

**CURRICULUM VITAE**  
**Andrei S. Potapov, Doctor of Chemical Science**

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Born 31 Dec. 1981

2004 – graduated with honors from the Altai State Technical University, Department of Chemical Technology, specialty “Technology of polymer processing”

2006 – defended the PhD thesis “Synthesis and some properties of bis(pyrazol-1-yl)methanes and chelating oligomers based on them” at the Altai State Technical University, Russia

2006 – became the faculty member of Department of Chemical Technology, Altai State Technical University

2009 – Associate Professor of the Chair of General, Inorganic and Analytical Chemistry, Department of Chemical Technology, Altai State Technical University

2012 – defended the Doctors thesis “Synthesis and reactivity of pyrazolic polydentate ligands” at Tomsk Polytechnical University, Russia (in Russia there are two levels of scientific degrees, one equivalent to PhD, the second – Doctor of Science degree is the highest research degree).

2012 – Elected as Head of Chair of Chemistry and Chemical Technology, Department of Food and Chemical Industry, Altai State Technical University

2014 – present time Professor, National Research Tomsk Polytechnic University (TPU)

**Main research interests**

Synthesis of heterocyclic chelating ligands for transition metals based on azole derivatives.

Coordination chemistry of azole ligands, electrochemical and biological properties of transition metal complexes

Synthesis of chelating polymeric ligands – azole derivatives.

**List of publications (published in English)**

1. M. B. Bushuev, A. V. Virovets, E. V. Peresyphkina, D. Yu. Naumov, **A. S. Potapov**, A. I. Khlebnikov, S. F. Vasilevsky, and L. G. Lavrenova Synthesis and structure of (bis(3,5-dimethyl-1*H*-pyrazol-1-yl)methane)diodocobalt(II) // *J. Struct. Chem.* 2005. Vol. 46. No. 6. pp. 1099-1103
2. **Potapov A.S.**, Khlebnikov A.I. Synthesis of mixed-ligand copper (II) complexes containing bis (pyrazol-1-yl) methane ligands // *Polyhedron.* 2006. Vol. 25. pp. 2683–2690.
3. Schepetkin I., **Potapov A.**, Khlebnikov A., Korotkova E., Lukina A., Malovichko G., Kirpotina L., Quinn M.T. Decomposition of reactive oxygen species by copper (II) bis (1-pyrazolyl) methane complexes // *J. Biol. Inorg. Chem.* 2006. Vol. 11. pp. 499–513.
4. **Potapov A. S.**, Khlebnikov A. I., Ogorodnikov V. D. Synthesis of 1-Ethylpyrazole-4-cardaldehydes, 1,1'-Methylenebis(3,5-dimethylpyrazole-4-cardaldehyde), and Schiff Bases Derived Theirfrom // *Russ. J. Org. Chem.* 2006. Vol. 42. No. 4. pp. 550-554
5. **Potapov A. S.**, Khlebnikov A. I., Vasilevskii S. F. Synthesis of Monomeric and Oligomeric 1,1'-Methylenebis-(1*H*-pyrazoles) Containing Ethynyl Fragments // *Rus. J. Org. Chem.* 2006. Vol. 42. No. 9. pp. 1368-1373
6. E. V. Lider, **A. S. Potapov**, E. V. Peresyphkina, A. I. Smolentsev, V. N. Ikorskii, A. I. Khlebnikov, and L. G. Lavrenova Synthesis and structure of a complex of copper(II) bromide with bis(benzotriazol-1-yl)methane // *J. Struct. Chem.* 2007. Vol. 48. No. 3. pp. 500-505

