CURRICULUM VITAE

Prof. Evgeny TRETYAKOV

Institute address:

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Born:
1968, 26th of March, Novosibirsk, Russia

Research Interests:
Organic chemistry & Molecular magnetism:

- Functionally oriented synthesis of organic radicals
- Design of magnetically active heterospin systems
- Synthesis of fluorinated heterocycles and quinones

Keywords and expertise:
Organic Chemistry, Coordination chemistry, Molecular magnetism, Design of Molecule-based Magnets, Synthesis, Nitroxides, Heterospin Complexes, Magneto-structural Correlations, Fluorinated Heterocycles, Fluorinated Quinones, Aromatic nitriles, Nucleophilic aromatic substitution

Education and Degrees:

March 2009	Doctor of Science (Habilitation analogue)	"Polyfunctional nitroxides for design of molecular magnets" (Zelinsky Institute of Organic Chemistry, Moscow)
November 1997	PhD in Chemistry	"Synthesis and conversion of the acetylenic derivatives of phenyl- and pyrazolyl-diazonium salts" (Institute of Chemical Kinetics and Combustion, Novosibirsk)
June 1992	Master degree in organic chemistry	Studying of the Richter's reaction (Novosibirsk State University)

Work Experience:

2/2016–present	Vice Director, NIOC Novosibirsk
4/2015–present	Leader of Laboratory of studying nucleophilic and radical ion reactions, NIOC Novosibirsk
10/2015–12/2015	Visiting Professor at at Max Planck Institute for Polymer Research (in DAAD research fellowship, Prof. Dr. Martin Baumgarten)
8/2008–4/2015	Leading researcher in ITC, Novosibirsk (Laboratory of Multispin Coordination Compounds, Prof. Victor Ovcharenko)
10/2014–12/2014	Visiting Professor at Osaka City University (JSPS fellowship, Prof. Keiji Okada).
9/2003–7/2008	Senior Staff Scientist in ITC, Novosibirsk (Laboratory of Multispin Coordination Compounds, Prof. Victor Ovcharenko)
8/2001–8/2003	Research Assistant in ITC, Novosibirsk (Laboratory of Multispin Coordination Compounds, Prof. Victor Ovcharenko)
11/1996–7/2001	Research Assistant in Institute of Chemical Kinetics and Combustion, Novosibirsk (Laboratory of Organic Conjugated Systems, Prof. S. Vasilevsky)

Languages:
English (fluent), Russian (native)

Grants and Awards

1. State Prize for young scientists (2000).
2. State Prize for young scientists (2002).
3. Award from the International Science and Education Development Foundation (2002).
4. Award from the Academia Europaea (2002).
5. Lavrentiev's award of SB RAS for the best group project (2004).
6. Award from the Russian Science Support Foundation for "the postdoctoral research", 2004.
7. Award from the Presidium SB RAS "for the achievements in scientific research and on the occasion of 50th anniversary of SB RAS" (2007).
8. A principal investigator of the Project "Magnetochemistry" supported by the Ministry of Education and Science (2012).
9. JSPS research fellowship, a visiting professor at Osaka City University (2014).
10. The leader of the Project "Spin-labeled derivatives of 1,3-diaza[3]ferrocenophane – a new platform for molecular design of magnets" supported by the Russian Foundation for Basic Research (2015–2017).
11. DAAD research fellowship, a visiting professor at Max Planck Institute for Polymer Research (2015).

Bibliography:
Author and co-author of more than 135 scientific publications.

Selected Publications:

1. **E. Tretyakov**, S. Fokin, V. Ovcharenko, G. Romanenko, Yu. Shvedenkov. A new approach to synthesis of α-nitronyl nitroxide carboxylates. First metal complexes with α-imino nitroxide carboxylate. *Polyhedron* **2005**, *24*, 2176–2184.

2. **E. Tretyakov**, G. Romanenko, V. Ikorskii, D. Stass, V. Vasiliev, M. Demina, A. Mareev, A. Medvedeva, E. Gorelik, V. Ovcharenko. Cascade Reactions of Me_3Si-Substituted Imidazolidine-1,3-Diols with PbO_2, Including Oxidation of the Corresponding Diol and Subsequent Elimination of the Trimethylsilyl Fragment. *Eur. J. Org. Chem*. **2007,** 3639–3647.

3. O. N. Chupakhin, I. A. Utepova, M. V. Varaksin, **E. V. Tretyakov**, G. V. Romanenko, D. V. Stass, V. I. Ovcharenko. S_N^H Approach in the Synthesis of Nitronyl Nitroxides. *J. Org. Chem*. **2009**, *74*, 2870–2872.

4. **E. V. Tretyakov**, V. I. Ovcharenko. The chemistry of nitroxide radicals in the molecular design of magnets. *Russ. Chem. Rev.* **2009**, *78*, 971–1012.

