Nikolay N. Gerasimchuk

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Education

Dec. 1996	Second Ph.D. degree in bioinorganic chemistry from the University of Kansas. Thesis entitled as "Synthesis, Spectroscopic and Structural Studies of a new Family of Dipyrromethane Ligands and Their Manganese Complexes as Catalase Models."
1993-1996	Doctoral studies with Professor K. Bowman-James at the Department of Chemistry of the University of Kansas, Lawrence.
Mar. 1985	Candidate of Science degree (Ph.D.) in coordination chemistry from Kiev State University, Kiev, Ukraine
1981-1984	Doctoral studies with Prof. V.V. Skopenko in the field of synthesis and investigation of air-sensitive iron(II) complexes with cyano-containing amide and methanide ligands.
June 1981	MS degree in Chemistry from the Chemistry Department of Kiev State University, Ukraine. Graduated with honors.
1976-1981	Undergraduate studies (w/ honors) at the Chemistry Department of the above institution.

Teaching Experience

University level lecture and laboratory courses for undergraduate students:

General Chemistry (CHM 160), and General Chemistry Honors College course (CHM 160-999);
General Chemistry Laboratory (CHM 105);
General Chemistry laboratory (CHM 175);
Inorganic Chemistry (CHM 375);
Inorganic Synthesis Laboratory (CHM 376);
Chemical Glassware and Scientific Glassblowing (CHM 597, intersession course).

and courses for graduate students:

Inorganic Chemistry: Special Topics (CHM 515);
Advanced Inorganic Chemistry (CHM 525);
Organometallic Chemistry (CHM 625);
Introduction into Bioinorganic Chemistry (CHM 597);
Interpretation of IR-spectra of Organic and Coordination Compounds (CHM 597, intersession course).

April 2021	Distinguished Professor, Department of Chemistry, Missouri State University
March 2021	Matthew Harthcock Fellow
March 2012-	Full Professor, *Inorganic Chemistry*, Department of Chemistry, Missouri State University
March 2006-	Associate Professor (tenured), Department of Chemistry, Missouri State University
Aug. 2001- 06	Assistant Professor, Department of Chemistry, Southwest Missouri State University
1995	Teaching Assistant, Chemistry Department, University of Kansas, Lawrence, Kansas
1991-1992	Associate Professor (tenured), Chemistry Department, Kiev State University, Kiev, Ukraine
1986-1990	Assistant Professor, Chemistry Department, Kiev State University, Ukraine

1987 Organized and supervised Mossbauer Spectroscopy and Magnetochemistry Teaching Laboratory at the Chemistry Department of Kiev State University

Research Experience:

June – Dec.2016 **Sabbatical leave** to Spain: three months in University of Zaragoza, and three months in University of Valencia, ICMOL. Magnetochemical and spectroscopic studies of series of transition metals cyanoximates; conducting lectures on X-ray crystallography and inorganic spectroscopy.

Aug. – Dec. 2009 **Sabbatical leave** to Ruprecht-Karls Universität (Heidelberg, Germany) doing research in the field of metallocyanoximates including studies of their interactions with a variety of non-natural DNA molecules.

Apr. 1999-Aug. 2001 **Research Chemist** (Scientist-II), *Pharmacyclics, Inc.,* Sunnyvale, CA Investigations of stability in solutions and kinetics of interactions of new metal-containing drug candidates with low molecular weight reducing cellular substrates.

Nov.1998-Apr.1999 **Research Associate,** *Pharmacyclic, Inc*.**,** Sunnyvale, CA. doing synthesis, spectroscopic, magnetochemical and electrochemical characterization of a new class of lanthanide and transition metal complexes investigated as antitumor agents and drug candidates.

Jan. 1997- Oct. 1998 **Post-doctoral Research Associate**, North Dakota State University (with Prof. Kenton Rodgers)**.** Work in the field of design, synthesis and spectroscopic, electrochemical characterization of new porphyrin systems for potential photophysical applications as nonlinear optical materials

1995-1996 **Research Assistant,** Kansas Advanced Synthesis Laboratory (KASL) doing custom synthesis of organic, inorganic and coordination compounds.

1993-1994 **Research Assistant,** University of Kansas (Lawrence).

1989-1990 Distinguished scholar of Hungarian Academy of Sciences: **Visiting Researcher** in collaboration with Prof. Kalman Burger at the University of Szeged (Hungary)

1985-1986 **Research Associate**, Inorganic Chemistry Division of Kiev State University (Ukraine)

Research Interests:

1) Synthesis, spectroscopic characterization, and medical-biological applications of oxime-based ligands and their Pt and Sb complexes.
2) Self-assembled 1D coordination polymers that emit in the NIR region.
3) X-ray crystallography of small molecules.

Practical Skills:

- Synthesis of organic, inorganic and coordination compounds with 36 years' experience.
- Proficient in instrumentation, experiment and glassware design, anaerobic technique (Schlenk lines, glove box). Some of the glassware invented has been commercialized by ALDRICH Chemical Company.
- Experienced in running and interpretation of data of multinuclear 1D-, 2D NMR, IR, and UV-visible spectroscopy. Highly skilled in elucidation of molecular structure of compounds by physical methods.
- Proficient in practical X-ray diffractometry:
  a) operation, maintenance and repairs of a single crystal diffractometer APEX 2; personally solved and refined 400+ crystal structures of organic, inorganic, organometallic and coordination compounds;
  b) operation of a powder Discover diffractometer [both by BRUKER].
- Expert in using crystallographic (Apex Suites, Mercury, ORTEP, OLEX2)

Publications:

Authored or co-authored 131 journal articles since 1982, and while at MSU presented at 75 conferences, conducted 51 invited seminars and lectures at institutions of higher education in the USA. Scopus *h*-index 26 with 83 documents cited and listed; the Google Scholar *i10* index = 73 with 2380 citations; Research Gate index 40.2 with 174 research entries.

Books and chapters:

- Wrote a textbook "*Inorganic Synthesis*" (in co-authorship with Dr. S. Tyukhtenko; 2019, Cambridge Scholars Publishing; ISBN (10): 1-5275-3920-2; ISBN (13): 978-1-5275-3920-4).

- Wrote with Prof. K. Bowman-James a chapter *"Mixed Donor Ligands"* into the eight volumes set *"Encyclopedia of Inorganic Chemistry"* (1994, v.5, John Wiley & Sons; England);

- Coauthored book chapter: Magda, D. J.; Gerasimchuk, N.; Wang, Z.; Sessler, J. L.; Miller, R. A. "Mechanistic Studies of Motexafin Gadolinium (Xcytrin®): A Redox Active Agent that Reacts with Electron-rich Biological Substrates," Chapter 8 in *American Chemical Society Symposium Series*, N^{o} 903, p.110-136. American Chemical Society, Washington, DC; 2005.

Papers in the area of inorganic/materials chemistry and coordination chemistry:

since coming to Missouri State University in 2001 *(full list of publications available upon request)*

1. Opalade, A.A.; Hietsoi, O.; Gerasimchuk, N. "Structural characterization of products in the Ni(II) – 2-oximino-2-cyan-N-piperidineacetamide (HPiPCO) system". *Journal of Mol. Str*., **2022**, 1258, 132646; https://doi.org/10.1016/j.molstruc.2022.132646
2. Hollandsworth, C.B.; Pruden, J.R.; Clark, W.; Gerasimchuk, N. "X-ray structural determination and comparison of Bis-imine Schiffbases with trans - and cis -1,2-cyclohexanediamine backbones" *Journal of Mol. Str*., **2022**, 1255, 132430; https://doi.org/10.1016/j.molstruc.2022.132430.
3. Balijapelly, S.; Sandineni, P.; Adhikary, A.; Gerasimchuk, N.N.; Chernatynskiy, A.V.; Choudhury, A. "Ternary Alkali ion Thiogallates, A_5GaS_4 (A = Li and Na) with Isolated Tetrahedral Building Units and Their Ionic conductivity:" *Dalton Trans*. **2021**, 50, 7372-7379.
4. Adu S. A.; Hietsoi, O.; Tyukhtenko, S.; Gerasimchuk, N.; Charlier, H. "Preparation, Properties and Crystal Structure of syn-isomer of 2,6-dichlorophenyl-cyanoxime, H(2,6-diCl-PhCO) – Potent Carbonyl Reductase Inhibitor." *Journal of Chem. Cryst*., **2021,** https://doi.org/10.1007/s10870-021-00905-1
5. Balijapelly, S.; Sandineni, P.; Adhikary, A.; Gerasimchuk, N.N.; Chernatynskiy, A.V.; Choudhury, A. "Ternary Alkali ion Thiogallates, A_5GaS_4 (A = Li and Na) with Isolated Tetrahedral Building Units and Their Ionic conductivity:" *Dalton Trans.*, **2021**, *50*, 7372-7379.
6. Hart, M.D.; Meyers, J.J. Jr.; Wood, Z.A.; Applegate, J.C.; Erickson, N.A.; Gerasimchuk, N.N.; Barybin, M.V. "Tuning π-Acceptor/σ-Donor Ratio of the 2-Isocyanoazulene Ligand: non-Fluorinated Rival of Pentafluorophenyl Isocyanide and Trifluorovinyl Isocyanide Discovered." *Molecules.* **2021**, *26*(4), 981; https://doi.org/10.3390/molecules26040981
7. Gerasimchuk, N.; Kivijarvi, L.; Noll, B.; Goudjil, M.; Khanra, S.; Ping, Yu.; Pearson, M.; Röminger, F. "New Solids In As-O-Mo, As(P)-O-Mo(W) and As(P)-O-Nb(W) Systems That Exhibit Nonlinear Optical Properties" *Molecules*, **2021**, *26*, 1494. https://doi.org/10.3390/molecules26051494

