Irina P. Smoliakova

Professional Preparation

Zelinski Institute of Organic Chemistry Moscow, Russia	Organic Chemistry	Ph.D.	1989
Lomonosov Moscow State University Moscow, Russia	Chemistry	B.Sc. (Diploma)	1983

Appointments

Associate Professor	University of North Dakota	2001–present
Assistant Professor	University of North Dakota	1995–2001
Research Associate	University of Minnesota-Duluth	1991–1995
Research Associate	Zelinski Institute of Organic Chemistry	1989–1991

Specialty Fields: Organic Chemistry; Stereochemistry; Organopalladium Chemistry; Organic Spectroscopy

Recent Significant Publications:

1. Mawo, R.Y.; Johnson, D.M.; Wood, J.L.; Smoliakova, I.P.* "Synthesis and Structural Characterization of enantiopure exo and endo six-membered oxazoline-derived palladacycles." *J. Organomet. Chem.* **2008**, *693*, 33-45.
2. Mawo, R.Y.; Mustakim, S.; Young, V. G., Jr.; Hoffmann, M.R.; Smoliakova, I.P.* "Endo-Effect Driven Regioselectivity in the Cyclopalladation of (*S*)-2-*tert*-Butyl-4-phenyl-2-oxazoline." *Organometallics* **2007**, *26*, 1801–1810.
3. Keuseman, K.J.; Smoliakova, I.P.*; Dunina, V.V. "Cyclopalladtion of (*S*)-4-*tert*-Butyl-2-methyl-2-oxazoline: an Unprecedented Case of (sp^3)C-H-Bond Activation Resulting in *exo*-Palladacycle Formation." *Organometallics* **2005**, *24*, 4159–4169.
4. Gorunova, O.N.; Keuseman, K.J.; Goebel, B.M.; Kataeva, N.A.; Churakov, A.V.; Kuz'mina, L.N.; Dunina, V.V.; Smoliakova, I.P.* "*Exo*- and *endo*-Palladacycles Derived from (4*R*)-phenyl-2-oxazolines." *J. Organomet. Chem.* **2004**, *689*, 2382–2394.
5. Peterson, D.; Keuseman, K.J.; Kataeva, N.A.; Kuz'mina, L.G.; Howard, J.A.K.; Dunina, V.V.; Smoliakova, I.P.* "Homochiral Cyclopalladated Complexes of (*S*)-*tert*-Butyl-2-phenyl-2-oxazoline. X-Ray Study of (*S,S*)-di-μ-chlorobis-{2-[2-(4-*tert*-butyl)oxazolinyl]phenyl-C,N}dipalladium(II)." *J. Organomet. Chem.* **2002**, *654*, 66–73.

Other Selected Publications (a total of 41 peer-reviewed publications):

1. Kubatova, A.*; Lahren, T.J.; Beranek, J.; Smoliakova, I.P.; Braun, A.; Huggins, F.E. "Significance of Extractable Organic Carbon and its Differentiation by Polarity in Air Particulate Matter." Full paper submitted to *Journal of Geophysical Research*.
2. Stahl, L.; Smoliakova, I.P. *Zinc.* In: "Comprehensive Organometallic Chemistry-III," Volume 2, Chapter 6, D. Michael P. Mingos and Robert H. Crabtree, Eds; Elsevier, Great Britain, Oxford, 2006, pp. 309–418.
3. Horzatko, A.; Brichac, J.; Murphy, T.C.; Reberg, A.; Kubatova, A.; Smoliakova, I.P.; Picklo, M.J.* "Enantioselective Metabolism of *trans*-4-Hydroxy-2-nonmenal by Brain Mitochondria." *Free Radical Biology and Medicine* **2005**, *39*, 913-924.
4. Liu, H.; Smoliakova, I. P.*; Koikov, L.N. "A One-Pot Synthesis of β-*C*-Glucopyranosides from *exo*-Glucal, *p*-Tolylsulfenyl Chloride, an α-Methoxyalkene and an External Nucleophile." *Org. Lett.* **2002**, *4*, 3899–3902.

5. Dudley, T.J.; Smoliakova, I.P.; *Hoffmann, M.R.** "Theoretical Study of 1-Methoxy-2-sulfanylethan-1-yl Cation: Insight into Intermediates in Glycosidation Reactions." *J. Org. Chem.* **1999**, *64*, 1247-1253.

Synergistic Activities:

- *Collaboration with SUNRISE researchers*: (i) proposal submission with E. Kozliak, E. Kolodka, A. Kubatova and W. Seames; (ii) research papers with M.R. Hoffmann and A. Kubatova.
- *Teaching with distinction:* Received the UND Foundation Faculty Award for Individual Excellence in Teaching (2001); "*Who's Who among American Teachers*", multiple year honoree; honorary member of the Golden Key International Honor Society; 2006 and 2007 UND Star Faculty; UND Graduate School Summer Professorship, 2002.
- *Service to the profession*: Editorial Advisory Board Member for the journal *Mini Reviews in Organic Chemistry*, Bentham Science Publishers, 2003–present; reviewer for ACS and other international chemistry journals.
- *International Collaboration.* (PI) NATO Collaborative Linkage Grant with Dr. V. Dunina (Russian Federation) (2003–2005); National Research Council travel grant to host Dr. V. Dunina (1999); hosted two graduate students from Moscow State University; a UND graduate student (K. Keuseman) worked in Dunina's lab in Moscow State University.

Collaborators:

Valeriya V. Dunina	Lomonosov Moscow State University, Moscow, Russia
Mark R. Hoffmann	Chemistry Department, University of North Dakota
Edward Kolodka	Department of Chemical Engineering, University of North Dakota
Evguenii E. Kozliak	Chemistry Department, University of North Dakota
Alena Kubatova	Chemistry Department, University of North Dakota

Graduate and Postdoctoral Advisor:

William A. Smit	Zelinsky Institute of Organic Chemistry, Moscow, Russia
Ron Caple	University of Minnesota-Duluth, MN

Postdoctoral Researchers Advised:

Dr. Leonid Koikov, Dr. Olga Gorunova

Graduate Students:

Mingming Han (Ph.D., 1998), Hui Liu (Ph. D., 2003), Kristopher Keuseman (Ph.D. 2006), Jessica Wood (M.S., 2007), Relindis Mawo (Ph.D. candidate), Valeria Stepanova (graduate student, Ph.D. track).