solving the current problems of the city-2014”, Kazan
- Diploma of the winner of the XXII International conference of students, graduate students and young scientists “Lomonosov-2015”, Moscow
- Diploma for a successful speech at Scientific and Educational Conference of the A.M. Butlerov Institute of Chemistry of KFU for the student 2013-2016, Kazan
- Certificate for participation in the I International School-Conference of students, graduate students and young scientists “Biomedicine, materials and technologies of the XXI century” 2015, Kazan
- Certificate of the participant of the VIII Russian Conference with international participation of young scientists in chemistry “Mendeleev-2014”, St. Petersburg
- Certificate for participation in the Russian school-conference of students, graduate students and young scientists “Materials and Technologies of the XXI Century” 2014, Kazan

- **Grant No. C40-15** of the British Petroleum Exploration Operating Company Limited “New Organometallic Catalysts for Petrochemistry” (2015-2016) – *leader of the project*
- **Grant No. 14-13-01122** of the Russian Science Foundation (RPF) “Chemistry of phosphine oxide H_3PO - from molecule to functional materials” (2014-2016) – *executor of the project*
- **Grant № 14-13-01122** of the Russian Foundation for Basic Research (RFBR) “Development of new methods for the selective production of linear alpha-olefins based on ethylene” (2015-2017) – *executor of the project*

PUBLICATIONS

- **List of articles:**

- A.F. Khusnuriyalova, V.M. Babaev, I.Kh. Rizvanov, K.E. Metlushka, V.A. Alfonsov, O.G. Sinyashin, D.G. Yakhvarov. Tracking of the formation of binuclear nickel complexes of $[Ni_2(\mu\text{-}O_2PR^1R^2)_2(bpy)_4]Br_2$ type by ESI and MALDI mass spectrometry. Polyhedron. 2017, 127, 302–306.
- D.G.Yakhvarov, A.F.Khusnuriyalova, O.G.Sinyashin. Electrochemical Synthesis and Properties of Organonickel σ-Complexes. Organometallics. 2014, 33, 4574-4589.
- Khusnuriyalova A.F., Kalugin L.E., Dobrynin A.B., Yakhvarov D.G. Electrochemical properties of nickel(II)-2,2'-bipyridine complexes in the presence of diphenylphosphinic acid. Butlerov Communications. 2015, 42, 6, 145-151.

- **List of theses:**

- A.F. Khusnuriyalova, A.V. Sykhov, E. V. Gorbachuk, R.I. Vagizov, D.G. Yakhvarov. Electrochemical generation of transition metal nanoparticles (Fe, Co, Ni) for catalytic oligo- and polymerization./ Thesis of report Workshop «Career in Polymers VIII» Prague, 15 July 2016.-P.24.
- A.F. Khusnuriyalova, A.V. Sykhov, E. V. Gorbachuk, R.I. Vagizov, D.G. Yakhvarov. Electrochemical generation of transition metal nanoparticles (Fe, Co, Ni) for catalytic oligo- and polymerization./ Thesis of report 80^{th} Prague meeting on macromolecules «Self-assembly in the world of polymers» 10-14 July 2016 Prague.-P.108.

- A.F. Khusnuriyalova, L.E. Kalugin, A.B. Dobrynin, O.G. Sinyashin, D.G. Yakhvarov. The coordination properties of diphenylphosphinic acid in nickel(II) complexes./ Thesis of report of«21st International Conference on Phosphorus Chemistry» Kazan, Russia 5-10 June 2016.-P.180.
- Khusnuriyalova A. The new methods of obtaining and activation organonickel catalysts for oligomerization and polymerization of ethylene/ Thesis of report of IV international school-conference on catalysis for young scientists "Catalysts Design. From molecular to industrial level" 2015.-P.102.
- Khusnuriyalova A.F. The new organonickel catalysts for oligomerization and polymerization of ethylene - real contribution to reducing the man-caused environmental impact of the city of Kazan./ Thesis of report of Conference of students and graduate students "The Science and Innovations in solving the current problems of the city-2014" - Kazan, 2014.-P.73.
- Khusnuriyalova A.F. The new methods of obtaining and activation organonickel catalysts for oligomerization and polymerization of ethylene./ Thesis of report of the XXII International conference of students, graduate students and young scientists "Lomonosov-2015" - Moscow, 2015 г.-ISBN 978-5-317-04946-1.
- Khusnuriyalova A.F., Gubaidullin A.T., Petr A., Yakhvarov D.G. Electrochemical generation of nanoparticles of cobalt./ Thesis of report of I International School-Conference of students, graduate students and young scientists "Biomedicine, materials and technologies of the XXI century" - Kazan, 2015-P.590.
- A.F. Khusnuriyalova, V.M. Babaev, I.Kh. Rizvanov, K.E. Metlushka, O.G. Sinyashin, D.G. Yakhvarov. Synthesis of new binuclear nickel complexes formed by {μ-O_2P} ligands./ Thesis of report of VIII Russian Conference with international participation of young scientists in chemistry "Mendeleev-2014" - St. Petersburg, 2014-P.228.
- A.F. Khusnuriyalova, V.M. Babaev, I.Kh. Rizvanov, K.E. Metlushka, O.G. Sinyashin, D.G. Yakhvarov. The new binuclear complexes of nickel with bridged heterocyclic {μ-$O_2PR^1R^2$} ligands./ Thesis of report of Russian school-conference of students, graduate students and young scientists "Materials and Technologies of the XXI Century" - Kazan, 2014-P.352.

Total number of scientific articles in refereed journals: **3**
Total number of speeches at scientific conferences: **15**