8. Adhikary, A.; Yaghoobnejad Asl, H.; Sandineni, P.; Balijapelly, S.; Mohapatra, S.; Khatua, S.; Konar, S.; Gerasimchuk, N.; Chernatynskiy, A.V.; Choudhury, A. "Unusual atmospheric water trapping and water induced reversible restacking of 2D gallium sulfide layers in $NaGaS_2$ formed by supertetrahedral building unit." *Chemistry of Materials*, **2020**, *32* (13), 5589–560; https://pubs.acs.org/doi/pdf/10.1021/acs.chemmater.0c00836

9. Mebi, C.A.; Gerasimchuk, N.N. "Macrocyclic tetranuclear double-butterfly Fe/S carbonyl clusters as [Fe-Fe]-hydrogenase models" *Supramolecular Chemistry*, **2020**, *32* (11), 557-568.

10. Martinez, J.A.; Gerasimchuk, N.N.; Mebi, C.A. "Synthesis, crystal structure, and thermal behavior of a diiron toluenethiolate complex with triphenylphosphine co-ligand." *Transition Metals Chemistry*, **2020**, *45*, 569–575; https://doi.org/10.1007/s11243-020-00409-5

11. Dannen, S.D.; Cornelison, L.; Durham, P.; Morley, J.E.; Shahverdi, K.; Du, J.; Zhou, H.; Sudlow, L.C.; Hunter, D.; Wood, M.D.; Berezin, M.Y.; Gerasimchuk, N. "New in vitro highly cytotoxic platinum and palladium cyanoximates with minimal side effects in vivo", *Journal of Inorganic Biochemistry*, **2020**, 208, July, 111082, https://doi.org/10.1016/j.jinorgbio.2020.111082

12. Curtis, S.; Lottes, B.; Robertson, D.; Lindeman, S.V.; Gerasimchuk, N. "Search for the shortest intermetallic Tl---Tl contacts: Synthesis and characterization of Thallium(I) coordination polymers with several mono- and bis-cyanoximes" *Inorganica Chimica Acta*, **2020**, *508*, 1 August, https://doi.org/10.1016/j.ica.2020.119597

13. Gerasimchuk, N. "Unusual four-membered metallocycles in complexes of main group III metals", Russian Journal of Inorganic Chemistry, 2020, 65 (10), 1445–1480.

14. Morton, J.; Dennison, R.; Nemykin, V.; Gerasimchuk, N. "Planochromism of cyanoxime anions: Computational and mechanistic studies in solid state and solutions" Inorganica Chimica Acta, 2020, 507, published online on 1 July 2020, https://doi.org/10.1016/j.ica.2020.119570

15. S. R. Lotlikar, E. Gallaway, T. Grant, S. Popis, M. Whited, M. Guragain, R. Rogers, S. Hamilton, N. Gerasimchuk, M. A. Patrauchan. "Polymeric Composites with Silver (I) Cyanoximates Inhibit Biofilm Formation of Gram-Positive and Gram-Negative Bacteria". *Polymers*, **2019**, *11*, 1018-1043; https://doi:10.3390/polym11061018

16. Gerasimchuk, N. "Chemistry and Applications of Cyanoximes and Their Metal Complexes" *Dalton Transactions*, **2019**, DOI: 10.1039/C9DT01057B.

17. P. Sandineni, H. Yaghoobnejad Asl, N. Gerasimchuk, K. Ghosh, A. Choudhury. "Soft chemical routes to electrochemically active iron phosphates." *Inorganic Chemistry*, **2019**, *58* (7), 4117–4133.

18. A. A. Opalade, C. J. Gomez-Garcia, N. Gerasimchuk. "New Route to Polynuclear Ni(II) and Cu(II) Complexes with Bridging Oxime Groups That Are Inaccessible by Conventional Preparations." *Crystal Growth & Design*. **2019**, *19*, 678−693.

19. J. Kallu, T. Banerjee, S. Sulthana, S. Darji, R. Higginbotham, C. Fletcher, N. Gerasimchuk, S. Santra. "Nanomedicine-Assisted Combination Therapy of NSCLC: New Platinum-Based Anticancer Drug Synergizes the Therapeutic Efficacy of Ganetespib". *Nanotheranostics* **2019**, *3*, 120-134.

20. Olyshevets, I.; Kariaka, N.; Znovjyak, K.; Gerasimchuk, N.; Lindeman, S.; Smola, S.; Seredyuk, M.; Sliva, T.Yu.; Amirkhanov, V.M. "Synthesis and Characterization of Anionic Lanthanide(III) Complexes with a Bidentate Sulfonylamidophosphate (SAPh) Ligand" **2018**, *Inorganic Chemistry*, DOI: 10.1021/acs.inorgchem.8b02846.

21. Mugenzi, C.; Powell, D.R.; Gerasimchuk, N.N.; Yang, L. "Synthesis and Characterization of One, Two and Three-dimensional Cu(I) Polymers Supported by Bipyridylamide

Ligands." *Polyhedron*. **2018**, *154* (1), p. 39-46.

22. Johnson, S.L.; Gerasimchuk, N.; Mebi, C. "Cyclic tetranuclear iron-carbonyl complex containing thiobisbenzenethiolate ligands: Synthesis and structural characterization." *Inorg. Chim. Acta*. **2018**, *477*, 306–311.

23. Mebi, C.; Gerasimchuk, N.; Labrecque, J. "Crystal and electronic structure of a hexacarbonyldiiron cluster tethered to naphthalene-2-thiolate ligands." *Acta Cryst*. **2018**, *C74*, 224–228.

24. Adedamola A. Opalade; Karmakar, A.; Rúbio, G.M.D.M.; Pombeiro, A.J.L.; Gerasimchuk, N. "Zinc Complexes with Cyanoxime: Structural, Spectroscopic, and Catalysis Studies in the Pivaloylcyanoxime–Zn System". *Inorganic Chemistry*. **2017**, *56* (22), 13962–13974.

25. Cheadle, C.; Ratcliff, J.; Berezin, M.; Pal'shin, V.; Nemykin, V.N.; Gerasimchuk, N. " Shortwave infrared luminescent Pt-nanowires: a mechanistic study of emission in solution and in the solid state". *Dalton Transactions*, **2017**, *46*(39), 13562-13581.

26. Solntsev, P.V.; Anderson, D.R.; Rhoda, H.M.; Belosludov, R.V.; Fathi-Rasekh, M.; Maligaspe, E.; Gerasimchuk, N.N.; Nemykin, V.N. "Initial Report on Molecular and Electronic Structure of Spherical Multiferrocenyl/tin(IV) (Hydr)oxide $[(FcSn)_{12}O_{14}(OH)_6]X_2$ Clusters." *Crystal Growth & Design*, **2016**, *16* (2), 1027–1037.

27. Beckford, F. A.; Stott, A.; Mbarushimana, P. C.; LeBlanc, M-A.; Hall, K.; Smith, S.; Bullock, J.L.; Houghton, D.J.; Holder, A. A.; Gerasimchuk, N.; Gonzalez-Sarrias, A.; Seeram, N.P. "Anticancer, biophysical and computational investigations of half-sandwich ruthenium(II) thiosemicarbazone complexes: the effect of arene versus thiacrown face-cap." *Interdisciplinary Journal of Chemistry***, 2016**, *1* (1), 1-15; doi: 10.15761/IJC.1000101

28. Pariyar, A.; Gopalakrishnan, S.; Stansbery, J.; Patel,L. R.; Liang, X.; Gerasimchuk, N.; Choudhurya, A. "1-D Coordination Polymer Route to Catalytically Active Co@C Nanoparticles." *RSC Advances*. **2016**, *6*, 38533-38540.

