

## Elena V. Grachova, M.Sc., Ph.D., Dr.Sci.

**Date of Birth** July 24, 1971  
**Place of Birth** St. Petersburg, Russian Federation (Leningrad, U.S.S.R.)  
**Nationality** Russian

Scopus ID 7801397654  
ORCID 0000-0003-4046-7708  
WoS Researcher ID I-8110-2013  
SPIN 6425-6896

St Petersburg University (SPU)  
Institute of Chemistry  
General and Inorganic Chemistry Division  
Universitetskii pr. 26  
198504 St. Petersburg, Russia

E-mail [e.grachova@spbu.ru](mailto:e.grachova@spbu.ru)  
Web <https://go.spbu.ru/egrachova>  
CoLab <https://colab.ws/labs/461>

### Education and qualification

**1988-1993**, M.Sc. in Chemistry, SPU

**1995-1999**, Ph.D. in Inorganic chemistry, *Synthesis, reactivity and dynamic behaviour of the phosphine-carbonyl rhodium clusters*

**2002-2003**, PostDoc in University of Bielefeld, Germany (Alexander von Humboldt Foundation Research Fellowship) *Transition metal carbonyl clusters containing GaCp\* (Cp\* =  $\eta^5$ -pentamethylcyclopentadienyl) ligand. Directed synthesis, properties and ligand effect.*

**2020**, Dr.Sci. in Inorganic chemistry, *Design of supramolecular cluster compounds of coinage metals based on template polydentate ligands*

### Scientific field and expertise

Coordination chemistry; organometallic chemistry; transition metal cluster compounds; mixed-metal cluster compounds; nano-scale molecular ensembles; supramolecular compounds; metal-containing molecular entities and materials; molecular emitters

### Current and previous positions

**1993-1995**, Engineer, Institute of Chemistry, SPU

**1999-2000**, Junior researcher, Institute of Chemistry, SPU

**2000-2001/2004-2005**, Assistant Professor, Department of General and Inorganic Chemistry, SPU

**2005-2021**, Associate Professor, Department of General and Inorganic Chemistry, SPU

**2021-present**, Professor, Institute of Chemistry, SPU

### Lecturer experience

**1999-2012**, Teacher in “*General and Inorganic Chemistry*” for 1<sup>st</sup> year students (020100. Chemistry; 020201. Fundamental and Applied Chemistry)

**2003-2019**, Regular Lecturer in “*Coordination chemistry*” for 4<sup>th</sup> year students (04.03.01. Chemistry)

- 2004-2019**, Regular Lecturer in “*Coordination chemistry*” for 2<sup>th</sup> year students (04.03.02. Chemistry, Physics and Mechanics of Materials)
- 2008-2016**, Regular Lecturer in “*Design of polynuclear and cluster complexes of transition metals*” for 5<sup>th</sup> year students (020201. Fundamental and Applied Chemistry)
- 2010**, Lecturer of education workshop (lectures course) “*The Mingos Rule for Metal Clusters with Heavy Elements of the 15th Group: Pro and Contra*”, University of Heidelberg, Germany (academic exchange program)
- 2012-present**, Coordinator of Open Scientific Master's Workshop “*Journal Club*” (04.04.01. Chemistry; 04.04.02. Chemistry, Physics and Mechanics of Materials)  
<http://chem.spbu.ru/learning/mag-seminar.html>
- 2015**, Regular Lecturer in “*Trends and problems of the modern coordination chemistry*” for 4<sup>th</sup> year students (020201. Fundamental and Applied Chemistry)
- 2015-2020**, Regular Lecturer in “*Modern Inorganic Chemistry*” for 4<sup>th</sup> year students (04.03.01. Chemistry; 04.03.02. Chemistry, Physics and Mechanics of Materials)
- 2017-present**, team member of the online course ‘*Inorganic chemistry: an introduction to the chemistry of elements*’; available on portal of SPU; online resources Open Education, Stepik and Coursera
- 2017**, Lecturer of education workshop (lectures course) “*Interdisciplinary aspects of coordination chemistry and luminescence of transition metal complexes*” under supporting of “German-Russian Interdisciplinary Science Center” (G-RISC) in RWTH Aachen University;
- 2019**, Lecturer of multidisciplinary education project of the University of Tromsø (Norway) and the Tomsk State University (Russia) in collaboration with SPU and the University of Oslo (Norway) as the network partners, ‘*OPS@BE: Optical Probe Sensors at Biological Environments*’
- 2019**, Invited lecture of *International School on Advanced Light-Emitting and Optical Materials (SLALOM 2019)* in ITMO University (St.Petersburg, Russia)
- 2019-present**, Regular Lecturer in “*Coordination chemistry*” for 3<sup>th</sup> year students (04.03.01. Chemistry)
- 2021-present**, Regular Lecturer in “*Inorganic Chemistry*” for 4<sup>th</sup> year students (5009 Applied Physics and Mathematics, 5011 Physics, 5112 Engineering Physics, 5113 Electromagnetic and Acoustic Processes)
- 2021-present**, Regular Lecturer in “*Advanced Coordination Chemistry*” (in English) for 2<sup>nd</sup> year students (04.04.01. Chemistry)
- 2024-present**, Regular Lecturer in “*Supramolecular chemistry*” (in English) for 4<sup>th</sup> year students (04.03.01. Chemistry)

### Professional services

- 2005-2016**, Scientific Secretary of General and Inorganic Chemistry Division, SPU
- 2016-present**, member of the Expert Council of SPU in Chemistry
- 2021-present**, member of the scientific advisory board of the Research Park SPU in Chemistry and Analytics

Reviewer of manuscripts for: ACS, Royal Society of Chemistry, Elsevier, Wiley, Springer, MPDI

- 2017-present**, Reviewer of projects for Russian Science Foundation
- 2020-2021**, Guest Editor of Special Issue ‘Organometallic Compounds and Their Applications’, Molecules MDPI [www.mdpi.com/journal/molecules/special\\_issues/molecules\\_organometallic](http://www.mdpi.com/journal/molecules/special_issues/molecules_organometallic)

### Awards, individual grants and fellowships

1. **1993**, “Top-five” award for graduated students of the year
2. **1996-1997**, Russian Government Fellowship

