

**Curriculum Vitae**

Valeriy V. SMIRNOV  
 Whitworth University  
 Department of Chemistry, ROB 209  
 300 West Hawthorne Road  
 Spokane, WA 99251  
 vsmirnov@whitworth.edu  
 office: (509)777-3467  
 mobile: (410)979-0365

**Education**

PhD in Organic Chemistry	05/2004	University of Nebraska-Lincoln Dissertation: <i>Stereoelectronic control and modulation of metal electronic properties in <math>\beta</math>-octafluorometalloporphyrins</i> Advisor: Stephen G. DiMugno
Diploma of Higher Education, Chemistry	03/1998	Higher Chemical College, Russian Academy of Sciences, Moscow, Russian Federation

**Employment**

Lecturer	08/2016 – present	Whitworth University, Spokane, WA Chemistry Department
Assistant Professor	01/2009 – 07/2016	University of Montana, Missoula, MT Department of Chemistry & Biochemistry and Center for Biomolecular Structure & Dynamics
Postdoctoral Fellow	02/2004 – 12/2008	Johns Hopkins University, Baltimore, MD Department of Chemistry Postdoctoral Advisor: the late Justine P. Roth; jointly with Ken D. Karlin from 02/2004 until 08/2005
Graduate Research Assistant/Teaching Assistant	07/1996 – 02/2004	University of Nebraska-Lincoln, NE Department of Chemistry

**Courses Taught at Whitworth University as a Lecturer**

- **General Chemistry I**, CH 161, 3 credits  
enrollment is 55–65 students per semester  
•Spring 2018, •Spring 2017, •Fall 2016
- **General Chemistry I Laboratory**, CH 161L, 1 credit  
enrollment is 30–36 students per semester  
•Fall 2016
- **Organic Chemistry I**, CH 271, 3 credits  
enrollment is 20–30 students per semester  
•Spring 2022, •Fall 2021, •Spring 2021, •Fall 2020, •Fall 2019, •Spring 2019, •Fall 2018, •Fall 2017

- **Organic Chemistry I Laboratory**, CH 271L, 1 credit  
enrollment is 20–45 students per semester  
•Spring 2022, •Fall 2021, •Fall 2020, •Fall 2019, •Fall 2018, •Fall 2017, •Spring 2017,  
•Fall 2016
- **Organic Chemistry II Laboratory**, CH 278L, 1 credit  
enrollment is 18–20 students per semester  
•Spring 2022, •Spring 2021, •Spring 2020, •Spring 2019, •Spring 2018, •Spring 2017
- **General Biochemistry**, BI 311, 3 credits  
enrollment is 20–35 students per semester  
•Spring 2022, •Spring 2019
- **Biochemistry I Laboratory**, CH 401L, 1 credit  
enrollment is 15–24 students per semester  
•Spring 2021, •Spring 2020, •Spring 2019, •Spring 2018, •Spring 2017
- **Biochemistry II**, CH 403, 3 credits  
enrollment is 18–20 students per semester  
•Spring 2020

---

*Courses Taught at the University of Montana as an Assistant Professor*

Year	Semester	Course	Title	Enrollment	Credits
2016	Spring	CHMY 224	Organic Chemistry II, Laboratory	90	2
2015	Fall	CHMY 222	Organic Chemistry I, Laboratory	127	2
2015	Spring	CHMY 224	Organic Chemistry II, Laboratory	89	2
2014	Fall	CHMY 222	Organic Chemistry I, Laboratory	128	2
2014	Spring	CHMY 224	Organic Chemistry II, Laboratory	72	2
2013	Fall	CHMY 562	<i>Graduate Course: Organic Structure and Mechanisms</i>	8	3
2011	Fall	CHMY 104	Preparation for Chemistry	122	3
2011	Spring	BCH 111	Biochemistry of Life, Laboratory	27	1
2010	Fall	CHMY 104	Preparation for Chemistry	135	3
2010	Spring	BCH 111	Biochemistry of Life, Laboratory	34	1
2009	Fall	CHMY 104	Preparation for Chemistry	111	3

