CURRICULUM VITÆ

Yury A. Skorik

Institutional address:
Insitute of Macromolecular Compounds of the Russian Academy of Sciences
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Academic Degrees

PhD in Chemistry (Physical/Analytical Chemistry)
Urals State University (Ekaterinburg, Russian Federation)
13th October 1998

MS in Chemistry
Urals State University (Ekaterinburg, Russian Federation),
23rd June 1995

Previous Activities and Professional Situation

April 2013 – present time
Associate Professor (joint affiliation)
St. Petersburg State Technological Institute (technical university), St.Petersburg, Russian Federation

October 2012 – present time
Senior Researcher (principal affiliation)
Insitute of Macromolecular Compounds of the Russian Academy of Sciences

December 2007 – present time
Associate Professor (joint affiliation)
St.Petersburg State Chemical Pharmaceutical Academy, St.Petersburg, Russian Federation

August 2005 – August 2007
Lecturer and Director of Analytical Chemistry Laboratory
University of Pittsburgh, Department of Chemistry, Pittsburgh, PA, USA

October 2004 – July 2005
Postdoctoral Research Associate (Prof. C. Achim)
Carnegie Mellon University, Department of Chemistry, Pittsburgh, PA, USA

August 2003
Invited Researcher (Prof. R.E. Shepherd),
University of Pittsburgh, Department of Chemistry, PA, USA

January-February 2003
Invited Researcher (D.Sc. G. Kogan),
Institute of Chemistry, Slovak Academy of Sciences, Bratislava, Slovakia

March 2001 – January 2003, January 2004 –August 2004
Postdoctoral Fellow (Prof. M.T.S.D. Vasconcelos, Prof. C.A.R. Gomes)
Universidade do Porto, Departamento de Quimica, Porto, Portugal

March 2000 – September 2004
Assistant Professor
Urals State University, Chemistry Department, Ekaterinburg, Russian Federation

November 1997 – March 2000
Assistant Lecturer/Insructor
Urals State University, Chemistry Department, Ekaterinburg, Russian Federation

October 1995 – October 1998
PhD Student (Prof. L.K. Neudachina)
Urals State University, Chemistry Department, Ekaterinburg, Russian Federation

Grants and Awards

2003 Postdoctoral fellowship, US Civilian Research and Development Foundation
2001, 2002, 2004 Postdoctoral fellowship, Fundação para a Ciência e a Tecnologia (Portugal)
2003-2005, 2004-2006 Russian Foundation of Basic Research; grants 04-03-32463a, 03-03-32287a
1998 PhD fellowship, International Soros Science Education Program
1996, 1997 Urals Governor Award for outstanding PhD students

Teaching Experience

Courses:

@ St. Petersburg State Technological Institute (technical university) (St. Petersburg, Russia)
Standardization, Metrology and Certification: Spring 2013 – present time
Working with scientific, technical and regulatory literature: Spring 2013 – present time

@ St. Petersburg Chemical Pharmaceutical Academy (St. Petersburg, Russia)
Instrumental Analysis: Spring 2008 – present time
Analytical Chemistry I&II (Lab&Recitation): Fall 2007 – present time
PhD students' supervision:
Alexander Berezin (2009-2012)
Ekaterina Lomkova (2011-2015)
Anton Golyshev (2012-2015)

@ University of Pittsburgh (Pennsylvania, USA):
0250 Intro Analytical Chemistry: Fall 2005, Summer 2006
0110 General Chemistry I: Spring 2006, Fall 2006, Spring 2007
0260 Intro Analytical Chemistry Lab: Fall 2005, Spring 2006, Summer 2006, Fall 2006, Spring 2007
1255 Instrumental Analysis Lab: Fall 2005, Spring 2006, Fall 2006, Spring 2007

@ Urals State University (Ekaterinburg, Russia):
Environmental Analytical Chemistry: Spring 2000, Fall 2000, Fall 2003
Electroanalytical Chemistry: Spring 2000, Fall 2000, Fall 2003
Analytical Separation and Pre-Concentration: Spring 1998, Spring 1999, Spring 2000
Complex Compounds in Analytical Chemistry: Spring 1998, Spring 1999, Spring 2000
Analytical Chemistry I&II (Lab&Recitation): Fall 1995 – Fall 2003