29. He, S.; Toukrakis, G.; Berezin, O.; Gerasimchuk, N.; Zhang, H.; Zhou, H.; Izraely, A.; Akers, W.J.; Berezin, M.Y. "Temperature-dependent shape-responsive fluorescent nanospheres for image guided drug delivery." *J. Materials Chemistry*, C. **2016**, DOI: 10.1039/c6tc00122

30. Haleya, A.L.; Broadbent, L.N.; McDaniel, L.S.; Heckman, S.T.; Hinkle, C.H.; Gerasimchuk, N.N.; Hershberger, J.C.; Mebi, C.A. "[Fe-Fe] Hydrogenase Models: Iron(I)-Carbonyl Clusters Coupled to alpha- and para-Toluenethiolate Ligands". *Polyhedron*, **2016**, DOI:10.1016/j.poly.2015.12.031

31. Applegate, J.C.; Okeowo, M.K.; Erickson, N.R.; Neal, B.M.; Berrie, C.L.; Gerasimchuk, N.N.; Barybin, M.V. "First π-linker featuring mercapto and isocyano anchoring groups within the same molecule: synthesis, heterobimetallic complexation and self-assembly on Au(111)" *Chem. Sci*., **2016**, 7, 1422–1429.

32. Mann, A.; Gerasimchuk, N.; Silchenko, S. "New non-aggregating bivalent cis-ML_2 (M = Pd, Pt; L = pivaloylcyanoxime)". *Inorganica Chimica Acta*, **2016**, *440*, 118–128.

33. Li, Y.; Dutta, T.; Gerasimchuk, N.; Wu, S.; Shetye, K.; Jin, L.; Wang, R.; Zhu, D-M.,; Peng, Z. "Conjugated Foldamers with Unusually High Space-Charge-Limited Current Hole Mobilities" ACS *Appl. Mater. Interfaces*, **2015**, *7* (18), 9372−9384

34. Tyukhtenko, S.I.; Hilton, M.; Gerasimchuk, N. "Classic Isomeric 1,2- and 2,1-nitrosonaphthols are Oximes in Solid State and Solutions". *Current Inorganic Chemistry*, **2015**, *5* (2), 120-136.

35. Marcano, D.C.; Lindeman, S.V.; Pyrkosz-Bulska, M.; Gumienna-Kontecka, E.; Lengyel, A.; Kuzmann, E.; Röminger, F.; Gerasimchuk, N. "The 2-Pyridylcyanoxime and its Complexes." *Current Inorganic Chemistry*, **2015**, *5* (2), 98-113.

36. Gerasimchuk, N.; Guzei, I.; Sipos, P. "Structural Peculiarities of Cyanoximes and their Anions: Co-crystallization of Two Diastereomers and Formation of Acid-salts" *Current Inorganic Chemistry*, **2015**, *5* (1), 38-63.

37. Klaus, D.R., Keene, M., Silchenko, S., Berezin, M., Gerasimchuk, N. "1D Polymeric Platinum Cyanoximate: A Strategy toward Luminescence in the Near-Infrared Region beyond 1000 nm." *Inorganic Chemistry*, **2015**, *54* (4), 1890-1900.

38. Gerasimchuk, N. "Synthesis, Properties, and Applications of Light-Insensitive Silver(I) Cyanoximates" *Eur. J. Inorg. Chem*. **2014**, 4518–4531.

39. Riddles, C.N.; Whited, M.; Lotlikar, S.R.; Still, K.; Patrauchan, M; Silchenko, S.; Gerasimchuk, N. "Synthesis and characterization of two cyanoxime ligands, their precursors, and light insensitive antimicrobial silver(I) cyanoximates." *Inorganica Chimica Acta*. **2014**, *412*, 94-103.

40. Ryabchuk, P.; Edwards, A.; Gerasimchuk, N.; Rubina, M.; Rubin, M. "Dual Control of Selectivity in the Synthesis of Homochiral Densely Substituted Cyclopropanes via the Addition of Nucleophiles to *in situ* Generated Cyclopropenes." *Organic Letters*. **2013**, *15* (23), 6010-6013.

41. Ramidi, P.; Gerasimchuk, N.; Gartia, Y.; Felton, C.M.; Ghosh, A. "Influence of substituents on the reactivity of cobalt(III) amidoamine complexes for the catalytic synthesis of cyclic carbonate from epoxide and carbon dioxide". *Dalton Transactions.* **2013**, *42*, 13151-13160.

42. Eakins, G.L.; Cooper, M.; Phillips, T.; Gerasimchuk, N.; Breyfogle, B.; Stearman, C.J. "Structural Influences Impacting the Role of the 9-Ylidene Bond in the HOMO-LUMO Tuning of Structures Built upon 9-Fluorenylidene Scaffolds". *Can. J. Chem.* **2013**, *91* (11), 1059-1071.

43. Cheadle, C.; Gerasimchuk, N.; Barnes, C.L.; Tyukhtenko, S.I.; Silchenko, S. "First *bis*-cyanoxime: synthesis and properties of a new versatile and accessible polydentate bifunctional building block for coordination and supramolecular chemistry" *Dalton Transactions.* **2013**, *42* (14), p. 4931 – 4946.

44. Gudima, A.O.; Shovkova, G.V.; Trunova, O.K.; Grandjean, F.; Long, G.J.; Gerasimchuk, N. "Sodium-Centered Dodecanuclear Co(II) and Ni(II) Complexes with 2-(Phosphono methylamino)succinic Acid: Studies of Spectroscopic, Structural, and Magnetic Properties." *Inorganic Chemistry*. **2013**, *52* (13), p. 7467-7477.

45. Hilton, M.; Gerasimchuk, N.; Silchenko, S.; Charlier, H. , "Synthesis, Properties and Crystal Structure of the 2,4-dichlorophenyl-cyanoxime - a powerful carbonyl reductase inhibitor." *J. Chem. Crystallography*. **2013**, *43* (3), p.157-164.

46. Curtis, S.; Ilkun, O.; Brown, A.; Silchenko, S.; Gerasimchuk, N. "Synthesis, spectroscopic and structural characterization of the first phenyl bis-cyanoximes: non-chelating extended ionisable building block ligands for new MOFs." *Cryst. Eng. Comm*. **2013**, *15*, p.152-159

47. D. Marcano, N. Gerasimchuk, V. Nemykin, S. Silchenko."Synthesis, Characterization and Studies of Coordination Polymers With Isomeric Pyridylcyanoximes: Route to Metal Ribbons With Very Short Tl---Tl separations." *Cryst. Growth Des*., **2012**, *12*, 2877-2889.

48. Ratcliff, J.; Kuduk-Jaworska, J.; Chojnacki, H.; Nemykin, V.N.; Gerasimchuk, N. "Part 1: Experimental and theoretical studies of 2-cyano-2-isonitroso-N-piperidynylacetamide (HPiPCO), 2-cyano-2-isonitroso-N-morpholylacetamide (HMCO) and their Pt- and Pd-complexes." *Inorganica Chimica Acta*. **2012**, *385,* 1-11.

49. Ratcliff, J.; Durham, P.; Keck, M.; Mokhir, A.; Gerasimchuk, N. "Part 2: *In vitro* Cytotoxicity Studies of Two ML_2 Complexes (M = Pd, Pt; L = 2-cyano-2-isonitroso-N-morpholylacetamide, HMCO." *Inorganica Chimica Acta*. **2012,** *385*, 11-20.

50. Solntsev, P.V.; Neisen, B.D.; Sabin, J.R.; Gerasimchuk, N.N.; Nemykin, V.N. "Synthesis, characterization, X-ray structure, and mixed-valence states of *trans*-dichlorotin(IV)-5,10,15,20-tetraferrocenylporphyrin." *J. Porphyrins Phthalocyanines* **2011**; *15*: 612–621.

51. Gerasimchuk, N. "An Excursion into the Intriguing World of Polymeric Tl(I) and Ag(I) Cyanoximates." *Polymers* **2011**, *3*, 2-37.

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54. Beckford, F.; Thessing, J.; Woods, J.; Didion, J.; Gerasimchuk, N.; Gonzalez-Sarrias, A.; Seeram, N.P. "Synthesis and structure of [(η^6-*p*-cymene)Ru(2-antracene-9-ylmethylene-N-ethylhydrazinecarbothioamide)Cl]Cl: biological evaluation, topoisomerase II inhibition and reaction with DNA and human serum albumin." *Metallomics*. **2011**, *3*, 491-502.