3. Research grants of Basic Natural Sciences Centre (St. Petersburg, Russia):
  - 1997, *Redox processes of nitroso- and nitro compounds in the reactions with the carbonyl clusters of rhodium and heterometal platinum-rhodium clusters*
  - 1998, *The phosphine-carbonyl rhodium clusters: synthesis and study of the static and dynamic heteroligand effects*
  - 1999, *The phosphite-carbonyl rhodium clusters: synthesis and study of the heteroligand effects*
  - 2005, *The method of "building blocks" in cluster compounds chemistry and its application to create the cluster complexes with direct connection of high and low oxidation levels transition metals*, grant PD05-1.3-197
4. 1998, Award "Distinguished Young Scientist Research Work", SPU
5. 1999-2000, INTAS Fellowship for Young NIS Scientists (YSF99-4030), *Study of the halides and pyridines ligand effect on stereochemical nonrigidity of  $Rh_6(CO)_{15}L$  derivatives, qualitative and quantitative aspects*, supervisors: Dr. Tunik S. P. (SPU, Russia); Prof. Heaton B. T. (University of Liverpool, UK)
6. 2000-2002, Government Science Fellowship
7. **Alexander von Humboldt Foundation support:**
  - 2002/2003, Research Fellowship (IV-1-7109 RUS 1074525), *Transition metal carbonyl clusters containing  $GaCp^*$  ( $Cp^* = \eta^5$ -pentamethylcyclopentadienyl) ligand. Directed synthesis, properties and ligand effect*, supervisor: Prof. Dr. Jutzi P. (University of Bielefeld, Germany)
  - 2003/2004, Return Fellowship for Young Researchers (V-RKS-RUS/1074525), *Mixed-metal clusters: transition metal carbonyl clusters containing  $GaCp^*$  ( $Cp^* = \eta^5$ -pentamethylcyclopentadienyl) fragment. Dynamic behaviour in solution and reactivity toward to carbonyl ligands substitution*, SPU, Russia
  - 2005, Research Resumption Fellowship (V-8121/RUS/1074525),  *$ECp^*$  ( $E = Ga, In; Cp^* = C_5Me_5$ ) compounds as building blocks in chemistry of transition metal clusters. Synthesis of "Very-Mixed" carbonyl cluster compounds containing  $ECp^*$  fragments*, supervisor: Prof. Dr. Linti G. (University of Heidelberg, Germany)
  - 2006, Residence Allowance Fellowship (3.4-8100/B-RUS/1074525) for "Very-Mixed" carbonyl cluster compounds containing  $InCp^*$  fragments. *Synthesis and structure characterization*, supervisor: Prof. Dr. Linti G. (University of Heidelberg, Germany)
  - 2008, Research Resumption Fellowship, *Design of Linked Cluster Systems "Transition metal – Group 13 metal"*, supervisor: Prof. Dr. Linti G. (University of Heidelberg, Germany)
8. 2005, Vladimir Potanin Foundation Award for the Most Perspective Young Teachers of Higher School
9. 2007-2012, Academic Exchange Program of SPU and Ruprecht-Karls-Universität Heidelberg "Low Nuclearity Cluster and Polynuclear Bridging Complexes Design"
10. 2018, The Award of SPU for a series of scientific articles "Phosphorescent transition metal complexes, new approaches to the synthesis and application"
11. 2019, The Award of Student Council of Institute of Chemistry SPU "The Best Lector"

#### External grants and projects

1. 1996-1997, Competitive Centre in Natural Science research grant, *Synthesis and Reactivity of Rhodium and Platinum-Rhodium Carbonyl-Nitrosyl Clusters*, principal investigator Dr. Tunik S.P.
2. 1996-1998, INTAS-RFBR research grant (95-IN-RU-242), *Multinuclear NMR study of structure and ligand mobility in homo- and hetero-metallic transition metal carbonyl clusters*, in cooperation with University of Liverpool (UK) and University of Aveiro (Portugal), principal investigators: Prof. Heaton B.T. (University of Liverpool, UK) and Dr. Tunik S. P.

3. **2002-2004**, RFBR research grant 02-03-32792, *Chiral Induction in Reactions of Transition Metal Clusters. Study of Stereoselectivity of Diynes Cyclization on the  $H_2Os_3(CO)_{10-x}(L^*)$  Clusters*, principal investigator Dr. Tunik S. P.
4. **2005-2006**, Royal Society of Chemistry Grant, *Investigation of solution structure and stereochemical norigidity of transition metal clusters containing chiral hemilabile ligands*, in cooperation with University of Liverpool (UK), principal investigator Prof. Heaton B.T. (University of Liverpool, UK)
5. **2005-2007**, RFBR research grant 05-03-33266, *Chiral transition metal clusters: new approach to the synthesis, resolution and application in asymmetric catalysis*, principal investigator Dr. Tunik S.P.
6. **2007-2009**, RFBR research grant 07-03-00908, *Synthesis and photophysical studies of heterovalent macrocomplexes, containing transition metal clusters and bifunctional phosphines*, principal investigator Dr. Kurochkin A.V.
7. **2009-2010**, RFBR research grant 09-03-12309, *Effective electroluminescence materials based on a novel class of nanosized supramolecular transition metal complexes: synthetic design, study of the photophysical characteristics and optimization of electroluminescence properties*, principal investigator Prof. Tunik S.P.
8. **2009-2010**, RFBR research grant 09-03-91279, *Molecular architecture with alkynyl/thiolate gold or platinum complexes. Study of their photophysical properties*, principal investigator Prof. Tunik S.P.
9. **2011-2013**, RFBR research grant 11-03-00541, *Supramolecular organometallic cage structures of Au(I) complexes: synthesis, photophysical and electrochemical properties of the "host-guest" compounds*, principal investigator Dr. Koshevoy I.O.
10. **2011-2013**, RFBR research grant 11-03-00974, *Synthesis of a novel class of functionalized heterometallic complexes and investigation of their photophysics and electrochemistry*, principal investigator Prof. Tunik S.P.
11. **2011-2013**, RFBR research grant 11-03-92010, *Heterometallic supramolecular complexes of the copper subgroup metals: synthesis, photophysical properties and application in molecular imaging and electroluminescence technology*, in cooperation with National Taiwan University; principal investigator Prof. Tunik S. P.
12. **2011-2013**, SPU research grant 12.37.132.2011, *Nanosize complexes of transition metals as high-performance luminophors: synthesis and photophysical properties investigation*, principal investigator Prof. Tunik S.P.
13. **2012-2013**, SPU research grant 12.39.1048.2012, *Nanoanalytical "biochip-label-detector" system for screening medical detection*, in cooperation with Institute of Macromolecular Compounds, Russian Academy of Sciences; supervisor Prof. Tennikova T.B., **responsible investigator**
14. **2012-2018**, Research program of cooperation with Institut für Festkörperphysik and Helmholtz Zentrum Berlin für Materialien und Energie Elektronenspeicherring BESSY II (HZB/BESSY II), Russian-German Laboratory at BESSY II; supervisor Dr. Vyalikh D.V. (Institut für Festkörperphysik, Technische Universität Dresden, Germany); **principal investigator of chemistry group**

