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**DANIEL J. MINDIOLA**

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Born in 1974.

### **Education**

Ph.D. August 2000

Massachusetts Institute of Technology, Cambridge, MA – Ph.D. in Chemistry, (Advisor Christopher C. Cummins) Thesis Title: “Arene Extrusion Reactions and Synthesis and Reactivity Studies of Complexes Supported by Sterically Demanding Anilide Ligands.” (Dissertation Committee: C. C. Cummins, R. R. Schrock, and D. Seyferth)

B.S. May 1996

Michigan State University, College of Natural Science, East Lansing, MI – B.S. in Chemistry with honors (Undergraduate Mentor: Prof. Kim R. Dunbar)

### **Research Experience**

- July 1-present Brush Family Chair Professor, University of Pennsylvania, Philadelphia, PA.
- 2017-2018 Visiting Professor, State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Shanghai, China (1 month)
- 2016-2017 Visiting Professor, KAIST, Daejeon, Republic of Korea.
- July. 1, 2013-2018 Presidential Chair Professor of Chemistry, University of Pennsylvania, Philadelphia, PA.
- 2010-2013 Department of Chemistry, Indiana University. Full Professor.
- May 2012 Visiting Professor, Japan Society for the Promotion of Science (JSPS), Japan.
- 2009-2010 Visiting Professor, Friedrich-Alexander Universität, Erlangen-Nürnberg, Germany.
- 2007-2010 Department of Chemistry, Indiana University. Associate Professor with tenure.
- 2002-2007 Department of Chemistry, Indiana University. Assistant Professor.
- 2000-2002 Department of Chemistry, University of Chicago. Postdoctoral Research Fellow under the direction of Prof. Gregory L. Hillhouse. Metal mediated N<sub>2</sub>O reductions and synthesis and reactivity studies of group 10 metal-ligand multiple bonds.
- 1996-2000 Department of Chemistry, Massachusetts Institute of Technology. Graduate research under the direction of Prof. Christopher C. Cummins. Synthesis of low

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- coordinate transition metal complexes and atom and group transfer reactions.
- 1993-1996 Department of Chemistry, Michigan State University. Undergraduate research under the direction of Prof. Kim R. Dunbar. Synthesis and study of anti-tumor agents and investigations of their binding modes with purine bases.
- Summer 1994 Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School. Undergraduate research with Prof. Christopher Walsh. Cloning, sequencing, overexpressing and purifying GlmU, an enzyme involved in peptidoglycan and lipopolysaccharide biosynthesis in bacterial cell wall membranes.

### **Teaching Experience**

- Fall 2018 Visiting Teaching Professor for the Disclosed Engaged and Empowering Professional Training Program in KAIST Advanced Institute for Science-X (KAIX), September (pending).
- Spring 2015, 2016, 2018 University of Pennsylvania, Instructor for the undergraduate Course, General Chemistry (CHE-102)
- Spring 2014 and Fall 2015-2018 University of Pennsylvania, Instructor for the Graduate Course (Main Group Chemistry CHE-565)
- Spring 2011, Fall 2012 Indiana University. Instructor for course N330 (Intermediate Inorganic Chemistry)
- Fall 2010, 2011, 2013 Indiana University. Lecture and Laboratory Instructor for course N330 (Intermediate Inorganic Chemistry)
- Spring 2009-11 Indiana University. Laboratory Instructor for course N330 (Intermediate Inorganic Chemistry)
- Spring 2009 Indiana University. Lecturer for course N800 (Research Analytical Chemistry)
- Spring 2006, 07, 08 Indiana University. Instructor for the undergraduate course C437 (advance inorganic chemistry laboratory)
- Fall 2003, 05, 07 Indiana University. Instructor for the graduate and undergraduate course C502/C432 (physical methods and spectroscopy)
- Spring 2005 Indiana University. Instructor for the undergraduate honors course S118 (lecture component of general chemistry)
- Spring 2004 Indiana University. Laboratory instructor for the undergraduate honors course S118 (general chemistry)
- Spring 2003 Indiana University. Instructor for the graduate and undergraduate course C502/C432 (physical methods and spectroscopy)
- Fall 2002, 04, 06, 08 Department of Chemistry, Indiana University. Instructor for the graduate course C633 (chemistry of the main group elements)

### **Graduate Student**

- Spring 1997 MIT. Teaching assistant in inorganic chemistry and group theory (5.03).
- Fall 1996 MIT. Laboratory teaching assistant in an advanced spectroscopy lab (5.33).