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(benzoylcyanoximato)cobalt(III), $Co(BCO)_3$." *Journal of Coordination Chemistry*, **2010**, 63 (*6*), p.943.

60. Gerasimchuk, N.; Esaulenko, A.N.; Dalley, N.K.; Moore, C. "2-Cyano-2-isonitrosoacetamide and its Ag(I) complexes. Silver(I) cyanoximate as a non-electric gas sensor." *Dalton Transactions*, **2010**, *39*, p. 749-764.

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65. Maher, T.; Gerasimchuk, N.; Durham, P.; Domasevitch, K.V.; Wilking, J.; Mokhir, A. "Tin(IV) Cyanoximates: Synthesis, Characterization and in vitro Cytotoxicity." *Inorganic Chemistry*, **2007**, *46*, N°18, p.7268-7284.

66. Robertson, D.; Cannon, J.F.; Gerasimchuk, N. "Double-Stranded Metal-Organic Networks for One-Dimensional Mixed Valence Coordination Polymers". *Inorganic Chemistry*. **2005**, *44*, N°23, p.8326-8342.

67. Magda, D. J.; Gerasimchuk, N.; Wang, Z.; Sessler, J. L.; Miller, R. A."Mechanistic Studies of Motexafin Gadolinium (Xcytrin®): A Redox Active Agent that Reacts with Electron-rich Biological Substrates," Chapter 8 in *American Chemical Society Symposium Series*, N° 903, p.110-136. American Chemical Society, Washington, DC; 2005.

68. Gerasimchuk, N.N., Dalley, K.N."Demetallation of Ni(II) tetraazamacrocyclic complex by cyanoxime resulting in the formation of stereospecific trinuclear compound $[Na(H_2O)_6]^+[NaNi_2L_6]^-$ (L= NC-C(NO)-C(O)NH_2^-)."*Journal of Coordination Chemistry*, **2004**, *57*, N°16, p.1431-1445.

69. Eddings, D., Barnes, C., Durham, P., Gerasimchuk, N.N., Domasevich, K.V. "First bivalent palladuim and platinum cyanoximates: synthesis, characterization and biological activity." *Inorganic Chemistry*, **2004**, *43*, N°13, pp. 3894-3909.

70. Robertson, D., Barnes, C., Gerasimchuk, N.N. "Synthesis of the monosubstituted arylcyanoxime and its Na, Tl(I) and Ag(I) compounds." *Journal of Coordination Chemistry*" **2004**, *57*, N°14, pp.1205-1216.

71. Magda, D., Wang, Z., Gerasimchuk, N., Wenhao, W., Anzenbacher, P., Sessler, J. "Synthesis of Texaphyrin Conjugates", *Pure and Applied Chemistry.* **2004**, *76*, N°2, pp.365-374.

72. S. Hannah, V. Lynch, D.M. Guldi, N.N. Gerasimchuk, C.B. MacDonald, D. Magda, J.L. Sessler. "Late First-Row Transition-Metal Complexes of Texaphyrin." *J. Am. Chem. Soc.*, **2002,** *124*, N°28, p.8416-8427.

73. D. Magda, N.N. Gerasimchuk, P. Lecane, R.A. Miller, J.E. Biaglow, J.L. Sessler. "Motexafin gadolinium reacts with ascorbate to produce reactive oxygen species." *Chemical Communications*, **2002**, p.2730-2731.

Applications of Research: Patents

Nine patents on useful properties of synthesized coordination compounds were registered:

P A T E N T N^{o} 1480346 (USSR), 1989
"Tetra-(Nitrosocarbamylcyanmethanid)(ethylenediamine)dicopper as a Bacteriostatic Compound Towards *Staphylococcus Aureus".*
Skopenko V. V., Palii G. K., Gerasimchuk N. N., Domashevskaya O. .A., Vievskii A. N.

P A T E N T N^{o} 1405281 (USSR), 1988
"Nitrosothiocarbamylcyanmethanid of Potassium or Sodium Which Show Antimicrobial Activity"
Skopenko V. V., Palii G. K., Gerasimchuk N. N., Makats E. F., Domashevskaya O. A., Rakovskaya R. V.

P A T E N T N^{o} 1405282 (USSR), 1988
"Bis-(Nitrosothiocarbamylcyanmethanid) Copper(II) or Nickel(II) Which Show Antimicrobial Activity"
Palii G. K., Skopenko V. V., Gerasimchuk N. N., Makats E. F., Domashevskaya O. A., Rakovskaya R. V.

P A T E N T N^{o} 1487422 (USSR), 1989
"Di-(Nitrosothiocarbamylcyanmethanid)-di-(pyridine)-Copper Which Shows Bacteriostatic Activity Towards *Staphilococcus Aureus*, and Method of Preparation of the Complex"
Skopenko V. V., Palii G. K., Gerasimchuk N. N., Domashevskaya O. A., Makats E. F.

P A T E N T N^{o} 1466229 (USSR), 1989
"Di-(Nitrosothiocarbamylcyanmethanid)-(tetramethylcyclam)-Copper Which Shows Bacteriostatic Activity Towards *Staphilococcus Aureus"*
Skopenko V. V., Palii G. K., Gerasimchuk N. N., Domashevskaya O. A., Kovalchuk V.

P A T E N T N^{o} 06919327 C1 (USA), 2005
"Texaphyrin Coordination Compounds and Uses Thereof"
Magda, D., Miles, D., Gerasimchuk, N., Lepp, C.

P A T E N T N^{o} 7,727,967 B2 (USA), 2010
"Cyanoxime Inhibitors of Carbonyl Reductase and methods of Using Said Inhibitors in Treatments Involving Antracyclines",
Henry Charlier, Nikolay Gerasimchuk

P A T E N T N^{o} 9,982,188 (USA), 2018
"Near Infrared Emitters"
Nikolay Gerasimchuk, Mikhail Berezin

Submitted full patent application:

57910165_Application_02232021, **February 23rd, 2022** (pending):
"Non-antibiotic Antimicrobial Compounds and Methods of Production Thereof" by Nikolay Gerasimchuk, Kevin Pinks, Marianna Patrauchan, Karen Wozniak.

Awards and Honors:

Feb. 1980	Gold Medal of Ukrainian Academy of Sciences for outstanding student research project.
May 1988	Received Best Young Faculty Member Award in the College of Natural Sciences at Kiev State University (Ukraine).
July 2004	College of Natural and Applied Sciences of SMSU Research Award
August 2005	College of Natural and Applied Sciences of Missouri State University Teaching Award
August 2006	College of Natural and Applied Sciences of Missouri State University Service Award
April 2011	Best Undergraduate Research Student Mentor Award, for 2nd place student presentation.
May 2012	College Research Award
October 2013	Certificate of the Program Chair recognition from the American Chemical Society for Extraordinary Contribution to the Success of 2013 Midwest Regional Meeting
May 2014	Missouri State University Foundation Award in Research
May 2014	College of Natural and Applied Sciences of Missouri State University Service Award
May 2015	College of Natural and Applied Sciences of Missouri State University Award in Research
April 2016	Jerry Atwood College Award for research
March 2021	Matthew Harthcock Fellowsip (4 years)

Foreign Languages: fluently Russian and Ukrainian, communicate in German and Spanish.

Professional Service:

- Chairman of the "Inorganic Chemistry" section on 40th Regional American Chemical Society Meeting, October 2005, Joplin, Missouri.
- Chairman of the "Inorganic Chemistry" section on 38th Regional American Chemical Society Meeting, November 2003, Columbia, Missouri.
- Chaired, organized and successfully conducted 20th Missouri Inorganic Day, May 2006
- Chaired, organized and successfully conducted 24th Missouri Inorganic Day, April 2011
- Program Chair of the 48th Midwest Regional Meeting of the ACS, October 16-18, 2013
- Chairman of the "Inorganic Chemistry" oral presentations section on 49th Regional American Chemical Society Meeting, November 2014, Columbia, Missouri.
- Chairman of the "Coordination Chemistry: synthesis and applications" oral presentations section at 250th National American Chemical Society meeting, Boston, August 16-18th, 2015.
- Chairman of oral presentations section on 3rd International Conference on Crystals Growth, September 2016, San-Sebastian, Spain.