#### 2012

2012_1_111048	18.06.2012 – 01.07.2012	Combined photoemission and x-ray absorption study of the Rods-in-belt supramolecular complexes containing gold-copper and gold-silver clusters
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#### 2013

2013_1_120793	17.03.2013 – 01.04.2013	Tunable electronic properties of the 'rods-in-belt' supramolecular complexes
2013_1_121256	13.05.2013 – 20.05.2013	
2013_2_130319	18.11.2013 – 24.11.2013	Tunable electronic properties of the highly ordered Au(I)-Ag(I) and Au(I)-Cu(I) supramolecular aggregates

#### 2014

14100352-ST	24.02.2014 – 10.03.2014 02.06.2014 – 08.06.2014	Cu vs Fe. Photoemission and X-ray absorption insight into how metal and protein interact
14201378-ST	15.09.2014 – 21.09.2014	Novel family of luminescent Pt(II) complexes: photoemission and X-ray absorption insight into the electronic structure and its modification
<b>2015</b>		
14201051-ST/R	09.02.2015 – 15.02.2015	Tunable electronic properties of the highly ordered Au(I)-Ag(I) and Au(I)-Cu(I) supramolecular aggregates
15202930-ST	07.09.2015 – 13.09.2015	Modification of the electronic structure of the novel family of Pt(II) complexes by n-type doping
<b>2016</b>		
16103663-ST	18.04.2016 – 24.04.2016	Insight into the interfacial chemistry between the novel family of Pt(II) coordination compounds and alkali metals
<b>2018</b>		
18106481-CR/R	19.02.2018 – 25.02.2018	Insight into the electronic structure of novel MoS <sub>2</sub> /CNT Hybrid Material for Ultrasensitive Gas Sensing
18106542-CR	26.03.2018 – 19.04.2018	Self-Assembled Supramolecular Complexes with ‘Rods-in-Belt’ Architecture in the Light of Soft X-rays

15. **2013-2015**, RFBR research grant 13-03-12411, *Novel Luminescent Systems Based on Noble Metal Complexes and Supramolecular Compounds*, principal investigator Prof. Kukushkin V. Yu.
16. **2013-2015**, RFBR research grant 13-04-40342, *Novel polyfunctional labels for bioimaging – covalent bioconjugates based on transition metal complexes* in the frameworks of the project *Development of original methods to study cell structures using a novel class of triplet luminophors based on polynuclear transition metal complexes*, in cooperation with Russian Research Institute for Agricultural Microbiology; principal investigator Prof. Tunik S.P.
17. **2014-2016**, RFBR research grant 14-03-00970, *Metal-organophosphorus luminophores for controllable light generation*, principal investigator Prof. Tunik S.P.; **responsible investigator**
18. **2014-2016**, SPU research grant 0.37.169.2014, *Triplet luminescence emitters and their covalent and noncovalent conjugates with proteins and oligonucleotides – new labels for luminescence microscopy*, principal investigator Dr. Melnikov A.S.; **responsible investigator**
19. **2014-2016**, Ministry of Education and Science of Russian Federation grant, *Development of the nano associated hybrids synthesis method for creating of the labels for medical-biological use* (project number 14.604.21.0078; Registration Number RFMEFI60414X0078); principal investigator Dr. Manshina A.A.; **responsible investigator**
20. **2015**, Research project *Complexes of metals copper subgroup with cyclic aminomethylphosphane ligands: synthesis and photophysical properties investigation*, in cooperation with Laboratory of organometallic and coordination compounds, A.E. Arbusov Institute of Organic and Physical Chemistry (Kazan, Russian Federation); **principal investigator**
21. **2016-2017**, Research project *Complexes of metals copper subgroup with macrocyclic aminomethylphosphane ligands: synthesis and photophysical properties investigation*, in cooperation with Laboratory of organometallic and coordination compounds, A.E. Arbusov Institute of Organic and Physical Chemistry (Kazan, Russian Federation); **principal investigator**
22. **2016-2020**, Russian Science Foundation grant 16-13-10064 *NIR molecular emitters based on d-f heterometallic complexes*; **principal investigator**
23. **2018-2022**, Research program of cooperation with European XFEL (scientific instrument FXE), in cooperation with A.E. Arbusov Institute of Organic and Physical Chemistry (Kazan, Russian Federation); **principal investigator of chemistry group**

Facility, beamline	Experiment number/code	Data	Experiment title
<b>2018</b>			
ESRF, ID09 White Beam Station, Time-resolved Beamline	CH-5623	03.10.2018 – 08.10.2018	Probing aurophilicity in stimuli-responsive dimer complexes: the role of ‘host-guest’ interactions
<b>2019</b>			
European XFEL, FXE instrument	2266, allocation cycle 201802	14.03.2019 – 17.03.2019	Origins of enhanced aurophilicity in stimuli-responsive dimer complexes and the role of ‘host-guest’ interactions
<b>2022</b>			
European XFEL, FXE instrument	2906, allocation cycle 202201	14.04.2022 – 17.04.2022	Origins of enhanced aurophilicity in stimuli-responsive dimer complexes and the role of ‘host-guest’ interactions, continue

24. **2019-2022**, Russian Science Foundation grant 19-73-20055 *New organometallic phosphors: design of triplet emitters with adjustable photophysical characteristics*; **responsible investigator**
25. **2019**, Research project (agreement 46329568) *Synthesis and study of the photophysical properties of binuclear gold complexes based on template phosphine ligands* in collaboration with the Federal Research Center ‘Kazan Scientific Center of the Russian Academy of Sciences’, A.E. Arbusov Institute of Organic and Physical Chemistry (Russian Federation); **principal investigator**
26. **2020-2021**, Research project 91192757 *Phosphinine-Based Ligands for the Design of Novel Luminescent Transition Metal Complexes*, Program of Freie Universität Berlin and SPU cooperation in the framework of Strategic Partnership Program, **principal investigator**
27. **2021-2023**, Russian Science Foundation grant 21-13-00052 *Functional hybrid molecular systems based on transition metal complexes*; **principal investigator**
28. **2022**, Research project (ID 99617020) *Design of organic and coordination thermosensitive phosphors as a basis for new generation molecular and nanoscale thermometers for biomedical applications* in collaboration with the Federal Research Center ‘Kazan Scientific Center of the Russian Academy of Sciences’, A.E. Arbusov Institute of Organic and Physical Chemistry (Russian Federation); **principal investigator**