*Publications as a Principal Investigator while at the University of Montana, Missoula*

(\* corresponding author(s), † Undergraduate Researcher)

- (16) Kolawole A. O.; Hixon† B. P.; Dameron† L. S.; Chrisman I. M.; Smirnov\* V. V. *Catalytic Activity of Human Indoleamine 2,3-Dioxygenase (hIDO1) at Low Oxygen* Arch. Biochem. Biophys. **2015**, 570, 47-57, doi:10.1016/j.abb.2015.02.014
- (15) Smirnov\* V. V.; Roth\* J. P. *Tyrosine Oxidation in Heme Oxygenase: Examination of Long-range Proton-coupled Electron Transfer* J. Biol. Inorg. Chem. **2014**, 19, 1137-48, doi:10.1007/s00775-014-1169-7

*Postdoctoral Publications from Johns Hopkins University*

- (14) Smirnov V. V.; Lanci M. P.; Roth\* J. P. *Computational Modeling of Oxygen Isotope*

- Effects on Metal-mediated O<sub>2</sub> Activation at Varying Temperatures* *J. Phys. Chem. A* **2009**, *113*, Max Wolfsberg Festschrift, 1934-45, doi:10.1021/jp807796c
- (13) Mukherjee A.; Smirnov V. V.; Lanci M. P.; Brown D. E.; Shepard E. M.; Dooley D. M.; Roth\* J. P. *An Inner-sphere Mechanism for Molecular Oxygen Reduction Catalyzed by Copper Amine Oxidases* *J. Am. Chem. Soc.* **2008**, *130*, 9459-73, doi:10.1021/ja801378f
- (12) Lanci M. P.; Smirnov V. V.; Cramer C. J.; Gauchenova E. V.; Sundermeyer J.; Roth\* J. P. *Isotopic Probing of Molecular Oxygen Activation at Copper(I) Sites* *J. Am. Chem. Soc.* **2007**, *129*, 14697-709, doi:10.1021/ja074620c
- (11) Smirnov V. V.; Roth\* J. P. *Mechanisms of Electron Transfer in Catalysis by Copper Zinc Superoxide Dismutase* *J. Am. Chem. Soc.* **2006**, *128*, 16424-5, doi:10.1021/ja066369r
- (10) Smirnov V. V.; Roth\* J. P. *Evidence for Cu-O<sub>2</sub> Intermediates in Superoxide Oxidations by Biomimetic Copper(II) Complexes* *J. Am. Chem. Soc.* **2006**, *128*, 3683-95, doi:10.1021/ja056741n
- (9) Smirnov V. V.; Brinkley D. W.; Lanci M. P.; Karlin K. D.; Roth\* J. P. *Probing Metal-mediated O<sub>2</sub> Activation in Chemical and Biological Systems* *J. Mol. Cat. A* **2006**, *251*, 100-7, doi:10.1016/j.molcata.2006.02.026
- (8) Lanci M. P.; Brinkley D. W.; Stone K. L.; Smirnov V. V.; Roth\* J. P. *Structures of Transition States in Metal-Mediated O<sub>2</sub>-Activation Reactions* *Angew. Chem. Int. Ed.* **2005**, *44*, 7273-6, doi:10.1002/anie.200502096