### **Undergraduate**

- Fall 1995- Spring 1996 Michigan State University. Algebra and trigonometry.

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Spring 1996 Michigan State University. Undergraduate teaching assistant in general chemistry.

### **Honors and Awards**

2018 Brush Family Professor, University of Pennsylvania  
2018 Fellow, American Association for the Advancement of Science  
2017 Chinese Academy of Sciences President's International Fellowship for Visiting Scientists, State Key Laboratory of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Shanghai, China  
2017-2018 John Simon Guggenheim Foundation Fellowship  
2017 Alexander von Humboldt Foundation Visiting Professorship (3 months), University of Nuremberg-Erlangen, Erlangen, Germany  
2014 Fellow of the Royal Society of Chemistry (FRSC)  
2013 Presidential Chair Professor of Chemistry, University of Pennsylvania, Philadelphia, PA.  
2013 Latino Faculty and Staff Council Special Mention Award (Indiana University)  
2012 Fellowship, Japan Society for the Promotion of Science (1 month)  
2012 Fellowship, Chemistry Research Promotion Center, National Science Council of Taiwan.  
2010 College of Natural Science Recent Alumni Award (Michigan State University)  
2009 American Chemical Society National Fresenius Award (Phi Lambda Upsilon)  
2009-2010 Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation  
2008-2009 Dalton Lecturer, University of California at Berkeley  
2002-2004 Camille and Henry Dreyfus New Faculty Award  
2004 Indiana University-Bloomington Summer Faculty Fellowship  
2003-2008 NSF CAREER Award  
2005 Indiana University Outstanding Junior Faculty Award  
2005-2007 Alfred P. Sloan Research Fellow  
2005-2012 Camille Dreyfus Teacher-Scholar Award  
2004 NSF Presidential Early Career Award for Scientists and Engineers (PECASE)  
2002 NIH Individual National Research Service Award  
2001 Ford Foundation Post-Doctoral Fellowship  
1999 Union Carbide Student Innovation Recognition Program  
1999 Proctor & Gamble Careers in Industry Program  
1997 MIT Department of Chemistry Teaching Award  
1996 Keki and Phyllis Mistry Undergraduate Research Award in Chemistry at Michigan State University  
1995 American Chemical Society Undergraduate Scholarship; 1995, 1994,  
1995, 1994 Summer Honors Undergraduate Research Program (SHURP) at Harvard Medical School  
1994 Rohm and Haas Undergraduate Research Award in Chemistry  
1993-1996 Dean's honor list in the College of Natural Science at Michigan State University

### **Professional Service (University of Pennsylvania)**

- 2016-present School of Arts and Sciences Dean's Council on Diversity
- 2016-present Graduate Advisor for Inorganic Students
- 2015-present Admission Committee, Ph.D. Program and Masters of Science Program

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- 2015 Penn Arts & Sciences BEN Talks: Union Club, New York City, NY (May 12).
- 2014 Penn2U Panelist. Sustainable Energy Policy: Impossible Dream or Absolute Imperative, Chicago, IL (October 7).
- 2015-present Vagelos Senior Chaired Faculty Hire Committee
- 2014 Vagelos Senior Chaired Faculty Hire Committee, Chair
- 2013-present Graduate Recruiting Committee (Inorganic), Chemistry Department
- 2013-present SAS strategic planning faculty working group in the areas of Energy, Environment and Sustainability
- 2013-2014 Inorganic Faculty Search Committee (Junior Search)

### **Professional Service (Indiana University)**

- 2012-2013 Faculty Research Support Program (FRSP) Proposal Panel and Selection Committee (**internal proposals**)
- 2011-2013 Chair of the Graduate Admissions Committee, Chemistry Department
- 2010-2013 Graduate Recruiting Committee, Chemistry Department
- 2010-2012 University Graduate School recruitment awards committee
- 2008-2009 Head of undergraduate curriculum reform committee at Indiana University
- 2007, 2008 Faculty Advisor for the Molecular Structure Center and head of the MSC personnel search committee
- 2007-2008 Director of Graduate Studies, Chemistry Department
- 2006-2013 Faculty Chair for the NOBCChE chapter at Indiana University
- 2006-2012 IMSD undergraduate research program supervisor for the Chemistry Department at Indiana University
- 2006-2013 Faculty advisor for the glassblowing facility at IU
- 2006-2007 Diversity-Building Graduate Fellowship Committee
- 2002-2007 Graduate Admissions and Recruiting Committee
- 2002-2013 Chemistry Department Inorganic Seminar Series, Chair
- 2002-2003 Junior and Senior Faculty Search Committee
- 2002-2006 FASE, REU and McNair mentor for Indiana University
- 2002-2013 Indiana University STARS mentor