## Publications

### Articles

1. S.K. Petrovskii, E.V. Grachova, and K.Yu. Monakhov, *Bioorthogonal Chemistry of Polyoxometalates – Challenges and Prospects*, under revision in **Chem. Sci.**, preprint ChemRxiv <https://chemrxiv.org/engage/chemrxiv/article-details/656b8ef9cf8b3c3cd7a639b1>
2. A. Paderina, S. Slavova, S. Petrovskii, and E. Grachova, *Alkynylphosphonium Pt(II) Complexes: Synthesis, Characterization, and Features of Photophysical Properties in Solution and in the Solid State*, **Inorg. Chem.** 62(44) (2023) 18056-18068; DOI: 10.1021/acs.inorgchem.3c02209; first published 27 October 2023
3. A.Yu. Gitlina, S. Petrovskii, M. Luginin, A. Melnikov, E. Rychagova, S. Ketkov and E. Grachova, *X/Y Platinum(II) complexes: some features of supramolecular assembly via halogen bonding*, **Dalton Trans.** 52 (2023) 16005-16017; DOI: 10.1039/D3DT02970K; first published 06 October 2023
4. S.K. Petrovskii, M. Moors, S. Schmitz, E.V. Grachova and K.Yu. Monakhov, *Increasing the redox switching capacity of Lindqvist-type hexavanadates by organogold post-functionalisation*, **Chem. Comm.** 59 (2023) 9517-9520; DOI: 10.1039/D3CC02511J; first published 07 July 2023
5. A. Gitlina, V. Khistiaeva, A. Melnikov, M. Ivonina, V. Sizov, D. Spiridonova, A. Makarova, D. Vyalikh and E. Grachova, *Organometallic Ir(III) complexes: post-synthetic modification, photophysical properties and binuclear complex construction*, **Dalton Trans.** 52 (2023) 8986-8997; DOI: 10.1039/D3DT00901G; first published 12 June 2023
6. S. Petrovskii, A. Petrovskaia, A. Sizova, V. Sizov, E. Grachova, *Homoleptic Alkynylpyridinium Au(I) Complexes as Organometallic ‘D-π-A’ Chromophores*, **ChemPlusChem** 88(7) (2023) e202300155; DOI: 10.1002/cplu.202300155; first published 26 May 2023; **Special Issue “Gold Chemistry”**



7. S. Petrovskii, A. Paderina, A. Sizova, E. Grachova, *Homoleptic alkynylphosphonium Au(I) complexes as push-pull phosphorescent emitters*, **Inorg. Chem.** 62(13) (2023) 5123-5133; DOI: 10.1021/acs.inorgchem.2c04360; first published 20 March 2023
8. S. Petrovskii, V. Khistiaeva, A. Paderina, E. Abramova and E. Grachova, *Post-Functionalization of Organometallic Complexes via Click-Reaction*, **Molecules** 27 (2022) 6494; DOI: 10.3390/molecules27196494; first published 01 October 2022
9. A. Surkova, A. Bogomolov, A. Paderina, V. Khistiaeva, E. Boichenko, E. Grachova, D. Kirsanov, *Optical multisensor system based on lanthanide(III) complexes as near-infrared light sources for analysis of milk*, **Chemosensors**, 10(7) (2022) 288; DOI: 10.3390/chemosensors10070288; first published 20 July 2022
10. A. Paderina, R. Ramazanov, R. Valiev, C. Müller and E. Grachova, *So Close, Yet so Different: How One Donor Atom Changes Significantly the Photophysical Properties of Mononuclear Cu(I) Complexes*, **Inorg. Chem.**, 61(30) (2022) 11629-11638; DOI: 10.1021/acs.inorgchem.2c01145; first published 5 July 2022; **Virtual Issue “We Glow Together: A Dialogue on Luminescent Compounds”. ON COVER**
11. A.Yu. Baranov, S.O. Slavova, A.S. Berezin, S.K. Petrovskii, D.G. Samsonenko, I.Yu. Bagryanskaya, V.P. Fedin, E.V. Grachova and A.V. Artem'ev, *Controllable synthesis and luminescent behavior of tetrahedral Au@Cu<sub>4</sub> and Au@Ag<sub>4</sub> clusters supported by tris(2-pyridyl)phosphine*, **Inorg. Chem.**, 61 (2022) 10925-10933; DOI: 10.1021/acs.inorgchem.2c01474; first published 1 July 2022; **Virtual Issue “We Glow Together: A Dialogue on Luminescent Compounds”**
12. S. Petrovskii, A. Senchukova, V. Sizov, A. Paderina, M. Luginin, E. Abramova and E. Grachova, *Efficient photoswitchable organometallic complexes with azobenzene and stilbene units: the case of Au(I)*, **Mol. Syst. Des. Eng.**, 7 (2022) 1249-1262; DOI: 10.1039/D2ME00071G; first published 21 June 2022
13. A. Paderina, A. Melnikov, S. Slavova, V. Sizov, V. Gurzhiy, S. Petrovskii, M. Luginin, O. Levin, I. Koshevoy and E. Grachova, *The tail wags the dog: the far periphery of the coordination environment manipulates the photophysical properties of heteroleptic Cu(I) complexes*, **Molecules** 27(7) (2022) 2250; DOI: 10.3390/molecules27072250; first published 30 March 2022
14. M.A. Kinzhalov, E.V. Grachova and K.V. Luzyanin, *Tuning the Luminescence of Transition Metal Complexes with Acyclic Diaminocarbene Ligands*, **Inorg. Chem. Front.** 9 (2022) 417-439; DOI: 10.1039/D1QI01288F; first published 06 December 2021
15. E.O. Abramova, A.V. Paderina, S.O. Slavova, E.A. Kostenko, E.V. Eliseenkov, S.K. Petrovskii, A.Yu. Gitlina, V.P. Boyarskiy, and E.V. Grachova, *Just Add the Gold: Aggregation-Induced-Emission Properties of Alkynylphosphinegold(I) Complexes Functionalized with Phenylene-Terpyridine Subunits*, **Inorg. Chem.** 60(24) (2021) 18715-18725; DOI: 10.1021/acs.inorgchem.1c02125; first published 26 November 2021
16. E.M. Baranovskii, V.V. Khistiaeva, K.V. Deriabin, S.K. Petrovskii, I.O. Koshevoy, I.E. Kolesnikov, E.V. Grachova and R.M. Islamova, *Re(I) complexes as Backbone Substituents and Cross-linking Agents for Hybrid Luminescent Polysiloxanes and Silicone Rubbers*, **Molecules** 26 (2021) 6866; DOI: 10.3390/molecules26226866; first published 14 November 2021
17. M. Beliaeva, A. Belyaev, E. Grachova, A. Steffen, I. Koshevoy, *Ditopic phosphide oxide group: a rigidifying Lewis base to switch luminescence and reactivity of a disilver complex*, **J. Am. Chem. Soc.** 143(37) (2021) 15045-15055; DOI: 10.1021/jacs.1c04413; first published 07 September 2021
18. Cheng-Ham Wu, K.S. Kisel, Muthu Kumar Thangavel, Yi-Ting Chen, Kai-Hsin Chang, Ming-Rung Tsai, Chia-Yu Chu, Yu-Fang Shen, Pei-Chun Wu, Tzu-Ming Liu, J. Jänis, E.V. Grachova, J.R. Shakirova, S.P. Tunik, I.O. Koshevoy, Pi-Tai Chou, *Functionalizing collagen with vessel-penetrating two-photon phosphorescence probes: A new in vivo strategy to map oxygen concentration in tumor microenvironment and tissue ischemia*, **Adv. Sci.** 8(20) (2021) 2102788; DOI: 10.1002/adv.202102788; first published 19 August 2021
19. A.A. Surkova, A.V. Paderina, A.V. Legin, E.V. Grachova, and D.O. Kirsanov, *Cu(I)-based molecular emitters for quantification of fluoride and phosphate in surface waters*, **Measurement** 184 (2021) 109976; DOI: 10.1016/j.measurement.2021.109976; first published 06 August 2021
20. T. Eskelinen, S. Buss, S. K. Petrovskii, E.V. Grachova, M. Krause, L. Kletsch, A. Klein, C.A. Strassert, I.O. Koshevoy and P. Hirva, *Photophysics and Excited State Dynamics of Cyclometalated [M(Phbp)(CN)] (M = Ni, Pd, Pt) Complexes: A Theoretical and Experimental Study*, **Inorg. Chem.** 60(12) (2021) 8777-8789; DOI: 10.1021/acs.inorgchem.1c00680; first published 07 June 2021
21. A.V. Paderina, I.O. Koshevoy and E.V. Grachova, *Keep it tight: a crucial role of bridging phosphine ligands in the design and optical properties of multinuclear coinage metal complexes*, **Dalton Trans.** 50 (2021) 6003-6033; DOI: 10.1039/D1DT00749A; first published 09 April 2021. **This article is part of the themed collections: 2021 Frontier and Perspective articles and Dalton Transactions HOT Articles. ON COVER**