Peer-reviewing:

- For the *Journal of Catalysis. A, Journal of Coordination Chemistry, Synthesis and Reactivity of Inorganic and Organometallic Compounds, Australian Journal of Chemistry, Chemical Communications, Inorganic Chemistry Communications, Inorganic Chemistry, Journal of American Chemical Society, Dalton Transactions, Inorganica Chimica Acta, Crystal Engineering Communications, Journal of Chemical Crystallography and Journal of Inorganic Biochemistry.*
- Research proposals: for the Cottrell College Research Corporation (one proposal, 2006), American Chemical Society PRF grants (4 proposals in 2004-2006), NSF (one grant proposal), NIH (two research proposal 2004-2013), Hungarian Research Foundation (OTKA; two proposals).

Professional Membership:

- American Chemical Society
- American Crystallographic Association
- Mid-South Inorganic Chemists Association, MICA

Community Service:

- Regional schools Science Olympiad event leader (2002-2008)
- Continuous participation in recruitment activities and chemical demonstrations for students of local colleges and schools.
- Founder and Treasurer of the Kiev State Alumni Abroad Association CTPYMOK (Engl.: *creek*) (since year 2000; ended in 2014)

Graduate Students:

Ph.D. students in Ukraine:

- Dr. Konstantin V.Domasevitch, dissertation entitled: "Synthesis and Investigation of Donor Properties of New Cyanoxime Acidoligands" (Kiev State Universsity, Ukraine, 1993)

- Dr. Olesya A. Domaschevskaya, dissertation entitled: "Nickel(II) and Copper(II) Coordination Compounds with Nitroso-containing Methanide Type Acidoligands" (Kiev State University, Ukraine, 1989)

M.S. students in Ukraine:

- Nelli Zaporozhets (Kiev State University, Ukraine, 1984)
- Sergiy Dolzhenko (Kiev State University, Ukraine, 1989)
- Michail Fedorenko (Kiev State University, Ukraine, 1993)
- Konstantin V. Domasevitch (Kiev State University, Ukraine, 1992)
- Olga A. Zhmourko (Kiev State University, Ukraine, 1992)

M.S. students in the USA:

- Daniel Eddings, thesis title: "The Synthesis, Characterization, Spectroscopic, and Biological Activity Studies of Pt(II) and Pd(II) Cyanoximates." (Southwest Missouri State University, Springfield, USA, 2003)

- Tiffany Maher, thesis title: "Synthesis, characterization and Anti-cancer properties of Organotin(IV) Cyanoximates" (Southwest Missouri State University, Springfield, USA, 2004)

- Leon Goeden, thesis title: "The Synthesis, Characterization and Bilogical Activity Studies of Pt(II) and Pd(II) Disubstituted Arylcyanoximates." (Southwest Missouri State University, Springfield, USA, 2005)

- Daniel Robertson, thesis title: "Thallium(I) Coordination Polymers Based on Monosubstituted Arylcyanoximes" (Missouri State University, Springfield, USA, 2006)

- Jennifer Snyder, thesis title: "Synthesis and Investigations of Several Dibutyltin(IV) Cyanoximates" (Missouri State University, Springfield, USA, 2007)

- Jessica Ratcliff, thesis title: "Further Investigations of Cytotoxic Metallocyanoximates" (Missouri State University, Springfield, USA, 2007)

- Daniela Marcano, thesis title: "Pyridylcyanoximes and Their Metal Complexes" (Missouri State University, USA, 2007)

- Carl Cheadle, thesis title: "Synthesis and Studies of N^1,N^2-piperazine *bis*-(2-oximino-2-cyano)

Acetamide and its Several Metal Complexes" (Missouri State University, USA, 2008)

- Jeffrey Morton, thesis title: "Further investigations of silver(I) cyanoximates" (Missouri State University, USA, 2010)

- Scott Curtis, thesis title: "Synthesis and characterization of the first non-chelating bis-cyanoximes and their metal complexes." (Missouri State University, USA, 2013)

- Michael Hilton, thesis title: "Synthesis and Characterization of Oximes-based Platinum Complexes" (Missouri State University, USA, 2013)

- Abraham Adedamola Opalade, thesis title: "Investigations of Copper(II) and Nickel(II) cyanoximates" (Missouri State University, USA, 2016)

- Kevin Antony Pinks, thesis title: "Synthesis, Characterization and Biological Studies of Novel Organoantimony(V) Cyanoximates." (Missouri State University, USA, 2020)

- Seth Adu Amankrah, thesis title: "Synthesis and Characterization of Antimony Cyanoximates for Microbiological Studies" (Missouri State University, USA, 2022)

Research Funding:

Department of Chemistry general start-up fund:	$18,500 / 5 years
SMSU Faculty Research Grant, 2002:	$6,350
SMSU Faculty Summer Research Fellowship, 2002:	$2,000
American Chemical Society PRF grant, 2003-2006:	$49,825
SMSU Faculty Research Grant, 2004:	$5,670
Research Corporation Award, 2006-2008:	$34,776
MSU Faculty Research Award, 2007:	$6,490
MSU Provost Fund Research Award (co-PI) for purchase of X-ray single crystal and powder diffractometers, 2007:	$250,000
NSF Major Instrumentation Award (co-PI) for purchase of SQUID magnetometer, 2007:	$353,252
MSU Provost Research Fund Award (co-PI), for the 400 MHz NMR spectrometer upgrade for solid state capabilities, 2008:	$150,000
MSU Faculty Summer Research Fellowship, 2008:	$6,000
MSU Faculty Research Award, 2008:	$6,877
MSU Faculty Summer Research Fellowship, 2010:	$6,000
MSU Faculty Research Award, 2011:	$6,150
NIH R15 AREA award, 2012-2016:	$396,400
MSU Faculty Research Award, 2013:	$ 6,450
MSU Faculty Summer Research Fellowship, 2015	$6,000
MSU Faculty Research Award, 2017:	$6,720
Oklahoma State University exploratory research award, 2017	$8,000
MSU Faculty Summer Research fellowship, 2018	$6,000
MSU Faculty Research Award, 2020:	$6,680

List of Presentations 2002-2019 (descending) at Regional, National ACS Meetings and International Conferences

Regional Meetings:

38th Midwest Regional ACS Meeting (November 5-7, 2003; Columbia, MO):

1. Gerasimchuk, N.N., Barnes, C., Domasevich, K.V. "An excursion into coordination chemistry of Thallium: first complexes with oximes." Proceedings of 38th Midwest Regional Meeting of the ACS; p. 157.
2. Robertson, D.,** Barnes, C., Cannon, J., Gerasimchuk, N.N. "Synthesis and investigation of the first mono-substituted arylcyanoximes and their monovalent metal complexes." Proceedings of 38th Midwest Regional Meeting of the ACS; p. 187.
3. Goeden, L.,* Barnes, C., Gerasimchuk, N.N. "Preparation and studies of disubstituted arylcyanoximes and their Tl(I) and Ag(I) coordination compounds." Proceedings of 38th Midwest Regional Meeting of the ACS; p. 188.
4. Maher, T.,* Durham, P., Gerasimchuk, N.N. "Synthesis, spectroscopic, structural characterization and anti-proliferating activity of new bis{organotin(IV)}cyanoximates." Proceedings of 38th Midwest Regional Meeting of the ACS; p. 233.

39th Midwest Regional ACS Meeting (October 22-26, 2004; Manhattan, KS):

5. Gerasimchuk, N., Durham, P., Eddings, D. "First biologically active Pd(II) and Pt(II) cyanoximates." Proceedings of 39th Midwest Regional Meeting of the ACS; p. 291.
6. Goeden, L.,* Gerasimchuk, N., Barnes, C., Cannon, J. F. "Preparation and studies of disubstituted arylcyanoximes and their bivalent platinum and palladium complexes." Proceedings of 39th Midwest Regional Meeting of the ACS; p. 292.
7. Robertson, D.,* Gerasimchuk, N., Cannon, J.F., Barnes, C. "Design of new types of metal-organic networks for one-dimensional mixed-valence coordination polymers." Proceedings of 39th Midwest Regional Meeting of the ACS; p. 213.

40th Midwest Regional ACS Meeting (October 25-27, 2005; Joplin, MO)

8. Owen, T.*; Domasevitch, K.V.; Barnes, C.; Gerasimchuk, N. "Preparation and studies of highly-colored anionic Fe(II) tris(cyanoximates)." Proceedings of 40th Midwest Regional Meeting of the ACS; p. 49.
9. Gerasimchuk, N.; Durham, P.; Goeden, L.*; Abbey, M.; Bowen, E.; Eddings, D. "Synthesis, characterization and anticancer activity studies of several Pd(II) and Pt(II) cyanoximates." Proceedings of 40th Midwest Regional Meeting of the ACS; p.52.
10. Maxwell, J.*; Barnes, C.; Gerasimchuk, N.; Boaz. "Synthesis and characterization of cobalt(III) cyanoximates - precursors for chiral ethylendiamines." Proceedings of 40th Midwest Regional Meeting of the ACS; p. 146.