### **Professional Service (National and Local)**

- 2016-present Member of the ACS Experts program
- 2016-present Chair of the ACS Scholars Program Subcommittee on Minority Affairs.
- 2016-present Visiting Associate, ACS Committee on Professional Training
- 2014-present Editorial Board for *Inorganic Syntheses*
- 2014-present Associate Editor for *Organometallics*
- 2014, 2015, 2017 DOE Panel, Office of Science Early Career Research Program
- 2012, 2014, 2015 NSF SYN (synthesis) Virtual Panel
- 2016 NSF CAT (synthesis Catalysis) Virtual Panel
- 2011-present Alfred P. Sloan Fellowship Selection Committee
- 2011-2014 Associate Editor for *Dalton Transactions (the Americas)*
- 2011-2014 ACS National Award Selection Committee
- 2012 Research consultant for Chevron Phillips Chemical
- 2011 Research consultant for Exxon Chemical Company

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- 2011 Research consultant for The Proctor and Gamble Chemical Company
- 2010-2012 Advisory Board for the Chemistry Journal *Chemical Science*
- 2009-2010, 2014 Chemistry Proposal Review Panel for the National Research Council of the National Academies
- 2009-2013 Advisory Board for the Chemistry Journal *Organometallics*
- 2009-2014 Advisory Board for the Chemistry Journal *Dalton Transactions*
- 2008,2014, 2015 ACS Minority Affairs Committee
- 2008 NSF Chemistry's Major Research Instrumentation (MRI) Panel.
- 2005-2006 ACS Chair for the Local Section of Southern Indiana
- 2006-2009 Alternate Councilor, Division of Inorganic Chemistry, ACS
- 2006 External Ph.D. Reviewer, Brandeis University Chemistry Department
- 2012 External Ph.D. Reviewer, University of British Columbia Okanagan, Canada
- 2006-2013, 2015, 2016-17 American Chemical Society Scholars Program Selection Committee and Mentor
- 2007-2013 National Organization of Black Chemists and Chemical Engineers (NOBCCHE) IU Student Chapter Advisor and Founder

### **Symposia Organized**

254th ACS National Meeting, Washington DC. August 20 - 24th, 2017. Symposium co-organized with Prof. Valerie Schmidt in honor of Prof. Paul J. Chirik (*ACS Catalysis* Lectureship for the Advancement of Catalytic Science).

Activation of small molecules by electropositive metals related to chemical energy conversion. Symposium co-organized with Prof. Karsten Meyer, Prof. Laurel Schafer, Prof. Hiroyuki Kawaguchi, Prof. Adam Veige, and Dr. Michael Reynolds. Pacifichem 2015, Honolulu, HI, December 15 - 20th, 2015.

249th ACS National Meeting, Denver, CO. March 22 - 26th, 2015. Symposium co-organized with Prof. Eric Schelter, Prof. Curtis P. Berlinguette, and Prof. Michael Shatruk in honor of Prof. Kim R. Dunbar (ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry).

ACS Award in Organometallic Chemistry. Symposium in honor of Prof. Kenneth G. Caulton. Symposium co-organized with Prof. Oleg Ozerov and Prof. Zi-Ling Xue. 247th ACS National Meeting, Dallas, TX, March 16 - 20th, 2014.

Organometallic Developments in C-H Bond Activation. Symposium co-organized with Prof. Alan Goldman. 245th ACS National Meeting, New Orleans, April 7 - 11th, 2013.

Beta-Diketiminates: A Renaissance of Reaction Chemistries. Symposium co-organized with Prof. Patrick Holland. 230th ACS National Meeting, Washington D. C., August 28 - 30th, 2005.

### **Presentations at Scientific Meetings and Symposia:**

#### ***Assistant, Associate and Full Professor***

Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, July 8-13th, 2018.

EuChemMS Inorganic Chemistry Conference, EICC-4, Copenhagen, Denmark, July 2-5, 2017.

251th ACS National Meeting, San Diego, CA, March 13-17, 2016.