7. E. A. Nudnova, **A. S. Potapov**, A. I. Khlebnikov, and V. D. Ogorodnikov Synthesis of Ditopic Ligands Containing Bis(1H-pyrazol-1-yl)methane Fragments // Russ. J. Org. Chem. 2007. Vol. 43. No. 11. pp. 1698–1702
8. **Potapov A.S.**, Domina G.A., Khlebnikov A.I., Ogorodnikov V.D. Facile Synthesis of Flexible Bis (pyrazol-1-yl) alkane and Related Ligands in a Superbasic Medium // Eur. J. Org. Chem. 2007. pp. 5112–5116.
9. G. A. Domina, **A. S. Potapov**, A. I. Khlebnikov, V. D. Ogorodnikov Synthesis of 1,8-Di(pyrazol-1-yl)-3,6-dioxaoctane and Its Derivatives // Russ. J. Org. Chem. 2009. Vol. 45. pp. 1224–1228.
10. **Potapov A.S.**, Nudnova E.A., Domina G.A., Kirpotina L.N., Quinn M.T., Khlebnikov A.I., Schepetkin I.A. Synthesis, characterization and potent superoxide dismutase-like activity of novel bis (pyrazole) –2,2-bipyridyl mixed ligand copper (II) complexes // Dalton Trans. 2009. pp. 4488–4498.
11. **Potapov A.S.**, Nudnova E.A., Khlebnikov A.I., Ogorodnikov V.D., Petrenko T.V. Synthesis of New Polydentate Pyrazolyl-ethene Ligands by Interaction of 1H-Pyrazole and 1,1,2,2-Tetrabromoethane in a Superbasic Medium // J. Heterocycl. Chem. 2011. Vol. 48. pp. 645–651.
12. **Potapov A.S.**, Chernova N.P., Ogorodnikov V.D., Petrenko T.V., Khlebnikov A.I. Synthesis and oxidation of some azole-containing thioethers // Beilstein J. Org. Chem. 2011. Vol. 7. pp. 1526–1532.
13. **Potapov A.S.**, Domina G.A., Petrenko T.V., Khlebnikov A.I. Synthesis and crystal structure of discrete complexes and coordination polymers containing 1,3-bis (pyrazol-1-yl) propane ligands // Polyhedron. 2012. Vol. 32. pp. 150–157.
14. **Potapov A.S.**, Nudnova E.A., Ogorodnikov V.D., Petrenko T.V., Khlebnikov A.I. Synthesis and X-Ray crystal structure of the first binuclear 1,1,2-tris (pyrazol-1-yl) ethene – zinc chloride complex // Polyhedron. 2012. Vol. 32. pp. 252–256.
15. **Potapov A.S.**, Nudnova E.A., Ogorodnikov V.D., Petrenko T.V., Khlebnikov A.I. Synthesis of new bitopic tetra (pyrazolyl) -ligands with neopentane and o-xylene backbones // The Scientific World Journal. Organic Chemistry. 2012. Article ID 798271. doi:10.1100/2012/798271.
16. Eugenia V. Peresyphkina, Elisaveta V. Lider, Anton I. Smolentsev, Joaquin Sanchiz, Beatriz Gil-Hernandez, **Andrei S. Potapov**, Andrei I. Khlebnikov, Natalie A. Kryuchkova, Ludmila G. Lavrenova, *Bis* (benzotriazol-1-yl) methane as a linker in the assembly of new copper (II) coordination polymers: Synthesis, structure and investigations // Polyhedron 2012, Vol. 48, P.253–263.
17. **Andrei S. Potapov**, Nina P. Chernova, Vladimir D. Ogorodnikov, Tatiana V. Petrenko, and Andrei I. Khlebnikov Facile Synthesis of Pyrazole- and Benzotriazole-Containing Selenoethers // The Scientific World Journal. Volume 2014, 5 pages. <http://dx.doi.org/10.1155/2014/578762>
18. Tatiana V. Goncharova, Lina V. Zatonkaya, **Andrei S. Potapov** Synthesis of di(imdazolium) and di(pyrazolium) salts as precursors for N-heterocyclic dicarbene complexes // Procedia Chemistry. 2014. Vol. 10. pp. 485-489.
19. **Andrei S. Potapov**, Evgenia A. Nudnova, Andrei I. Khlebnikov, Vladimir D. Ogorodnikov and Tatiana V. Petrenko Synthesis, crystal structure and electrocatalytic activity of discrete and polymeric copper(II) complexes with bitopic bis(pyrazol-1-yl)methane ligands // Inorganic chemistry communications. 2015. Vol. 53. pp. 72–75.

#### **Patents:**

1. Patent RU 2322289 C1. Oligomers, containing fragments of bis(pyrazol-1-yl)methane, as sorbents of lanthanide and heavy metal ions / **A.S. Potapov**, Khlebnikov A.I. . Appl. 2006128120/15; 02.08.06; Publ. 20.04.08.
2. Patent RU 2456274 C1 Method of synthesis of bis(3,5-dimethylpyrazol-4-yl)methane / **A.S. Potapov**, Khlebnikov A.I. . Appl 11.01.2011; Publ. 20.07.2012.

#### **Funded research projects (as Principal Investigator)**

Russian Fund for Basic Research (RFBR) Project No 12-03-31197 (2012-2013) «Synthesis of N-heterocyclic dicarbenes based on pyrazole-derived polydentate ligands», 650,000 RUB  
 RFBR Project No 13-03-98033 (2013-2014) «Synthesis of azole-containing ligands and their complexes with potential antioxidant activity», 500000 RUB

RFBR Project No 13-03-90904 (2013) « Novel tridentate ligands for palladium-catalyzed C-C bond formation reaction via aryl boronic acid with aryl halide, alkenes and alkynes », 210,000 RUB  
Russian Ministry of Science and Education Scientific Project № 774 (2014-2016) «Synthesis of N-heterocyclic carbene complexes with catalytic activity», 5,540,000 RUB for 2014-2015.

### **Collaborations**

Department of Veterinary Molecular Biology, Montana State University, Dr. Igor A. Schepetkin  
Institute of Inorganic Chemistry (Novosibirsk), Prof. Ludmila Lavrenova, Prof. Sergei Konchenko,  
Prof. Vladimir Fedin

Institute of Petroleum Chemistry (Tomsk), Dr. Ogorodnikov V.D.

### **References**

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