42nd Midwest Regional ACS Meeting (November 7-10, 2007; Kansas City, MO)

11. Gerasimchuk, N.; Domasevitch, K.V.; Glover, G.*; Lewis, D.*; Dalley, N.K.; Rath, N.P. "Silver(I) cyanoximates: synthesis, characterization and applications." Proceedings of 42nd Midwest Regional Meeting of the ACS, p.81.
12. Cheadle, C.*; Gerasimchuk, N.; Kolesnichenko, V.; Ratcliff, J. "Nickel triad complexes of the amide-cyanoximes containing N-morpholyl-, N-piperidine- and bis-N-piperazine groups." Proceedings of 42nd Midwest Regional Meeting of the ACS, p.138.

13. Marcano, D.*; Nemykin, V.; Barnes, C.; Domasevitch, K.V.; Gerasimchuk, N. "Pyridylcyanoximes and their metal complexes". Proceedings of 42nd Midwest Regional Meeting of the ACS, p.139.

43rd Midwest Regional ACS Meeting (October 8-11, 2008; Kearney, NE)

14. Cheadle, C.*; Keene, M.; Gerasimchuk, N. "Synthesis and characterization of several cyanacetamide-oximes and their Pt(II) and Pd(II) complexes." Proceedings of 43rd Midwest Regional Meeting of the ACS, talk #45, p.63.
15. Glover, G.*; Gerasimchuk, N.; Domasevitch, K.V. "Heavy metals (M=Cs, Ag(I), Tl(I)) nitrosodicyanmethanides M[ONC(CN)$_2$]: synthesis, crystal structures and properties." Proceedings of 43rd Midwest Regional Meeting of the ACS, talk #49, p.64.
16. Gerasimchuk, N.; Glover, G.; Gamian, A.; Domasevitch, K.V. "Further investigations of silver(I) cyanoximates". Proceedings of 43rd Midwest Regional Meeting of the ACS, talk #52, p.66.

45rd Midwest Regional ACS Meeting (October 27-30, 2010; Wichita, KS)

17. Ratcliff, J.* Kolesnichenko, V.; Berezin, M.; Pal'shin, V.; Cheadle, C.*; Gerasimchuk, N. "Pt-cyanoximates: self-assembled nano-size electrical conductors." Proceedings of 45rd Midwest Regional Meeting of the ACS, poster #383, p.42 of the program booklet.

46th Midwest Regional ACS Meeting (October 27-30, 2011; St. Louis, MO)

18. Hilton, M.*; Gerasimchuk, N.; Charlier, H. "Preparation, characterization and *Human Carbonyl Reductase* (HCBR) inhibition studies of 2,4-dichlorophenyl-cyanoxime, H(2,4-diCl-PhCO)." Poster presentation at the 46th Regional Meeting of the ACS joint Midwest and Great Lakes sections. October 27-30, St. Louis.
19. Gross, S.; Hougas, R.,* Gerasimchuk, N. "Synthesis, characterization and applications of light-insensitive silver(I) cyanoximates." Oral presentation at the 46th Regional Meeting of the ACS joint Midwest and Great Lakes sections. October 27-30, St. Louis.

47th Midwest Regional ACS Meeting (October 24-27, 2012; Omaha, NE)

20. Hilton, M.*; Gerasimchuk, N. "Synthesis and characterization of 1D cyanoxime and nitrosonaphthol coordination complexes with semiconducting properties." Abstracts, 47th Midwest Regional Meeting of the American Chemical Society, Omaha, NE, United States, October 24-27 (2012), MWRM-434.
21. Curtis, S. M.*; Gerasimchuk, N.; Ilkun, O.; Brown, A. "First bis-cyanoximes: synthesis, spectroscopic studies, metal complexes, and coordination polymer studies." Abstracts, 47th Midwest Regional Meeting of the American Chemical Society, Omaha, NE, United States, October 24-27, MWRM-319.

48th Midwest Regional ACS Meeting (October 16-19, 2013; Springfield, MO)

22. D. R. Klaus,* M. Keene,* N. Gerasimchuk. "Synthesis, Spectra, and Crystal Structures of N,N'-diethylamide-2-cyano-2-oximino-acetamide and its Pt^{+2} and Pd^{+2}cyanoximates." Abstracts, 48th Midwest Regional ACS Meeting, Springfield, MO. United States, October 16-19; MWRM-9.
23. M. O. Whited,* C. N. Riddles,* N. N. Gerasimchuk, S. R. Lotlikar, M. R. Patrauchan, S. Silchenko. "Synthesis and characterization of cyanoxime ligands, their precursors, and light insensitive silver(I) cyanoximates". Abstracts, 48th Midwest Regional ACS Meeting, Springfield, MO. United States, October 16-19; MWRM-63.
24. Hilton, M.*, Gerasimchuk, N. "Synthesis and characterization of 1D platinum cyanoximes and nitroso-naphthols coordination complexes with conducting properties". Abstracts, 48th Midwest Regional ACS Meeting, Springfield, MO. United States, October 16-19; MWRM-64.

25. N. Gerasimchuk. "Structural peculiarities of oximes-based coordination polymers of monovalent silver and thallium." Abstracts, 48th Midwest Regional ACS Meeting, Springfield, MO. United States, October 16-19; MWRM-284.

49th Midwest Regional ACS Meeting (November 15-16, 2014; Columbia, MO)

26. Gerasimchuk, N.; Berezin, M.; Klaus, D.* "1D coordination polymers based on Pt(II) cyanoximates as new class of NIR emitters beyond 900 nm." Oral presentation, #308.
27. Whited, M.; Popis, S.; Patrauchan, M.; Earnhardt, W.; Gerasimchuk, N. "Antimicrobial light-curable polymeric composites including Silver(I) cyanoximates." Poster presentation, #6.

50th Midwest Regional ACS Meeting (October 21-24, 2015; St. Joseph, MO)

28. Gerasimchuk, N.; Berezin, M. "The NIR emission beyond 900 nm from self-assembled 1D polymeric Pt-cyanoximates." Oral presentation, #114.
29. Opalade, A.A.*; Gerasimchuk, N. "Investigating crystallohydrates of Ni and Zn cyanoximes coordination compounds." Oral presentation, #115.
30. Applegate, J.*; Erickson, N.*; Gerasimchuk, N.; Barybin, M.V. "Heterobimetallic anchoring of the first p-linker featuring mercapto and isocyanato junction groups within the same molecule." Oral presentation, #122.
31. Kallu, J.*; Banerjee, T.; Sulthana, S.; Heckert, B.; Gerasimchuk, N.; Santra, S. "Hsp90 inhibitor carrying magnetic nanotheranostics for the treatment of non-small-cell lung cancer." Oral presentation, #183.
32. Tappan, B.A.; Spaeth, A.D.*; Torres-Texidor, O.; Gerasimchuk, N.; Barybin, M.V. "Tuning luminescence profile of the Ph_3P-Au-SR (R= azulenyl) scaffold." Poster presentation, #298.

National Meetings:

33. Domasevich, K.V., Gerasimchuk, N.N., Mokhir A. "Synthesis, spectroscopic and structural studies of new organotin, antimony and organoantimony cyanoximates". Coordination chemistry section, presentation 505 (oral). Spring 2002 ACS Meeting, April 6-11, Orlando, FL.
34. Gerasimchuk, N.N., Domasevich, K.V. "Building with oximes: synthesis and properties of monovalent thallium and silver cyanoximates". Coordination chemistry section, presentation 907 (oral). Spring 226th ACS Meeting, March 23-29, 2003, New Orleans, LA.
35. Maher, T.,* Gerasimchuk, N.N. "Synthesis and studies of new bis{organotin(IV)}cyanoximates". Bioinorganic chemistry section, presentation 105 (oral). Spring 226 ACS Meeting, March 23-29, 2003, New Orleans, LA.
36. Eddings, D.,* Gerasimchuk, N.N. "Synthesis, spectroscopic, structural studies and activity of novel Pd(II) and Pt(II) cyanoximates". Bioinorganic chemistry section, presentation 132 (poster). Spring 226 ACS Meeting, March 23-29, 2003, New Orleans, LA.
37. Goeden, L.,* Cannon, J., Barnes, C., Gerasimchuk, N. "Synthesis of new disubstituted arylcyanoximes and their transition metal complexes". Inorganic chemistry section, poster presentation. Fall 228 ACS Meeting, August, 22-26; 2004, Philadelphia, PA.
38. Robertson, D.,** Cannon, J., Gerasimchuk, N. "First monosubstituted arylcyanoximes and their Tl(I) and Ag(I) complexes." Inorganic chemistry section, poster presentation. Fall 228 ACS Meeting, August, 22-26; 2004, Philadelphia, PA.
39. Gerasimchuk, N.N., Durham, P., Eddings, D.* "Synthesis, spectroscopic characterization and biological activity of the first Pd(II) and Pt(II) cyanoximates". Inorganic chemistry section, poster presentation. Fall 228 ACS Meeting, August, 22-26; 2004, Philadelphia, PA.
40. Maher, T.,* Snyder, J.,* Durham, P., Gerasimchuk, N.N. "New anticancer active bis-{organotin (IV)-cyanoximates}". Inorganic chemistry section, poster presentation (719). Spring 229 ACS Meeting, March 13-17th, 2005, San Diego, CA.