SACNAS National Meeting, Washington DC, October 29-31, 2015.

250th ACS National Meeting, Boston, MA, August 16-20, 2015.

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Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, July 12-17th, 2015.

249th ACS National Meeting, Denver, CO, March 22-26, 2015.

248th ACS National Meeting, San Francisco, CA, August 10-14, 2014.

247th ACS National Meeting, Dallas, TX, March 16-20, 2014.

246th ACS National Meeting, Indianapolis, IN, September 7-12, 2013.

245th ACS National Meeting, New Orleans, LA, April 7-11, 2013.

Gordon Conference on Inorganic Reaction Mechanisms, Galveston, TX, March 6-11, 2011.

Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, July 6-10th, 2008.

235th ACS National Meeting, New Orleans, LA, April 6-10, 2008.

Inorganic Reaction Mechanisms Gordon Research Conference, Ventura, CA, February 18-22th, 2007.

Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, July 9-13th, 2006.

227th ACS National Meeting, Anaheim, CA, March 28-April 1, 2004.

Organometallic Gordon Research Conference, Salve Regina University, Newport, RI, July 20-25th, 2003.

NSF Workshop Conference, Jackson Hole, WY, May 29th-1st June, 2003.

### ***Post-doctoral***

222nd American Chemical Society National Meeting, Chicago, IL, 2001.

Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, 2001.

### ***Graduate***

Organometallic Gordon Research Conference, Salve Regina Univ., Newport, RI, 2000.

218th American Chemical Society National Meeting, New Orleans, LA, 1999.

216th American Chemical Society National Meeting, Boston, MA, 1998.

215th American Chemical Society National Meeting, Dallas, TX, 1998.

### **Invited Lectures at International Meetings and Conferences**

Keynote Speaker, the International School on Organometallic Chemistry Marcial Moreno Mañas in Castellon, Spain, June 11-14, 2019 (pending).

Keynote Speaker, 8th Tokyo Conference on Advanced Catalytic Science and Technology (TOCAT8), Yokohama, Japan, August 5-10, 2018 (pending).

99th Canadian Chemistry Conference, Toronto, Canada, May 28-June 1, 2017. Symposium on new developments in transition metal-alkyl chemistry.

Symposium at the Mexican Academy of Sciences or El Colegio Nacional (The Best of Penn in Mexico), Mexico City, Mexico, March 2-4.

Plenary Lecture, Inorganic Discussion Weekend at the Royal Military College of Canada, Kingston, Ontario, November 4-6, 2015.

Pacificchem 2015, Activation and Transformation of Small Molecules Mediated by Early Transition Metal Complexes, Honolulu, Hawaii.

26th International Conference on Organometallic Chemistry (ICOMC2014), July 13-18, 2014, Sapporo, Japan.

97th Canadian Chemistry Conference, Vancouver, Canada, June 1-5 (2014). Symposium in

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honor of Professor Peter Legzdins.

Plenary Lecture, IX Simposio Internacional: Investigación Química en la Frontera, Tijuana, Mexico, November 20-22, 2013.

96th Canadian Chemistry Conference, Quebec City, Canada, May 26-30. Symposium on the Chemistry of Pincer Complexes.

Royal Chemistry Society Editors' Symposia, Brussels, Belgium (March 2-4, 2013).

31st Congreso Nacional de Educación Química, Cancún, Mexico (October 27-31, 2012).

3rd Erlangen Symposium on Redox-Active Metal Complexes: Control of Reactivity via Molecular Architecture. Nürnberg, Erlangen, Germany (October 5-8, 2011).

International Symposium on Chemistry of Concerto Catalysis Based on Synergy of Elements, Rennes, France, July 12th, 2008.

Keynote speaker, Simposio Latinoamericano de Química de Coordinación y Organometálica, SiLQCOM 2009, Maracaibo, Venezuela, October 25-29, 2009.

Keynote speaker, 2nd Encuentro de Química Inorgánica in Universidad Nacional Autónoma de México (Mexico City), Universidad del Estado de Morelos (Cuernavaca), Universidad del Estado de Hidalgo (Pachuca). June 10-25, 2005.

### **Invited Lectures at Regional and National Meetings and Conferences**

251th ACS National Meeting, San Diego, CA. March 13-17, 2016. Symposium in honor of Prof. Eric Schelter (Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator) and Prof. Francois Gabbai (F. Albert Cotton Award in Synthetic Inorganic Chemistry).