22. I. Koshevoy, E. Grachova, K. Kisel, D. Temerova, T. Eskelinen, P. Hirva, J. Shakirova, S. Tunik, N. Kinnunen, A. Melnikov, *Diversifying luminescence of phenanthro-diimine ligands in zinc complexes*, **Inorg. Chem. Front.** 8 (2021) 2549-2560; DOI: 10.1039/D1QI00149C; first published 07 April 2021
23. I.O. Koshevoy, V. Sivchik, A. Kochetov, T. Eskelinen, K.S. Kisel, A.I. Solomatina, E.V. Grachova, S.P. Tunik, P. Hirva, *Modulation of metallophilic and  $\pi\pi$  interactions in platinum cyclometalated luminophores with halogen bonding*, **Chem. Eur. J.** 27 (2021) 1787-1794; DOI: 10.1002/chem.202003952; first published 24 September 2020
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## Corrections

99. **Erratum** Ponomarenko V. I., Krupenia D. V., Grachova E. V., Gindin V. A., Selivanov S. I., Koshevoy I. O., Tunik S. P., Haukka M., Pursiainen J., Pirila P., *Structure, stereochemistry and dynamics of tetranuclear polyhydride clusters containing chiral heterobidentate phosphanes*, **Z. Anorg. Allg. Chem.**, (2010) 1153

## Contributions to Academic Conferences

1. Safronova S.D., Luginin M.E., Grachova E.V., *Synthesis of heterometallic complex Pt(II)-Au(III) with cyclometalating tridentate ligands*, Conference on Natural Sciences and Humanities with International Participation 'Nauka SPU 2023', 21 November 2023, St. Petersburg, Russia
2. Grachova E., Paderina A., Luginin M., *Organometallic compounds of transition metals: bright stars of Universe of molecular emitters*, IV International Symposium 'Modern trends in organometallic chemistry and catalysis' dedicated to the 100th anniversary of Academician M.E. Volpin, 23-27 May 2023, Moscow, Russia  
**Invited**
3. Paderina A.V., Petrovskiy S.K., Grachova E.V., *Bis-alkynyl complexes of Pt(II) with ligands based on phosphonium salts: photophysical and stimuli-responsive properties in the solid phase*, International Scientific Conference of Students, Postgraduates and Young Scientists "Lomonosov", 10-21 April 2023, Moscow, Russia