41. Robertson, D.,* Cannon, J., Barnes, C., Gerasimchuk, N.N. "One-dimensional coordination polymers for molecular electronics." Inorganic chemistry section, poster presentation (721). Spring 229 ACS Meeting, March 13-17th, 2005, San Diego, CA.
42. Maxwell, J.,* Boaz, D.,* Gerasimchuk, N.N., Barns, C.L. "Synthesis and characterization of cobalt(III) cyanoximates: precursors for chiral ethylendiamines." Inorganic chemistry section, poster presentation (733). Spring 229 ACS Meeting, March 13-17th, 2005, San Diego, CA.
43. Durham, P., Sedivy, D.,* Keck, M., Ratcliff, J.,* Gerasimchuk, N.N. "New cytotoxic bivalent Pd and Pt cyanoximates." Inorganic chemistry section, poster presentation (733). Fall 232 ACS Meeting, September 7-11th, 2006, San Francisco, CA.
44. Cheadle, C.;* Ratcliff, J.;* Kolesnichenko, V.; Gerasimchuk, N. "Synthesis, characterization and studies of Pt(II) complexes with several substituted acetamide-oximes." Inorganic chemistry section, poster presentation (158). Spring ACS Meeting, April 4-7th, 2008, New Orleans, LA.
45. Gerasimchuk, N.; Glover, G.* "Visible light insensitive silver(I) cyanoximates." Inorganic chemistry section, poster presentation (196). Spring ACS Meeting, March 22-26th, 2009, Salt Lake City, UT.
46. Morton J. R.*; Gerasimchuk, N. "Silver(I) Cyanoximates: Synthesis, Crystal Structures and Physical Properties." Presentation at the 239th National American Chemical Society Meeting, San Francisco, CA, USA, March 21-25th 2010, INOR-947.
47. Curtis, S.*; Gerasimchuk, N.; Ilcun, O.; Brown, A. "First bis-cyanoximes: Synthesis, spectroscopic studies, crystal structures, and alkaline metals complexes" Abstracts of Papers, 243rd ACS National Meeting, San Diego, CA, USA, March 25-29, 2012, INOR-796.
48. Whited, M.*; Morton, J.*; Gerasimchuk, N. "Investigations of stability of polyacrylamide composites containing antimicrobial silver(I) cyanoximates to high intensity visible and UV-light." Abstracts of Papers, 243rd ACS National Meeting, San Diego, CA, USA, March 25-29, 2012, INOR-314.
49. Whited, M.; Korey, S.; Lotikar, S.R.; Patrauchan, M.; Gerasimchuk, N. "Light insensitive silver(I) cyanoximates as antimicrobial agents." Abstracts of Papers, 245th ACS National Meeting, New Orleans, LA, USA, April 4-8, 2013. INOR-400.
50. Whited, M.; Morton, J.R.; Gerasimchuk, N. "Investigations of the stability of acrylate based composites containing antimicrobial silver(I) cyanoximates to high intensity visible light and their antimicrobial effects." Abstracts of Papers, 245th ACS National Meeting, New Orleans, LA, USA, April 4-8, 2013. MEDI-193.
51. Gerasimchuk, N.; Berezin, M. "A new strategy for the NIR emitters beyond 900 nm: preparation of self-assembled luminescent 1D Pt-cyanoximates". Abstract of Papers, 250th ACS National Meeting, Boston, MA, August 16-20, 2015, INOR-595.

***International Conferences*:**

35th International Conference on Coordination Chemistry (Heidelberg, Germany; 2002).

52. Gerasimchuk, N.N. "Coordination chemistry of cyanoximes". P. 276 in Proceedings of 35th International Conference on Coordination Chemistry, Heidelberg, July 21-26, 2002. Germany.

36th International Conference on Coordination Chemistry (Merida, Mexico; 2004).

53. Gerasimchuk, N., Domasevich, K.V. "An excursion into coordination chemistry of thallium: design of new types of mixed valence coordination polymers as potential electric conductors". P. 236 in Proceedings of 36th International Coordination Chemistry Conference (ICCC-36); Merida, July 18-24th 2004; Mexico.
54. Gerasimchuk, N., Durham, P., Eddings, D.* "First Pd(II) and Pt(II) cyanoximates: synthesis, structures and biological activity". P. 475 in Proceedings of 36th International Coordination Chemistry Conference (ICCC-36); Merida, July 18-24th 2004; Mexico.

37th International Conference on Coordination Chemistry (Cape Town, South Africa; 2006).

55. Gerasimchuk, N.N., Domasevitch, K.V., Barnes, C., Dalley, N.K. "Design of oxime-based metal-organic networks for one-dimensional coordination polymers." P. 194 in Proceedings of the ICCC-37 Oral Abstracts book; Cape Town, August 13th - 18th 2006, South Africa.
56. Durham, P., Sedivy, D.,* Keck, M., Ratcliff, J.,* Gerasimchuk, N.N. "New cytotoxic bivalent Pd and Pt cyanoximates." P. 314 in Proceedings of the ICCC-37 Posters Abstracts book; Cape Town, August 13th - 18th 2006, South Africa.

23rd International Conference on Coordination and Bioinorganic Chemistry (Smolenice, Slovakia, June 5-10; 2011).

57. Gerasimchuk, N. "Synthesis, Characterization and Remarkable Applications of Light-Insensitive Silver(I) Cyanoximates", p. 49 in Book of Abstracts and Program of the Conference.

40th International Conference on Coordination Chemistry (Valencia, Spain; September of 2012).

58. Gerasimchuk, N. "Light-insensitive Silver(I) Cyanoximates: Properties and Remarkable Applications." Oral talk, at ICCC-40, September 9th-13th, 2012.
59. Curtis, S.*; Cheadle, C.*; Ilcun, O.; Gerasimchuk, N. "First Bis-Cyanoximes: New Versatile Multidentate Building Blocks for MOFs." Poster presentation at ICCC-40, September 9th-13th, 2012.

International Zing Conference on Coordination Chemistry, Cancun, Mexico; December 5-8th, 2013.

60. Gerasimchuk, N. "Synthesis, Properties and Applications of Light Insensitive Silver(I) Cyanoximates"; (invited 30 min oral talk).
61. Gerasimchuk, N.; Whited, M.; Patrauchan, M. "Light Insensitive Silver(I) Complexes as Antimicrobial Additives to Light-curable Acrylate Adhesives for Indwelling Medical Devices." (poster presentation).

International Zing Conference on Inorganic Polymers, San Diego, California, USA; February16th, 2016.

62. Berezin, M.; Gerasimchuk, N. "The NIR emission beyond 900 nm from self-assembled 1D polymeric Pt-cyanoximates" (oral presentation).

42th International Conference on Coordination Chemistry (Brest, France; July of 2016).

63. Gerasimchuk, N.; Berezin, M.; Santra, S. "New class of the NIR emitters beyond 1000 nm for theranostic applications: cytotoxic and luminescent 1D Pt-cyanoximates."

2nd International Conference on Crystals (San-Sebastian, Spain; September of 2016).

64. Gerasimchuk, N.; Morton, J*. "Crystal Structures of Ag-cyanoximates as a Guide for Search for Light Insensitive Silver(I) Compounds."