250th ACS National Meeting, Boston, MA. August 16-20, 2015. Symposium in honor of Prof. Gregory L. Hillhouse (High-Energy Organometallic Complexes: Reactivity Driving New Synthesis and Catalysis).

Philadelphia Inorganic Colloquium Keynote speaker, University of the Sciences, Philadelphia, PA (February 7, 2015).

249th ACS National Meeting, Denver, CO. March 22-26, 2015. Invited speaker for the symposium entitled "New Catalysis Through Ligand Design".

249th ACS National Meeting, Denver, CO. March 22-26, 2015. Symposium in honor of Prof. Kim R. Dunbar (ACS Award for Distinguished Service in the Advancement of Inorganic Chemistry).

Frontiers at the Interface of Homogeneous and Heterogeneous Catalysts, II, Chemical Sciences, Geosciences and Biosciences Division, Office of Basic Energy Sciences, U.S. Department of Energy Westin Annapolis, Annapolis, Maryland, July 20-24, 2014.

248th ACS National Meeting, San Francisco, CA. August 10-14, 2014. Symposium in honor of Prof. John Bercaw.

247th ACS National Meeting, Dallas, TX. March 16-20, 2014. Symposium in honor of Prof. Kenneth Caulton (ACS Award in Organometallic Chemistry).

247th ACS National Meeting, Dallas, TX. March 16-20, 2014, Symposia in honor of Prof. Guy Bertrand (ACS Inorganic Chemistry Award), and Prof. Don Tilley (ACS Distinguished Service in the Advancement of Inorganic Chemistry Award).

244th ACS National Meeting, New Orleans, LA. April 7-11, 2013. Symposium in honor of Prof. Theo Agapie, ACS Award in Pure Chemistry.

244th ACS National Meeting, New Orleans, LA. April 7-11, 2013. Symposium in honor of Prof. Gregory Hillhouse, ACS Award in Organometallic Chemistry.

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243rd ACS National Meeting, Philadelphia, PA. August 19-22, 2012. Symposium in honor of Prof. Alan Goldman, ACS Award for Catalysis Lectureship for the Advancement of Catalytic Science.

Gordon Conference in Organometallic Chemistry, Salve Regina University, Newport, RI, July 8-13, 2012.

242nd ACS National Meeting, San Diego, CA. March 25-29, 2012. Symposium in honor of Prof. Oleg V. Ozerov, ACS Award in Pure Chemistry.

Invited speaker for the 16th Mesilla Chemistry Workshop on Ligand-Based Control of Spin and Reactivity in Metal Complexes, Mesilla, NM. February 11-15, 2012.

Invited speaker for the NSF Center for Enabling New Technologies through Catalysis (CENTC) for the 2011 SACNAS meeting, San Jose, CA. October 27-28, 2011.

240th ACS National Meeting, Anaheim, CA. March 27-31, 2011. Symposium in honor of Prof. Peter T. Wolczanski, ACS Award in Organometallic Chemistry.

Gordon Conference on Inorganic Reaction Mechanisms, Galveston, TX, March 6-11, 2011.

Invited speaker for the Chemistry Symposium for the Society for the Advancement of Chicanos and Native Americans in Science (SACNAS). October 1, 2010, Anaheim, CA.

239th ACS National Meeting, Boston, MA. August 22-26, 2010. Keynote speaker for American Chemical Society Committee on Minority Affairs.

239th ACS National Meeting, Boston, MA. August 22-26, 2010. Invited lecture for the symposium on Ligand Design.

239th ACS National Meeting, Boston, MA. August 22-26, 2010. Symposium commemorating the journal Organometallics (in honor of Prof. Dietmar Seyferth).

238th ACS National Meeting, San Francisco, CA. March 21-25, 2010 (symposium for the National Fresenius Award).

NOBCChE National Meeting, St. Louis, MO, April 13-17th, 2009.

NOBCChE National Meeting, Philadelphia, PA, March 16-22th, 2008.

Excellence Empowered by a Diverse Academic Workforce: Achieving Racial & Ethnic Equity in Chemistry workshop, National Science Foundation (NSF), Arlington, VA September 24-26, 2007.

Puerto Rico Outreach and Graduate Recruiting Visit. October 8-10, 2007.

Understanding Interventions that Encourage Minorities to Pursue Research Careers: Major Questions and Appropriate Methods. National Academies in Washington, D.C. May 3-4th, 2007.