4. Snetkov D.A., Paderina A.V., Luginin M.E., Grachova E.V., *Influence of solvent properties on photophysical properties of diimine bis-alkynyl complexes of Pt(II) containing PPh<sub>2</sub>(O) group*, International Scientific Conference of Students, Postgraduates and Young Scientists “Lomonosov”, 10-21 April 2023, Moscow, Russia
5. Luginin M.E., Snetkov D.A., Grachova E.V., *Alkynyl complexes of gold(III) containing tertiary phosphine oxides: synthesis and photophysical properties*, International Scientific Conference of Students, Postgraduates and Young Scientists “Lomonosov”, 10-21 April 2023, Moscow, Russia
6. Sumovsky D.S., Makarov I.S., Filippov I.P., Grachova E.V., Rostovsky N.V., *Cyclometallated iridium(III) complexes based on imidazopyridines*, International Scientific Conference of Students, Postgraduates and Young Scientists “Lomonosov”, 10-21 April 2023, Moscow, Russia
7. Surkova A., A. Bogomolov, A. Paderina, V. Khistiaeva, E. Boichenko, E. Grachova, D. Kirsanov, *Milk Analysis using a New Optical Multisensor System Based on Lanthanide(III) Complexes*, Eng. Proc. 48(1) (2023) 28; DOI: 10.3390/CSAC2023-14923; first published 07 October 2023 [This article belongs to the Proceedings of The 2nd International Electronic Conference on Chemical Sensors and Analytical Chemistry]
8. A. Surkova, A. Bogomolov, A. Paderina, V. Khistiaeva, E. Boichenko, E. Grachova, D. Kirsanov, *Milk analysis by a new optical multisensor system based on lanthanide(III) complexes*, The 2nd International Electronic Conference on Chemical Sensors and Analytical Chemistry, 2023
9. E. Grachova, A. Paderina, S. Petrovskii, E. Abramova, *Non-covalent interactions in the design of luminophores based on transition metal complexes*, 2nd International Symposium “Noncovalent Interactions in Synthesis, Catalysis, and Crystal Engineering”, 14-16 November 2022, Moscow, Russia **Invited**
10. E. Grachova, *Supramolecular systems based on Pt(II) complexes and how to manage them*, XXIII International Chernyaev Conference on Chemistry, Analytics and Technology of Platinum Metals, 3-7 October 2022, Novosibirsk, Russia **Plenary**
11. A.V. Paderina, S.K. Petrovskii, E.V. Grachova, *Pt(II) bis-alkynyl complexes with ligands based on phosphonium salts: synthesis and photophysical properties*, XXIII International Chernyaev Conference on Chemistry, Analytics and Technology of Platinum Metals, 3-7 October 2022, Novosibirsk, Russia
12. A.D. Mironova, S.K. Petrovskii, E.V. Grachova, *Platinum(II) complexes with alkynylpyridinium ligands: Synthesis and photophysical properties*, XXIII International Chernyaev Conference on Chemistry, Analytics and Technology of Platinum Metals, 3-7 October 2022, Novosibirsk, Russia
13. S.K. Petrovskii, A.D. Mironova, E.V. Grachova, *Homoleptic gold(I) bis-alkynyl complexes with intramolecular charge transfer*, XXIII International Chernyaev Conference on Chemistry, Analytics and Technology of Platinum Metals, 3-7 October 2022, Novosibirsk, Russia
14. E. Grachova, *Non-rigid ligands in the design of polynuclear luminescent Au(I) complexes*, III Scientific Conference ‘Dynamic processes in the chemistry of elementorganic compounds’ dedicated to the 145th anniversary of Academician A.E. Arbuzov, 12-15 September 2022, Arbuzov IOPC FRC Kazan Scientific Center of RAS, Kazan, Russia **Invited**
15. E. Grachova, *Design of functional molecular systems based on lanthanide complexes*, VII Russian Day Rare Earths, 14-16 February 2022, Arbuzov IOPC FRC Kazan Scientific Center of RAS, Kazan, Russia **Invited**
16. S.K. Petrovsky, M. Morse, S. Schmitz, K.M. Monakhov, E.V. Grachova, *Polyoxovanadate-organogold molecular hybrids: a new class of compounds for molecular electronics*, XXVIII International Chugaev Conference on Coordination Chemistry, 3-8 October 2021, Tuapse, Russia
17. A.V. Paderina, Yu.R. Shakirova, I.O. Koshevoy, E.V. Grachova, *New effective method for the synthesis of bis-diimine Rhenium(I) complexes*, XXVIII International Chugaev Conference on Coordination Chemistry, 3-8 October 2021, Tuapse, Russia
18. V.V. Khistyeva, E.V. Gracheva, I.O. Koshevoy, *Cyclometallated Pt(II) and Pd(II) binuclear complexes based on tridentate ligands: design and photophysical properties*, XXVIII International Chugaev Conference on Coordination Chemistry, 3-8 October 2021, Tuapse, Russia
19. E. Abramova, E. Kostenko, E. Eliseenkov, V. Boyarskiy, E. Grachova, *Aggregation-induced emission in gold(I) complexes bearing with terpyridine fragment*, XXVIII International Chugaev Conference on Coordination Chemistry, 3-8 October 2021, Tuapse, Russia
20. E.V. Grachova, *Transition metal complexes as ‘building blocks’ of functional molecular systems*, XXVIII International Chugaev Conference on Coordination Chemistry, 3-8 October 2021, Tuapse, Russia
21. Khistiaeva V.V., Grachova E.V., Koshevoy I.O., *So close but different: Pt(II) and Pd(II) binuclear cyclometalated complexes of the tridentate N<sup>0</sup>N<sup>0</sup>C and N<sup>0</sup>C<sup>0</sup>N ligands*, The XII International Conference on Chemistry For Young Scientists Mendeleev 2021, 6-10 September 2021, St Petersburg, Russia