5. V. I. Ovcharenko, S. V. Fokin, E. Yu. Fursova, O. V. Kuznetsova, **E. V. Tretyakov**, G. V. Romanenko, A. S. Bogomyakov. "Jumping Crystals": Oxygen-Evolving Metal-Nitroxide Complexes. *Inorg. Chem*. **2011**, *50*, 4307–4312.

6. **E. V. Tretyakov**, S. E. Tolstikov, G. V. Romanenko, A. S. Bogomyakov, D. V. Stass, M. K. Kadirov, K. V. Holin, O. G. Sinyashin, V. I. Ovcharenko. Synthesis, structure, and magnetic properties of 2,2′-(buta-1,3-diyne-1,4-diyl)bis(4,4,5,5-tetramethyl-4,5-dihydro-1*H*-imidazole 3-oxide 1-oxyl). *Polyhedron*, **2011**, *30*, 3232–3237.

7. **E. Tretyakov**, S. Tolstikov, A. Suvorova, A. Polushkin, G. Romanenko, A. Bogomyakov, S. Veber, M. Fedin, D. Stass, E. Reijerse, W. Lubitz, E. Zueva, V. Ovcharenko. Crucial role of paramagnetic ligands for magneto-structural anomalies in "breathing crystals". *Inorg. Chem*., **2012**, *51* , 9385–9394.

8. V. I. Ovcharenko, S. V. Fokin, E. T. Kostina, G. V. Romanenko, A. S. Bogomyakov, **E. V. Tretyakov**. The First Example of a Reversible Single Crystal to Single Crystal Polymerization-Depolymerization Accompanied by a Magnetic Anomaly for a Transition Metal Complex with an Organic Radical. *Inorg. Chem*., **2012**, *51*, 12188–12194.

9. I. Yu. Drozdyuk, S. E. Tolstikov, **E. V. Tretyakov**, S. L. Veber, V. I. Ovcharenko, R. Z. Sagdeev, E. G. Bagryanskaya, M. V. Fedin. Light-Induced Magnetostructural Anomalies in a Polymer Chain Complex of $Cu(hfac)_2$ with *tert*-Butylpyrazolylnitroxides. *J. Phys. Chem. A*, **2013**, *117* , 6483–6488.

10. **E. V. Tretyakov**, V. F. Plyusnin, A. O. Suvorova, S. V. Larionov, S. A. Popov, O. V. Antonova, E. M. Zueva, D. V. Stass, A. S. Bogomyakov, G. V. Romanenko, V. I. Ovcharenko. Luminescence of the Nitronyl Nitroxide Radical Group in a Spin-labelled Pyrazolylquinoline. *J. Luminescence*, **2014**, *148*, 33–38.

11. S. Tolstikov, **E. Tretyakov**, S. Fokin, E. Suturina, G. Romanenko, A. Bogomyakov, D. Stass, A. Maryasov, M. Fedin, N. Gritsan, V. Ovcharenko. $C(sp^2)$-Coupled Nitronyl and Imino Nitroxide Diradicals. *Chemistry - A European Journal*, **2014**, *20*, 2793–2803.

12. I. Yu. Barskaya, **E. V. Tretyakov**, R. Z. Sagdeev, V. I. Ovcharenko, E. G. Bagryanskaya,

K. Yu. Maryunina, T. Takui, K. Sato, M. V. Fedin. Photoswitching of a Thermally Unswitchable Molecular Magnet $Cu(hfac)_2L^{i\text{-}Pr}$ Evidenced by Steady-State and Time-Resolved Electron Paramagnetic Resonance. *J. Am. Chem. Soc*., **2014**, *136*, 10132–10138.