2nd Caparica Christmas Conference on Samples Treatment (Caparica, Portugal; December of 2016)

65. Gerasimchuk, N.; Patrauchan, M. "Light-insensitive Ag(I) cyanoximes based complexes and their applications."

Annual American Crystallographic Association Meeting (New Orleans, LA, USA; June 2-6th 2017)

66. Gerasimchuk, N. "Coordination Polymers of Monovalent Silver and Thallium and Their Applications" (invited presentation at section "Small Molecules for Big Science")

19th Materials Congress (Barcelona, Spain; June 11-14th, 2018)

67. Gerasimchuk, N. "Multifunctional materials stemming out of coordination compounds" (Keynote address).

68. Gerasimchuk, N.; Romindger, F.; Khantra, S. Ping, Y.; Goudjil, M. "reparation and Characterization of Novel NLO Solids in As-O-Mo, As(P)-O-Mo(W) and As(P)-O-Nb(W) systems."

Annual American Crystallographic Association Meeting (Toronto, Canada; July 21-25th 2018)

69. Gerasimchuk, N.; Barybin, M. "Structural chemistry of azulenes"

35th Solutions Conference (Szeged, Hungary; August 26th-30th 2018)

70. Gerasimchuk, N.; Berezin, M. "Self-assembled cytotoxic NIR luminescent Pt-nanowires for theranostic applications."

7th EuChemSoc Conference on Nitrogen Ligands (Lisbon, Portugal; September 4th-8th 2018)

71. Gerasimchuk, N. "Chemistry and applications of cyanoximes and their metal complexes"

2nd Struchkov's Readings (Moscow, Russia; November 13-17th 2018)

72. Gerasimchuk, N. "Incredible diversity of structural chemistry of cyanoximes and their metal complexes."

Annual American Crystallographic Association Meeting (Cincinnati, USA; July 20-24th 2019)

73. Gerasimchuk, N.; Kivijarvi, L.; Rominger, F.; Khantra, S.*; Ping, Yu.; Goudjil, M.* "Novel non-linear-optical solids in As-O-Mo, As(P)-O-Mo(W) and As(P)-O-Nb(W) systems."

4th Capatica Conference on Antibiotic Resistance, Caparica, June 14-17th of 2021, Portugal.

74. Nikolay Gerasimchuk, Marianna Patrauchan. "Polymeric Composites with Silver (I) Cyanoximates Inhibit Biofilm Formation of Gram-Positive and Gram-Negative Bacteria".

25th Congress of the International Union of Crystallography, August 14th-23rd, 2022, Prague, Czech Republic

75. Gerasimchuk, N.; Barybin, M. "Structural Chemistry of Azulenes".

* - graduate student; * - undergraduate student

Conducted Seminars and Invited Lectures in 2002-2019:

1. Seminar at Saint Louis University, March 8th, 2022.
2. Seminar at Washington University of St. Louis, September 26th, 2019.
3. Seminar at Texas A&M University, Kingsville; April 4th, 2019
4. Seminar at the University of Manitoba, Winnipeg, February 8th, 2018.
5. Seminar at the Chemistry Department of University of Missouri – St. Louis, February 22nd, 2016.
6. Seminar at Saint Louis University, St. Louis, MO, October 30th 2015.
7. Lecture at 2nd Tiffany Maher Memorial Symposium; KU, Lawrence, October 12th 2015.
8. Seminar at the University of Missouri-Columbia, Columbia, MO, September 9th 2014.
9. Seminar at the Department of Chemistry of Pittsburgh State University, Pittsburgh, KS, March 28th 2014
10. Wichita State University, Wichita, KS, Chemistry Department invited speaker, March, 5th 2014
11. Seminar at the Department of Chemistry of the University of Kansas, April 11th, 2012.
12. Seminar at the Department of Agricultural Biology of the University of Missouri-Columbia, April 4th, 2012.
13. Invited speaker at Missouri University of Science and Technology in Rolla, November 28th, 2011.

14. Public lecture at Missouri State University: "Metals and metal compounds in medical practice"; October, 2011.
15. Presentation "Atomic Electric Power" at Springfield Business Rotary Club, July 26th, 2011.
16. Presentation "Chemical Aspects of Climate Change", MSU, Plaster Union, March 3rd, 2011.
17. Seminar at Creighton University, Omaha, Nebraska, February 12th, 2011.
18. Lecture at Arkansas State University, Jonesboro, AR, November 16th, 2010.
19. Seminar at University of Central Arkansas, Conway, November 4th, 2010.
20. Seminar at the Department of Chemistry, Missouri State University; October 13th, 2010.
21. Seminar at the Chemistry Department of University of Hull, England; December 9th, 2009.
22. Seminar at Anorganische Chemische Institut im Ruprecht-Karls Universität, Heidelberg, Germany; November 24th, 2009.
23. Lecture at the University of Pecs, Hungary; November 16th, 2009.
24. Seminar at the Department of Chemistry of Debrecen University, Hungary; November 13th, 2009.
25. Lecture at the Institute of Inorganic and Analytical Chemistry at the University of Szeged, Hungary; November 12th, 2009.
26. Seminar at the Department of Chemistry of Wroclaw University, Poland; September 26th 2009.
27. Lecture at the Institute of Immunology and Experimental Therapy of Polish Academy of Sciences; Wroclaw, Poland; September 27th, 2009.
28. Invited speaker at the Department of Chemistry of the University of Iowa, April 15th, 2009.
29. Invited speaker at the Chemistry Department of Xavier University of Louisiana, New Orleans, October 18th, 2007. The title of seminar is "Metal-based anticancer drugs."
30. Seminar at the Department of Chemistry and Biochemistry of University of Minnesota-Duluth, March 23rd, 2007.
31. Seminar at the Department of Chemistry of University of North Dakota, Grand Forks, March 22nd, 2007.
32. Seminar at the Department of Chemistry and Molecular Biology of North Dakota State University, Fargo, March 20th, 2007
33. Missouri-Oklahoma-Kansas ACS speaker at Missouri State Southern University, November 2006
34. Seminar at the Department of Chemistry of MSU, September 11th, 2006.
35. Lecture "Metal-based drugs" at the Chemistry Department of National University of Ukraine, Kiev, May 28th 2006.
36. Seminar at the Department of Chemistry of the University of Missouri - St. Louis April 11th, 2005.
37. Seminar at the Department of Chemistry and Biochemistry the University of Oklahoma. March 25th, 2005.
38. Seminar at the Department of Chemistry of SMSU. November 1st, 2004.
39. Seminar at the Department of Chemistry of University Missouri Kansas City. October, 28th 2004.
40. Seminar on Inorganic Chemistry Colloquium of the Department of Chemistry of University of Kansas. October, 5th 2004
41. Seminar at the Chemistry Department of University of Missouri-Rolla; February, 16th 2004.
42. Invited speaker for the Department of Chemistry of Kansas State University; April, 8th 2004
43. Presentation on CNAS Lecture Series at SMSU; March, 30th 2004.
44. CNAS, Summer Seminar Series, SMSU Presentation, June, 24th 2003
45. CNAS, Lunch Seminar Series, SMSU Presentation, October, 21st 2003
46. Arkansas State University, Jonesboro, AR. Invited speaker of the ACS local section. November, 22nd, 2002
47. CNAS, Department of Agriculture, SMSU, Springfield Invited speaker November 4th 2002
48. Department of Chemistry, SMSU, October, 21st 2002, Departmental seminar
49. Wichita State University, Wichita, KS, Chemistry Department invited speaker, October, 16th 2002

50. English Language Institute, SMSU, Springfield, MO; Invited presentation on Seminar Lecture Series. March, 20th 2002
51. Southeast Oklahoma State University, Durant, OK; February, 28th 2002, invited speaker of the ACS local section

Other oral presentations at other professional meetings:

- at the Missouri Inorganic Days:
  17th (2002, University of Missouri St. Louis),
  18th (2004, University of Missouri-Columbia),
  19th (2005, Washington University);
  20th (2006, Missouri State University).
  21st (2007, University of Missouri-Kansas City)
  22nd (2009, University of Missouri-Columbia)
  23rd (2010, University of St. Louis)
  24th (2011, Missouri State University)
  26th (2013, Missouri University of Science & Technology)
  27th (2014, University of Missouri St. Louis)
  28th (2015, University of Missouri St. Louis)
  29th (2016, Missouri State University)
  30th (2017, St. Louis University)
  31st (2018, Missouri University of Science & Technology)
  32nd (2019, Washington University of St. Louis)

- IV Mid-South Inorganic Chemists Association (MICA) (2005, October 1, University of Central Arkansas, Conway); and MICA Spring-2007 and Fall-2007 meetings, 2009, 2010, 2012, 2016, 2017, 2018, 2019, 2020.

- Missouri Academy of Sciences Meetings (April 22, 2002 at Southwest Missouri State University and April 20, 2006 at Truman State University)

- Bruker CCD Users Meeting: 2009, 2011, 2013 (Madison, WI, USA) and 2010 (Karlsruhe, Germany)