Specialization Fields

Bioinorganic Chemistry, Polymer Chemistry, Analytical Chemistry,

Hands-on Experience

Spectroscopy methods: UV-VIS, Fluorescence, FTIR, NMR, AAS/AES
Electroanalytical methods: Potentiometry, Voltammetry, Coulometry
Separation methods: GC including GC/MS; HPLC including HPLC/MS
Other methods: Isothermal Titration Calorimetry, Surface Plasmon Resonance

Reviewer, editorial board

Associate editor: Eurasian Chemico-Technological Journal (2011-present time)
Editorial board: Research & Reviews in Polymer (2008-present time),
Advances in Analytical Chemistry (2011-present time)
Reviewer: Biomacromolecules, Journal of Inorganic Biochemistry, Reactive & Functional Polymers, Biotechnology & Applied Biochemistry, Industrial & Engineering Chemistry Research, Carbohydrate Polymers, Polymer International, Chemical Engineering Journal, Eurasian Chemico-Technological Journal, Russian Journal of Applied Chemistry, Bioremediation Journal.
Grant Application Reviewer: FASIE – The Foundation for Assistance to Small Innovative Enterprises (2011-present time)

Languages

Fluent in Russian, Ukrainian, English
Some knowledge of Portuguese

Publications

Textbooks, manuals:

1. Skorik Y.A., Berezin A.S., Ekimov A.A. *Infrared spectroscopy: Self-study guide*. St. Petersburg Chemical Pharmaceutical Academy, 2012. 40 pp.
2. Skorik Y.A., Dmitrieva E.S. *Potentiometric analysis: Laboratory manual*. St. Petersburg Chemical Pharmaceutical Academy, 2010. 56 pp.
3. Skorik Y.A. *CHEM 0110 General chemistry: Lecture notes*. University of Pittsburgh, 2007. 85 pp.
4. Skorik Y.A. *CHEM 0250 Analytical chemistry: Lecture notes*. University of Pittsburgh, 2007. 114 pp.
5. Rasmussen P.W., Skorik Y.A. *CHEM 1255 Instrumental analysis: Laboratory manual*. University of Pittsburgh, 2007, 135 pp.
6. Rasmussen P.W., Skorik Y.A. *CHEM 0260. Introductory analytical chemistry: Laboratory manual*. University of Pittsburgh, 2006, 146 pp; 2007, 149 pp.
7. Skorik Y.A., Neudachina L.K. *Complexometric analysis of inorganic materials: Laboratory manual*. Urals State University: Ekaterinburg, 2002, 32 pp.

Articles in peer-reviewed journals:

1. Lomkova E.A., Chytil P., Erych T., Ulbrich K., **Skorik Y.A.** Drug delivery systems of passive transport of Docetaxel. *Izvestiya Vuzov. Tekhnologiya Legkhoi Promyshlennosti (Higher Schools Proceedings. Technology of Light Industry)*. 2012 **17(3)** P. 20-25 (in Russian).
2. **Skorik Y.A.**, Pestov A.V., Kodess M.I., Yatluk Y.G. Carboxyalkylation of chitosan in the gel state. *Carbohydrate Polymers*. 2012 **90(2)** 1176-1181.
3. **Skorik Y.A.** Carboxyethylated polyaminostyrene for selective copper removal. *Polymer Bulletin*. 2012 **68(4)** 1065-1078.
4. Berezin A.S., Lomkova E.A., **Skorik Y.A.** Chitosan conjugates with biologically active compounds: design strategies, properties, targeted drug delivery (review). *Russian Chemical Bulletin*. 2012 **61(4)** 781-795 (English translation).
5. Bezer S., Rappiredy S., **Skorik Y.A.**, Ly D., Achim C. Coordination-driven inversion of handedness in ligand-modified PNA. *Inorganic chemistry*. 2011 **50(23)** 11929-11937.
6. Ma Z., Olechnowicz F., **Skorik Y.A.**, Achim C. Effect of ligand attachment on metal-containing peptide nucleic acid. *Inorganic chemistry*. 2011 **50(13)** 6083–6092.
7. **Skorik Y.A.**, Pestov A.V., Yatluk Y.G. Evaluation of various chitin-glucan derivatives from *Aspergillus niger* as transition metal adsorbents. *Bioresource Technology*. 2010 **101(6)** 1769-1775.
8. Bushkova O.V., Koryakova I.P., **Skorik Y.A.**, Lirova B.I., Pestov A.V., Zhukovsky V.M. Influence of metal coordination on conductivity behavior in poly(butadiene-acrylonitrile) – $CoCl_2$ system. *Electrochimica Acta*. 2008 **53(16)** 5322-5333.
9. Pestov A.V., **Skorik Y.A.**, Kogan G., Yatluk Y.G. Alkylation of chitosan by β-halopropionic acids in the presence of various acceptors. *Journal of Applied Polymer Science*. 2008 **108(1)** 119-127.
10. Pestov A.V., Peresypkina E.V., Virovets A.V., Podberezskaya N.V., Yatluk Y.G., **Skorik Y.A.** Bis[N-(2-hydroxyethyl)-β-alaninato]copper(II). *Acta Crystallographica, Section C: Crystal Structure Communications*. 2005 **C61(12)** m510-m512.
11. Watson R.M., **Skorik Y.A.**, Patra G.K., Achim C. Influence of Metal Coordination on the Mismatch Tolerance of Ligand-Modified PNA Duplexes. *Journal of American Chemical Society*. 2005 **127(42)** 14628-14639.
12. **Skorik Y.A.**, Gomes C.A.R., Podberezskaya N.V., Romanenko G.V., Pinto L.F., Yatluk Y.G. Complexation Models of N-(2-carboxyethyl)chitosans with Copper(II) Ions. *Biomacromolecules*. 2005 **6(1)** 189-195.
13. Korotaev V.Y., **Skorik Y.A.**, Barkov A.Y. Kodess M.I. Zapevalov A.Y. 3,3,3-Trifluoro-N´-(3-trifluoromethylphenyl)-1,2-propanediamine and its N-mono- and N,N-dicarboxyethyl derivatives: synthesis, protolytic and complexation properties. *Russian Chemical Bulletin*. 2005 **54(11)** 2545-2549. (English translation).