ACS Scholars Program Selection Committee Meeting in Washington, D.C. April 28-30th, 2007.

NOBCChE National Meeting, Orlando, FL, April 5-6th, 2007.

233th ACS National Meeting, Chicago, IL. March 25-29, 2007 (symposium in honor of Prof. Christopher Cummins, Prof. A. Cotton Award).

NOBCChE Regional Meeting, Ann Arbor, MI, October 13-14th, 2006.

232nd ACS National Meeting, San Francisco, CA. September 10-14, 2006.

AGEP Minority Student Recruiting, IUPUI, Indianapolis IN, 2005.

Pacificchem 2005 Conference, Honolulu, Hawaii, December 15-20, 2005.

230th ACS National Meeting, Washington D. C., August 28-September 1, 2005.

Gordon Conference in Inorganic Chemistry, Salve Regina University, Newport, RI, July 17-22, 2005.

Gordon Conference in Organometallic Chemistry, Salve Regina University, Newport, RI, July 10-15, 2005.

Gordon Conference on Inorganic Reaction Mechanisms, Ventura, CA, February 13-17, 2005.



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Annual Ford Foundation Conference for Fellows, San Juan, Puerto Rico. September 16-19th, 2003.

225nd American Chemical Society National Meeting, New Orleans, LA, 2003.

Villanova University. ACS Philadelphia Section, PA November 11th, 2002.

### **Invited Lectures at Universities (national and international)**

#### **2018**

Baylor University, Waco, TX (pending October 5)

Loyola University, Chicago, IL (pending September 27)

National Tsing Hua University, Hsinchu, Taiwan (pending May 30)

Huaqiao University, Xiamen, Republic of China (pending May 28)

Xiamen University, Xiamen, Republic of China (pending May 25)

Hong Kong University of Science and Technology, Hong Kong (pending May 24)

University of Chicago (May 10)

#### **2017**

Universidad de Costa Rica, San Jose, Costa Rica (November 22)

Centro de Investigación en Electroquímica y Energía Química (CELEQ), San Jose, Costa Rica (November 24)

University of Texas El Paso, TX (November 3)

New Mexico State University, NM (November 2)

Soochow University, Republic of China (September 19)

Nanjing University, Republic of China (September 14)

Anhui Normal University, Republic of China (September 12)

Shanghai Institute of Organic Chemistry, Shanghai, Republic of China (September, 5)

City University of Hong Kong, Hong Kong (distinguished lectureship series, August 31)

Peking University, Republic of China (August 28)

FAU Universität of Erlangen – Nuremberg, Erlangen, Germany (July 28).

KAIST, Daejeon, Republic of Korea (April 19)

UNIST, Ulsan, Republic of Korea (April 17)

Temple University, Philadelphia PA (January 26)

#### **2016**

Queen's University, Kingston, Ontario, Canada (November 18)

KAIST, Daejeon, South Korea (February 22 and 23, October 2-3)

Seoul National University, South Korea (February 24)

University of Chicago, Chicago IL Gregory L. Hillhouse Memorial Lecture (March 7th)

Northwestern University, Chicago IL (March 25th)

#### **2015**

USDA-ARS-ERRC, Wyndmoor PA (October 14)

University of Wisconsin, Madison WI (October 7th)

Villanova University, Villanova PA (September 22)

Princeton University, Princeton NJ (May 19)

Yale University (May 4)

University of California, Riverside CA (April 17)

UCLA, Los Angeles CA (April 15)

University of Southern California, Los Angeles CA (April, 14)

CalTech, Pasadena CA (April 13)

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Lehigh University PA (January 28)

University of Maryland, College Park MD (April 30)

#### **2014**

University of Iowa, Departmental Colloquium Speaker, Iowa City, IA (November 7).

The College of New Jersey, NJ (November 5)

Shanghai Tech University, Shanghai, China (October 14).

Shanghai Institute of Organic Chemistry, Shanghai, China (October 13).

Peking University, Beijing, China (October 17).

Universiteit van Amsterdam, Amsterdam, The Netherlands (JvG Lecturer, September 25).

Tokyo Metropolitan University, Tokyo, Japan (July 11)

University of Delaware, Newark DE (April 9).

Columbia University, New York NY (February 27).

#### **2013**

Universidad de Valladolid, Valladolid-Spain (October 28).

Universidad de Alcala (Madrid), Alcala-Spain (October 30).