13. W. Kaszub, A. Marino, M. Lorenc, E. Collet, E. G. Bagryanskaya, **E. V. Tretyakov**, V. I. Ovcharenko, M. V. Fedin. Ultrafast Photoswitching in a Copper-Nitroxide-Based Molecular Magnet. *Angew. Chem., Intern. Ed*., **2014**, *53*, 10636–10640.
14. **E. V. Tretyakov**, G. V. Romanenko, S. L. Veber, M. V. Fedin, A. V. Polushkin, A. O. Tkacheva, V. I. Ovcharenko. $Cu(hfac)_2$ Complexes with Nitronyl Ketones Structurally Mimicking Nitronyl Nitroxides in Breathing Crystals. *Aust. J. Chem*. **2015**, *68*, 970–980.
15. L. V. Politanskaya, I. P. Chuikov, **E. V. Tretyakov**, V. D. Shteingarts, L. P. Ovchinnikova, O. D. Zakharova, G. A. Nevinsky. An effective two-step synthesis, fluorescent properties, antioxidant activity and cytotoxicity evaluation of benzene-fluorinated 2,2-dimethyl-2,3-dihydro-1H-quinolin-4-ones.*J. Fluorine Chem*., **2015**, *178*, 142–153.
16. L. Politanskaya, V. Shteingarts, **E. Tretyakov**, A. Potapov. The *p*-toluenesulfonic acid-catalyzed transformation of polyfluorinated 2-alkynylanilines to 2-aminoarylketones and indoles. *Tetrahedron Letters*, **2015**, *56*, 5328–5332.
17. G. A. Selivanova, **E. V. Tretyakov**, E. V. Amosov, I. Yu. Bagryanskaya, V. G. Vasiliev, E. V. Vasilyev, V. D. Tikhova, E. V. Karpova, T. V. Basova, D. V. Stass, V. D. Shteingarts. X-Ray induced phase transitions in 4-((4-(dibutylamino)phenyl)diazenyl)-biphenyl-2,3′,4′-tricarbonitrile. *J. Mol. Struct*., **2016**, *1107*, 242–248.
18. I. Yu. Bagryanskaya, L. V. Politanskaya, **E. V. Tretyakov**. Frequently used, but still unknown: terbium(III) tris-hexafluoroacetylacetonate dihydrate. *Inorg. Chem. Commun*., **2016**, 47–50.
19. O. D. Zakharova, L. P. Ovchinnikova, S. I. Zhivetyeva, L. I. Goryunov, V. D. Shteingarts, **E. V. Tretyakov**, G. A. Nevinsky. Synthesis and Evaluation of Cytotoxicity and Antioxidant Properties of Polyfluorinated Phosphorus-containing 1,4-Benzoquinones and 1,4-Naphthoquinones. *Adv. Res*., **2016**, *6*(6), 1–12.
20. **E. V. Tretyakov**, R. Yu. Peshkov, E. V. Panteleeva, A. S. Scrypnik, D. V. Stass, G. V. Romanenko, V. I. Ovcharenko. Addition of Cyanomethyl Anion to the Cyano Group of 2-Cyano-4,4,5,5-tetramethyl-4,5-dihydro-1*H*-imidazol-3-oxide-1-oxyl, a Nitronyl Nitroxide. *Tetrahedron Lett*., **2016**, *57*(21), 2327–2330.
21. L. V. Politanskaya, V. D. Shteingarts, **E. V. Tretyakov**. General and efficient synthesis of polyfluorinated 2-aminotolans and 2-arylindoles. *J. Fluor. Chem*., **2016**, *188*, 85–98.
22. S. E. Tolstikov, **E. V. Tretyakov**, D. E. Gorbunov, I. F. Zhurko, M. V. Fedin, G. V. Romanenko, A. S. Bogomyakov, N. P. Gritsan, D. G. Mazhukin. Reaction of Paramagnetic Synthon, Lithiated 4,4,5,5-Tetramethyl-4,5-dihydro-1*H*-imidazol-1-oxyl 3-oxide, with Cyclic Aldonitrones of the Imidazole Series. *Chem. Eur. J*., **2016**, *22*, 14598–14604.
23. G. Audran, E. G. Bagryanskaya, P. Brémond, M. V. Edeleva, S. R. A. Marque, D. A. Parkhomenko, O. Yu. Rogozhnikova, V. M. Tormyshev, **E. V. Tretyakov**, D. V. Trukhin,

S. I. Zhivetyeva. Trityl-based alkoxyamines as NMP controllers and spin-labels. *Polym. Chem*., **2016**, 7, 6490–6499.

24. S. I. Zhivetyeva, O. D. Zakharova, L. P. Ovchinnikova, D. S. Baev, I. Yu. Bagryanskaya, V. D. Shteingarts, T. G. Tolstikova, G. A. Nevinsky, **E. V. Tretyakov**. Phosphonium betaines derived from hexafluoro-1,4-naphthoquinone: Synthesis and cytotoxic and antioxidant activities. *J. Fluor. Chem*., **2016**, *192*, 68–77.
25. G. Audran, E. Bagryanskaya, I. Bagryanskaya, P. Brémond, M. Edeleva, S. R. A. Marque, D. Parkhomenko, **E. Tretyakov**, S. Zhivetyeva. C–ON bond homolysis of alkoxyamines triggered by paramagnetic copper(II) salts. *Inorg. Chem. Front*., **2016**, *3*, 1464–1472.
26. **E. Tretyakov**, K. Okada, S. Suzuki, M. Baumgarten, G. Romanenko, A. Bogomyakov, V. Ovcharenko. Synthesis, structure and properties of nitronyl nitroxide diradicals with fused-thiophene couplers. *J. Phys. Org. Chem*., **2016**, *29*, 725–734.