14. Yatluk Y.G. Zhuravlev N.A., Koryakova O.V., Neudachina L.K., **Skorik Y.A.** New hybrid chelating sorbents with grafted β-aminopropionate groups based on based on mixed silicon, aluminum, titanium, or zirconium oxides. *Russian Chemical Bulletin*. 2005 **54(8)** 1836-1841 (English translation).
15. **Skorik Y.A.**, Osintseva E.V., Podberezskaya N.V., Virovets A.V., Neudachina L.K., Vshivkov A.A. Copper(II) complexes with anthranilopropionic acid H_2Anthp. Synthesis and crystal structure of [Cu(Anthp)(H_2O)]·H_2O. *Russian Chemical Bulletin*. 2005 **54(7)** 1563-1568 (English translation).
16. Neudachina L.K., Osintseva E.V., **Skorik Y.A.**, Vshivkov A.A. N-Aryl-3-Aminopropionic Acids as Selective Reagents for the Determination of Copper in Metallurgical Products. *Journal of Analytical Chemistry*. 2005 **60(3)** 240–246. (English translation).
17. Lakiza N.V., Neudachina L.K., Yatluk Y.G., Bagretsova M.A., **Skorik Y.A.** New organosilicon adsorbents for transition metal ions. *Analitika i Kontrol' (Analytical chemistry and monitoring)*. 2005. V. 9. P. 391-398. (in Russian)
18. Kogan G., **Skorik Y.A.**, Zitnanova I., Krizkova L., Durackova Z., Gomes C.A.R., Yatluk Y.G., Krajcovic J. Antioxidant and antimutagenic activity of N-(2-carboxyethyl)chitosan. *Toxicology and Applied Pharmacology*. 2004 **201(3)** 303-310.
19. Yatluk Y.G., Eremin D.V., Neudachina L.K., **Skorik Y.A.** Synthesis and sorption properties of new hybrid chelating sorbents with β-alanine functional groups. *Russian Chemical Bulletin*. 2004 **53(12)** 2730-2735. (English translation)
20. **Skorik Y.A.**, Osintseva E.V., Neudachina L.K., Podberezskaya N.V., Romanenko G.V., Vshivkov A.A. Copper(II) complexes of N(2-carbamoylethyl)anthranilic acid H(Ce-anth). Synthesis and crystal structure of [Cu(Ce-anth)$_2$]·6H_2O. *Russian Journal of Inorganic Chemistry*. 2004 **49(3)** 386-394. (English translation).
21. Pestov A.V., **Skorik Y.A.**, Yatluk Y.G. Chitosan alkylation by β-halopropionic acids in the presence of different bases. *Vestnik UGTU-UPI*. 2004. V. 7(37). P. 93-98. (in Russian)
22. Pestov A.V., **Skorik Y.A.**, Yatluk Y.G. Reaction of chitosan with β-halopropionic acids in the presence of halide acceptors. *Vestnik UGTU-UPI*. 2004. V. 7(37). P. 80-82. (in Russian)
23. **Skorik Y.A.**, Pestov A.V., Yatluk Y.G. Carboxyethylated chitosan is a selective sorbent for transition metal ions. *Vestnik UGTU-UPI*. 2004. V. 7(37). P. 53-55. (in Russian)
24. **Skorik Y.A.**, Gomes C.A.R., Vasconcelos M.T.S.D., Yatluk Y.G. N-(2-carboxyethyl)chitosans: regioselective synthesis, characterisation and protolytic equilibria. *Carbohydrate Research*. 2003 **338(3)** 271-276.
25. **Skorik Y.A.**, Podberezskaya N.V., Romanenko G.V., Osintseva E.V., Neudachina L.K., Vshivkov A.A. Selectivity of arylamino-di-3-propionates to Cu(II) ions. Synthesis and the Crystal Structure of [CuAdp(H_2O)$_2$] 1/3CH_3OH 1/6C_2H_5OH, Adp=Aniline-N,N-di-3-propionate. *Russian Journal of Inorganic Chemistry*. 2003 **48(2)** 199-204 (English translation).
26. **Skorik Y.A.**, Romanenko G.V., Gomes C.A.R., Neudachina L.K., Vshivkov A.A. Synthesis, XRD structure and properties of diaqua(p-toluidine-N,N-di-3-propionato)copper(II) dihydrate [Cu(p-Tdp)(H_2O)$_2$] 2H_2O. *Polyhedron*. 2002 **21(27-28)** 2719-2725.
27. Zaitsev A.V., **Skorik Y.A.** The mathematical description of reaction time distribution. *Human Physiology*. 2002 **28(4)** 494-496 (English translation).
28. **Skorik Y.A.**, Neudachina L.K., Osintsev A.V., Vshivkov A.A., Osintseva E.V. Protolytic equilibria of some N,N-bis(2-carboxyethyl)aminoazobenzenesulfonic acids in aqueous solutions. *Russian Journal of Organic Chemistry*. 2002 **38(3)** 385-389 (English translation).
29. **Skorik Y.A.**, Romanenko G.V., Neudachina L.K., Vshivkov A.A. Synthesis and the Crystal Structure of Diaqua[N,N-di(2-carboxyethyl)-o-anisidinato]nickel(II) Trihydrate, [Ni(o-Andp)(H_2O)$_2$]·3H_2O. *Russian Journal of Inorganic Chemistry*. 2001 **46(11)** 1678-1684 (English translation).
30. **Skorik Y.A.**, Romanenko G.V., Neudachina L.K., Vshivkov A.A. Diaqua[N,N-di(2-carboxyethyl)-o-anisidinato]copper(II) Dihydrate [Cu(o-Andp)(H_2O)$_2$]·2H_2O: Synthesis and Crystal Structure. *Russian Journal of Coordination Chemistry*. 2001 **27(11)** 796-802 (English translation).
31. **Skorik Y.A.**, Neudachina L.K., Korotovskikh E.V., Vshivkov A.A. Spectrophotometric determination of copper in La(Sr)$M_{1-x}CuO_3$ (M-Co,Mn) with N,N-di(2-carboxyethyl)-3,4-xylidine. *Industrial laboratory*. 2001 **67(3)** 15-16 (in Russian).
32. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A., Mursalimova V.K. Complexing of Copper(II) Ions with N, N-Di(2-carboxyethyl)anilines in Aqueous Solution. *Russian Journal of Inorganic Chemistry*. 2001 **46(1)** 132-134 (English translation).

33. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A., Yatluk Y.G., Gert N.V. Synthesis, Protolytic Equilibria and Complexation with Cu(II) ions of N,N-di(2-carboxyethyl)-3,4-xylidine. *Russian Journal of Physical Chemistry*. 1999 **73(12)** 2055-2057 (English translation).
34. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A. Correlation analysis of acid-base and complexing properties of N,N-di(2-carboxyethyl)anilines. *Russian Journal of General Chemistry*. 1999 **69(2)** 285-290 (English translation).
35. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A. Ionization Mechanism of o- and p-N,N-di(2-carboxyethyl)aminophenols. *Russian Journal of Physical Chemistry*. 1998 **72(7)** 1191-1193 (English translation).
36. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A., Pasechnik L.A. Spectrophotometric determination of copper with N,N-di(2-carboxyethyl)-p-anizidine in alloys. *Analitika i Kontrol' (Analytical chemistry and monitoring)*. 1998. N 2(4) 23-28 (in Russian).
37. **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A., Pasechnik L.A., Legkikh N.V. Coordination compounds of N,N-di(2-carboxyethyl)-p-anizidine with Cu(II) ions. *Izvestiya Vuzov. Khimiya i Khimicheskaya tekhnologiya (Higher Schools Proceedings. Chemistry and Chemical Technology)*. 1998 **41(3)** 119-122 (in Russian).
38. **Skorik Y.A.**, Melkozerov V.P., Neudachina L.K., Vshivkov A.A., Acid-base equilibria N,N,N',N'-tetra(2-carboxyethyl)-p-phenylenediamine in aqueous solutions. *Izvestiya Vuzov. Khimiya i Khimicheskaya tekhnologiya (Higher Schools Proceedings. Chemistry and Chemical Technology)*. 1998 **41(1)** 29-33 (in Russian).

Articles in proceedings of scientific meetings and non-refereed journals:

1. Berezin A.S., **Skorik Y.A.** Novel multifunctional chitosan-based polymers. *In the world of scientific discovery*. Krasnoyarsk, Russia, 2010. No. 6.1(12). P. 162-165.
2. Berezin A.S., Moskalenko Y.E., **Skorik Y.A.** Novel copper selective chitosan derivative. *Proceedings 8th International Conference "Advances in the Research of Chitin and Chitosan"*, N.Novgorod, Russia, June 29 – July 2, 2010. P. 14-17. (in Russian)
3. Fadeeva M.V., Efremova G.V., Moskalenko Y.E., **Skorik Y.A.** Complexation of water soluble chitin derivatives with riboflavin. *Proceedings 8th International Conference "Advances in the Research of Chitin and Chitosan"*, N.Novgorod, Russia, June 29 – July 2, 2010. P. 241-245. (in Russian)
4. **Skorik Y.A.,** Efremova G.V., Fadeeva M.V. Complexation of N-(2-carboxyethyl)chitosan with some ocular drugs. *Proceedings 3rd Russian Conference "Biotechnology and biomedicine engineering"*, Kursk, Russia, June 7–8, 2010. P. 144-147. (in Russian)
5. **Skorik Y.A.**, Pestov A.V., Yatluk Y.G. Preparation methods and bioactive properties of N-(2-carboxyethyl)chitosan *Pharmacy from century to century*. 2008. V. 5. P. 160-167. ISBN 5-8085-0272-1 (in Russian)
6. Pestov A.V., Bondar' Y.A., Mirsaev T.D., **Skorik Y.A.**, Yatluk Y.G. Stomatological materials based on chitosan and carboxyethyl-chitosan. *Proceedings 8th International Conference "Advances in the Research of Chitin and Chitosan"*, Kazan, Russia, June 13-17, 2006. P. 46-50. (in Russian)
7. Yurovskikh M.A., Pestov A.V., Kogan G., **Skorik Y.A.**, Yatluk Y.G. Sorption Properties of the Modified Chitin-Glucans. *Advances in Chitin Science and Technology, Proceedings of 7th Asia-Pacific Chitin and Chitosan Symposium,* Busan, Korea, April 23-26, 2006, P. 60-62.
8. Pestov A.V., Yatluk Y.G., **Skorik Y.A.** In-Gel Synthesis of N-(2-carboxyethyl)chitosan. *Advances in Chitin Science and Technology, Proceedings of 7th Asia-Pacific Chitin and Chitosan Symposium,* Busan, Korea, April 23-26, 2006, P. 90-91.
9. **Skorik Y.A.**, Kogan G., Zitnanova I., Krizkova L., Durackova Z., Silva P.A.P., Pinto L.F., Gomes C.A.R., Yatluk Y.G. Complexation and biological properties of N-(2-carboxyethyl)chitosans. *Advances in Chitin Science*. 2005. V. 8. P. 79-84. ISBN 83-89867-25-7
10. **Skorik Y.A.**, Kogan G., Krizkova L., Yatluk Y.G., Pestov A.V., Gomes C.A.R., Krajcovic J. Chemoselective carboxyethylation of chitin and chitosan and antimutagenic activity of the reaction products. *Proceedings 7th International Conference "Advances in the Research of Chitin and Chitosan"*, St. Petersburg, Russia, September 15-18, 2003. P. 46-50. (in Russian)
11. Pestov A.V., **Skorik Y.A.**, Yatluk Y.G. Carboxyethylation of chitin and chitosan by acrylic and 3-bromopropionic acid. Advances in organic synthesis. Ekaterinburg. 2003. P. 120-124 (in Russian)
12. **Skorik Y.A.**, Gomes C.A.R., Vasconcelos M.T.S.D., Yatluk Y.G. Synthesis, characterisation and some properties of N-(2-carboxyethyl)chitosans. *Advances in Chitin Science*. 2002. V. 5. P. 344-348.

13. Osintseva E.V., **Skorik Y.A.**, Neudachina L.K., Vshivkov A.A., Shunyaev K.Y. New spectrophotometric reagent for copper determination in complex oxides and products of metallurgy industry. In book "*Electrochemical, optical and kinetic methods in chemistry*". Kazan. 2000. P. 236-243. (in Russian)
14. **Skorik Y.A.**, Korotovskikh E.V., Neudachina L.K., Vshivkov A.A. Spectrophotometric determination of copper in La(Sr)$M_{1-x}Cu_xO_3$ (M-Co, Mn). *Physical and chemical properties of oxides: Proceedings V Russian Conference*. Yekaterinburg. 2000. P. 423-425. (in Russian).
15. **Skorik Y.A.**, Zaitsev A.V. Study of first-year students values of universities by Rockeach value survey. *Psychophysiological Problems of Social Adaptation of Children: Proceedings Russian Conference*. St. Petersburg. 1999. P. 292-295. (in Russian)
16. Neudachina L.K., Vshivkov A.A., Melkozerov V.P., **Skorik Y.A.**, Baldina L.I. Complexes of arylaminopropionic acids with copper(II) ions. *Natural Sciences on Western Urals: Proceedings International Conference*. Perm. 1996. V. 1. Chemistry. P. 46-48. (in Russian)

Abstracts on scientific conferences:

More than 150 abstracts on national and international scientific meetings (oral and poster presentations)