22. E. Grachova, *Complexes of f-elements for the design of multichromic molecular emitters*, VI Russian Day Rare Earths, 17-19 February **2020**, Novosibirsk, Russia
23. E. Grachova, *Design of multicolor molecular emitters based on transition metal complexes for single-molecule-based (SMB) materials*, International School on Advanced Light-Emitting and Optical Materials (SLALOM 2019) ITMO University 12-13 December **2019**, St. Petersburg **Invited**
24. E. Grachova, *Heterometallic complexes constructed of d- and f-blocks: synthesis and structure characterization by soft X-ray*, Workshop on Spin-resolved Photoemission and Electronic Structure of Quantum and Energy Materials, 28-29 October **2019**, Berlin, Germany **Invited**
25. E. Grachova, *Design of multichromophore molecular emitters based on combination of transition metal complexes*, 5th EuChemS Inorganic Chemistry Conference (EICC-5), 24-28 June **2019**, Moscow, Russia **Invited**
26. A. Gitlina, I. Koshevoy, E. Grachova, *Solid-state organization of novel cyclometalated platinum(II) complexes through weak interactions*, 5th EuChemS Inorganic Chemistry Conference (EICC-5), 24-28 June **2019**, Moscow, Russia
27. E. Abramova, E. Kostenko, A. Gitlina, V. Boyarskiy, E. Eliseenkov and E. Grachova, *Gold(I) complexes decorated by flexible alkynyl-terpyridine ligands: some features of luminescence*, 5th EuChemS Inorganic Chemistry Conference (EICC-5), 24-28 June **2019**, Moscow, Russia
28. V. Khistiaeva, A. Gitlina, E.V. Grachova, *Click-chemistry as a convenient way for binding of metalloblocks: design principles for the construction of multi-metallic systems containing Ln(III)*, 5th EuChemS Inorganic Chemistry Conference (EICC-5), 24-28 June **2019**, Moscow, Russia
29. A. Paderina, E. Grachova, J. Shakirova, E. Galenko, and A. Khlebnikov, *Heteroleptic phosphine-diimine Cu(I) and Ag(I) complexes: synthesis and photophysical properties*, 5th EuChemS Inorganic Chemistry Conference (EICC-5), 24-28 June **2019**, Moscow, Russia
30. V.V. Khistyayeva, A.Yu. Gitlina, E.V. Grachova, *Strategy of post-synthetic modification of metalloligands Ir(III) complexes for construction of luminescent d-f dyads*, V Russian Day Rare Earths, 14-15 February **2019**, Nizhny Novgorod, Russia
31. J. Shakirova, E. Grachova, I. Koshevoy, and S. Tunik, *Luminescent heterometallic Au(I)-Cu(I) cluster-capped assemblies: demonstration of post-synthetic modification of the metal cores*, The Russian National Cluster of Conferences on Inorganic Chemistry «InorgChem 2018», 17-21 September **2018**, Astrakhan, Russia
32. Kisel, K.S., Koshevoy, I.O.; Grachova, E.V., and Tunik, S.P, *Synthesis and luminescent properties of zinc(II) complexes based on the 2-pyridyl-1H-phenanthro[9,10-d]imidazole ligands*, The Russian National Cluster of Conferences on Inorganic Chemistry «InorgChem 2018», 17-21 September **2018**, Astrakhan, Russia
33. Elena Grachova, *Molecular emitters based on heavy metal complexes equipped by bipyridine arm: some features of design and photophysical properties*, 3<sup>rd</sup> STEPS Symposium on Photon Science, 11-12 March **2018**, Moscow, Russia
34. I.V. Solovyev, E.V. Grachova, *Mononuclear complexes of gold(I) as sensitizers of lanthanide luminescence*, IV Russian Rare Earth Day, 15-16 February **2018**, Moscow, Russia
35. S.O. Slavova, V.V. Sizov, I.V. Solovyev, E.V. Grachova, *Quantum-chemical calculations of the electronic structure and excited states of d-f heterometallic ensembles by DFT and TDDFT methods*, IV Russian Rare Earth Day, 15-16 February **2018**, Moscow, Russia
36. V.V. Khistyayeva, E.V. Grachova, *Heterometallic Ir(III)/Ln(III) luminescent dyads: NIR emitters based on d-f systems*, IV Russian Rare Earth Day, 15-16 February **2018**, Moscow, Russia
37. E.V. Grachova, A.Yu. Gitlina, V.V. Khistyayeva, I.V. Solovyev, *Molecular d-f emitters based on heterofunctional polytope ligands: design features and photophysical properties*, IV Russian Rare Earth Day, 15-16 February **2018**, Moscow, Russia
38. Elena Grachova, *Supramolecular cluster complexes of copper subgroup metals: some features of architecture and controlled formation of hybrid nanostructures*, Workshop devoted to 15 Years of Russian-German Laboratory at BESSY II, 7-8 December **2017**, the BESSY II Facility of Helmholtz-Zentrum Berlin, Berlin, Germany **Invited**
39. Solovyev I.V., Belyaev A. A., Grachova E.V., Koshevoy I.O., *Au(I) complexes as sensitizers of Ln(III) emission: synthesis and photophysical study*, 22<sup>nd</sup> Conference on Organometallic Chemistry (EuCOMC XXII), 9-13 July **2017**, Amsterdam, Netherlands

40. Kisel K.S., Koshevoy I.O., Grachova E.V., Tunik S.P., *A New Generation of Diimine Ligands with Tunable Photophysical Behavior and Their Rhenium(I) Complexes*, 22<sup>nd</sup> Conference on Organometallic Chemistry (EuCOMC XXII), 9-13 July **2017**, Amsterdam, Netherlands
41. E. Grachova, I. Koshevoy and S. Tunik, *Molecular emitters based on heterofunctional polydentate ligands decorated by bipyridine: some features of design and photophysical properties*, 4th EuCheMS Inorganic Chemistry Conference, 2-5 July **2017**, Copenhagen, Denmark
42. V. Khistyayeva, A. Belyaev, E.V. Grachova, and I.O. Koshevoy, *Ambipolar phosphine derivatives to sensitize Ln(III): synthesis and luminescent Properties*, 4th EuCheMS Inorganic Chemistry Conference, 2-5 July **2017**, Copenhagen, Denmark
43. A. Gitlina, I. Solovjov, I. Koshevoy and E. Grachova, *Novel cyclometalated Ir(III) complexes as blocks for dual emissive materials: synthesis and photophysical properties*, 4th EuCheMS Inorganic Chemistry Conference, 2-5 July **2017**, Copenhagen, Denmark
44. Slavova S.O., Sizov V.V., Grachova E.V., *Electronic structure and excited states of d-f heterometallic complexes containing a bridging ligand with bipyridyl function*, X International conference of young scientists on Chemistry "Mendeleev 2017" and 2nd school-conference "Directed design of molecules and materials with programmable properties", 4-7 April **2017**, St. Petersburg, Russia
45. Shakirova J.R., Tomashenko O.A., Grachova E.V., Khlebnikov A.F., Tunik S.P., *Orange-red emissive Iridium(III) complexes based on the new type heterocyclic diamine ligands*, X International conference of young scientists on Chemistry "Mendeleev 2017" and 2nd school-conference "Directed design of molecules and materials with programmable properties", 4-7 April **2017**, St. Petersburg, Russia
46. Grachova E.V., *Design of d-f molecular emitters: Au(I) complexes as lanthanide sensitizers*, X International conference of young scientists on Chemistry "Mendeleev 2017" and 2nd school-conference "Directed design of molecules and materials with programmable properties", 4-7 April **2017**, St. Petersburg, Russia **Invited lecture**
47. Khistyayeva V.V., Grachova E.V., *Lanthanide complexes based on a heterocyclic polytope ligand: synthesis and photophysical properties*, III Russian Rare Earth Day, 20-21 February **2017**, Novosibirsk, Russia
48. E.V. Grachova, A.Yu. Gitlina, V.V. Khistyayeva, I.V. Solovjev, *Design of d-f molecular emitters: mononuclear Au(I) complexes as lanthanide sensitizers*, III Russian Rare Earth Day, 20-21 February **2017**, Novosibirsk, Russia **Invited**
49. Grachova E.V., Shakirova J.R., Koshevoy I.O., *Molecular emitters in NIR range based on d-f heterometallic complexes: design of d-block*, Scientific conference of Russian Scientific Foundation "Fundamental chemical studies of the XXI century" 20-24 November **2016**, Moscow, Russia
50. Khistyayeva V.V., Shakirova J.R., Grachova E.V., *Politopic N<sup>4</sup>-heterocyclic ligand and lanthanide complexes based on it: synthesis and photophysical properties*, Scientific conference of Russian Scientific Foundation "Fundamental chemical studies of the XXI century" 20-24 November **2016**, Moscow, Russia
51. Shakirova J.R., Tomashenko O.A., Grachova E.V., Khlebnikov A.F., Tunik S.P., *Molecular complex thermometer based on a dual emission in green and red regions of the spectrum*, Scientific conference of Russian Scientific Foundation "Fundamental chemical studies of the XXI century" 20-24 November **2016**, Moscow, Russia
52. Zhukovskaia M.A., Zhukovsky D.D., Grachova E.V., Tunik S.P., *Synthesis and photophysical properties of new binuclear platinum complex with unusual long-wavelength emission*, Scientific conference of Russian Scientific Foundation "Fundamental chemical studies of the XXI century" 20-24 November **2016**, Moscow, Russia
53. Kisel K.S., Koshevoy I.O., Grachova E.V., Tunik S.P., *Luminescence complexes Re(I) and Pt(II) as an independent chromophore centers to create heterometallic molecular emitters*, Scientific conference of Russian Scientific Foundation "Fundamental chemical studies of the XXI century" 20-24 November **2016**, Moscow, Russia
54. Viktoriia Khistyayeva, Julia R. Shakirova, Elena V. Grachova, *Synthesis and luminescent properties of lanthanide complexes on the base of N<sup>4</sup>-heterocyclic politopic ligand*, International Student Conference "Science and Progress" St.Petersburg, Peterhof, October 17-21, **2016**
55. Sergey Tunik, Igor Koshevoy and Elena Grachova, *Polynuclear luminescent d10 complexes, design and application in sensing, bioimaging and nanoparticles preparation*, 27th International Conference on Organometallic Chemistry (ICOMC 2016), 17-22 July **2016**, Melbourne, Australia
56. E.V. Grachova, A.A. Penney, V.V. Sizov and S.P. Tunik, *Homo- and heteroleptic Au(I) complexes based on bidentate NHC ligands: some features of the photophysical properties*, 27th International Conference on Organometallic Chemistry (ICOMC 2016), 17-22 July **2016**, Melbourne, Australia