#### Graduate Publications

- (7) Sun H.; Smirnov V. V.; DiMugno\* S. G. *Slow Electron Transfer Rates for Fluorinated Cobalt Porphyrins: Electronic and Conformational Factors Modulating Metalloporphyrin ET* *Inorg. Chem.* **2003**, *42*, 6032-40, doi:10.1021/ic034705
- (6) Smirnov V. V.; Woller E. K.; Tatman D.; DiMugno\* S. G. *Structure and Photophysics of  $\beta$ -Octafluoro-meso-tetraarylporphyrins* *Inorg. Chem.* **2001**, *40*, 2614-9, doi:10.1021/ic001116.
- (5) Audebert\* P.; Miomandre F.; DiMugno S. G.; Smirnov V. V.; Hapiot P. *Polymerization of 3,4-Difluoropyrrole: Electrochemical and Physicochemical Behavior of Poly(Difluoropyrrole)* *Chem. Mater.* **2000**, *12*, 2025-30, doi:10.1021/cm000222w
- (4) Smirnov V. V.; Woller E. K.; DiMugno\* S. G. *<sup>19</sup>F NMR and Structural Evidence for Spin-state Modulation of Six-coordinate Cobalt(II) in a Weak Field Porphyrin Ligand* *Inorg. Chem.* **1998**, *37*, 4971-8, doi:10.1021/ic980156o
- (3) Woller E. K.; Smirnov V. V.; DiMugno\* S. G. *A Straightforward Synthesis of 3,4-Difluoropyrrole* *J. Org. Chem.* **1998**, *63*, 5706-7, doi:10.1021/jo9805798

#### Undergraduate Publications

- (2) Belokon\* Yu. N.; Kochetkov K. A.; Churkina T. D.; Chesnokov A. A.; Smirnov V. V.; Ikonnikov N. S.; Orlova S. A. *The First Example of Asymmetric Michael Reaction Catalyzed by Chiral Alkali Metal Alkoxides* *Russian Chem. Bull.* **1998**, *47*, 74-9, doi:10.1007/bf02495512
- (1) Belokon\* Yu. N.; Kochetkov K. A.; Churkina T. D.; Ikonnikov N. S.; Orlova S. A.; Smirnov V. V.; Chesnokov A. A. *Asymmetric Michael Addition of a Glycine Synthone to Methyl Methacrylate, Mediated by Sodium TADDOLate* *Mendeleev Commun.* **1997**, *4*, 137-8, doi:10.1070/mc1997v007n04abeh000790

---

***Selected Service Activities while at the University of Montana, Missoula***

**1. Department of Chemistry**

- 2010-2015 AYs **a.** Member of the Graduate Admission Committee, Department of Chemistry & Biochemistry
- 2011-2014 AYs **b.** Member of the Graduate Admission Committee, Biochemistry Program
- 2011-2012 AY **c.** Member of the Organic Faculty Search Committee, Autumn **2011**  
**d.** Recruiter for the Biochemistry Program at the 26<sup>th</sup> National Conference on Undergraduate Research (NCUR), Weber State University, Ogden, UT, March 29-31, **2012**
- 2010-2011 AY **e.** Committee on modifying the CHMY 360 Physical Chemistry requirements for the Biochemistry Program

**2. University of Montana (UM)**

Reviewer for the 11<sup>th</sup> UM Conference on Undergraduate Research (UMCUR), Spring **2012**

**3. Northwest Section of the American Chemical Society (ACS)**

Symposium Organizer & Chair, Bioinorganic Chemistry, 69<sup>th</sup> Northwest Regional Meeting (NORM) of the ACS, Missoula, MT, June 22-25, **2014**

**4. Other Professional Service**

- a.** Presiding over the *Bioinorganic Chemistry: Proteins & Enzymes & Model Systems* at the 251<sup>st</sup> ACS National Meeting, **2016**
- b.** Reviewer for *Analytical Biochemistry: Methods in the Biological Sciences*, **2015**
- c.** Grant Reviewer for National Science Foundation (NSF), Division of Molecular and Cellular Biosciences (MCB), **2012-2014**

---

***Awards and Honors***

- Keynote Speaker, Goldschmidt™2009, June 21-26, Davos, Switzerland (2009)
- Stephen J. Fuerniss Award in Organic Chemistry, Department of Chemistry, University of Nebraska-Lincoln (2002)
- Korean Alumni of Chemistry Department Graduate Student Award, Department of Chemistry, University of Nebraska-Lincoln (2001)
- Phi Lambda Upsilon (PLU) Honorary Chemical Society, Department of Chemistry, University of Nebraska-Lincoln (1998)

---

***Affiliation***

- The Society of Biological Inorganic Chemistry, 07/2005 – present
- American Association for the Advancement of Science, 07/2001 – present
- American Chemical Society, 10/1997 – present