57. Julia Shakirova, Elena Grachova, Sergey Tunik, Olesya Tomashenko and Alexander Khlebnikov, *Gold(I)-alkynyl complexes with a new type N-donor heterocyclic ligand: Synthesis and photophysical properties*, 27th International Conference on Organometallic Chemistry (ICOMC 2016), 17-22 July **2016**, Melbourne, Australia
58. K. Kisel, M. Thangavel, I.O. Koshevoy, Pi-Tai Chou, E. Grachova, S. Tunik, *Water soluble rhenium(I) complexes for two-photon imaging*, 42nd International Conference on Coordination Chemistry 2016 (ICCC 2016), 3-8 July **2016**, Brest, France
59. J.R. Shakirova, O.A. Tomashenko, E.V. Grachova, A.F. Khlebnikov, S.P. Tunik, *Alkynyl complexes of gold(I) based on the new N-donor heterocyclic ligands: synthesis and photophysical properties*, Cluster Conference on Organic Chemistry (ORGCHEM-2016), 27 June - 1 July, **2016**, Repino, St.Petersburg, Russia
60. A.Yu. Gitlina, J.R. Shakirova, E.V. Grachova, *Synthesis, characterization and photophysical properties of a novel cyclometallated complexes Ir(III)*, Cluster Conference on Organic Chemistry (ORGCHEM-2016), 27 June - 1 July, **2016**, Repino, St.Petersburg, Russia
61. I. Strel'nik, E. Musina, E. Grachova, A. Karasik, O. Sinyashin, *Luminescent copper(I) and gold(I) complexes of 1,5-diaza-3,7-diphosphacyclooctanes*, 21st International Conference on Phosphorus Chemistry (ICPC 2016), 5-10 June **2016**, Kazan, Russia; Book of abstracts, p.87
62. E.V. Grachova, J.R. Shakirova, I.O. Koshevoy, S.P. Tunik, *Polydentate phosphines as templates to build polynuclear luminescence complexes of copper subgroup metals*, 21st International Conference on Phosphorus Chemistry (ICPC 2016), 5-10 June **2016**, Kazan, Russia; Book of abstracts, p.145 **Key note**
63. Grachova E.V., Shakirova Yu.R., Strel'nik I.D., Koshevoy I.O., Tunik S.P., *Alkynyl-phosphine Au<sup>I</sup> and Au<sup>I</sup>-Cu<sup>I</sup> complexes based on phosphine template: some features of the photophysical properties*, III EuCheMS Inorganic Chemistry Conference, from 28<sup>th</sup> June to 1<sup>st</sup> July **2015**, Wroclaw, Poland.
64. A.A. Makarova, E.V. Grachova, D. Niedzialek, O.Yu. Vil'kov, S. Sonntag, A.I. Solomatina, D.V. Krupenya, V.S. Neudachina, A.V. Fedorov, S.P. Tunik, C. Laubschat, D.V. Vyalikh, *Modification of the chemical and electronic structure of novel Pt(II) complexes via incorporation of alkali metals (Li, Na, K, Cs)*, 16<sup>th</sup> European Conference on Applications of Surface and Interface Analysis ECASIA '15, from September 28<sup>th</sup> to October 1<sup>st</sup>, **2015**, Granada (Spain)
65. Anna A. Makarova, Elena V. Grachova, Vera S. Neudachina, Lada Yashina, Anja Blüher, Serguei Molodtsov, Michael Mertig, Hermann Ehrlich, Vera K. Adamchuk, Clemens Laubschat, and Denis Vyalikh, *Insight into Bio-metal Interface Formation in vacuo: Interplay of S-layer Protein with Copper and Iron*, Interdisciplinary Surface Science Conference (ISSC-20), 30 March - 2 April **2015**; Birmingham, United Kingdom
66. Strel'nik I.D., Grachova E.V., Musina E.I., Tunik S.P., Karasik A.A., Sinyashin O.G., *Luminescent vapochromism of aminomethylphosphine gold(I) alkynyl complexes*, XXVI International Chugaev Conference on Coordination Chemistry 6-10 October **2014**, Kazan, Russia. Book of abstracts, p.43
67. A. Makarova, E. Grachova, V. Neudachina, L. Yashina, A. Blueher, S. Molodtsov, M. Mertig, H. Ehrlich, V. Adamchuk, C. Laubschat and D. Vyalikh. *Insight into Bio-metal Interface Formation in vacuo: Interplay of S-layer Protein with Copper and Iron*, 30<sup>th</sup> European Conference on Surface Science, ECOSS-30, 31 August – 5 September **2014**, Antalya (Turkey). Book of abstracts, p.263
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