Universidad de Zaragoza-CSIC, Zaragoza-Spain (October 31).

Universidad Autonoma de Barcelona, Cataluña-Spain (November 4).

Universidad de Jaume I, Castellon-Spain (November 5).

Universidad de Sevilla, Sevilla-Spain (November 7).

Universidad de Huelva, Huelva-Spain (November 8).

University of Rochester, Departmental colloquium, Rochester NY (September 25).

University of Ottawa, Ottawa, Canada (April 3).

University of Victoria, Victoria, Canada (February 4).

University of British Columbia, Vancouver, Canada (February 5).

Simon Fraser University, Vancouver, Canada (February 6).

#### **2012**

University of Chicago, Chicago IL (November 19).

University of Pennsylvania, Philadelphia PA (November 27).

ETH Zurich, Switzerland (October 2).

Wayne State University (Frontiers Seminar), Detroit MI (September 10).

Massachusetts Institute of Technology, Cambridge MA (September 5).

Chevron Phillips Chemical Company, Bartlesville OK (June 26).

Tokyo Metropolitan University, Japan (May 23).

Nagoya University, Japan (May 21).

Kyoto University, Japan (May 18).

Osaka University, Japan (May 17).

Osaka City University, Japan (May 16).

Osaka Prefecture University, Japan (May 15).

Kyusyu University, Japan (May 11).

Tokyo University of Agriculture and Technology, Japan (May 10).

Tokyo Institute of Technology (Ookayama), Japan (May 9 and 22).

Tokyo Institute of Technology (Suzukakedai), Japan (May 8).

Korea University, Seoul, South Korea (April 10).

National Sun Yat-sen University, Taiwan (April 6).

National Tsing Hua University, Taiwan (April 5).

Academia Sinica, Taiwan (April 3).

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University of Pennsylvania, Philadelphia PA (March 6).  
University of Minnesota (Dow Lecture), Minneapolis MN (February 28).  
University of Texas at Austin, Austin TX (February 8).  
University of British Columbia, Okanagan, Canada (March 15).

### **2011**

Harvard University, Cambridge MA. Student-Invited Speaker in Inorganic Chemistry (May 18)  
University of Missouri-Columbia, Columbia MO (February 11).  
University of Illinois at Urbana-Champaign, Champaign IL (April 19).  
University of Washington, Seattle WA (February 22).  
ExxonMobil Chemical Company, Baytown TX (March 4).

### **2010**

University of Virginia, Charlottesville VA (September 23).  
Virginia Tech, Blacksburg VA (September 24).  
University of Toronto, Canada (October 26).  
University of Western Ontario, Canada (October 27).  
McMaster University, Canada (October 28).  
Brock University, Canada (October 29).  
University of Vermont, Burlington VT (April 6).  
Texas A&M University Sponsored by Phi Lambda Upsilon, College Station TX (May 5).  
Oxford University, UK (June 8).  
University of Sussex, UK (June 9).  
University of York, UK (June 11).  
University of Durham, UK (June 14).  
University of Edinburgh, UK (June 16).  
Ecole Polytechnique Fédérale de Lausanne, Switzerland (June 18).  
Universität Göttingen, Germany (June 23).  
Universität Leipzig, Germany (June 28).

### **2009**

FAU Universität of Erlangen – Nuremberg, Erlangen, Germany (September 28).  
Universität Bayreuth, Germany (October 20).  
Universität Hamburg, Germany (November 23).  
Humboldt-Universität zu Berlin, Germany (November 25).  
BASF, Mannheim, Germany (November 20).  
CNRS LCOMS - ESCPE Lyon, France (October 8).  
Université Montpellier II, France (October 12).  
Laboratoire de Chimie de Coordination, Toulouse, France (October 16).  
University of Cincinnati, Cincinnati OH (January 23).

### **2008**

University of California at Berkeley, Berkeley CA (October 31).  
University of Louisville, Louisville KY (October 17).  
Yale University, New Haven CT (September 16).  
University of North Carolina at Chapel Hill, Chapel Hill NC (May 5).  
University of Rochester, Rochester NY (March 17)  
North Carolina State University, Raleigh NC (March 14).  
University of Tennessee TN (February 14).

### **2007**

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Georgia Institute of Technology, Atlanta GA (October 11).  
University of Delaware, Newark DE (April 4).  
University of California, Los Angeles CA (April 10).  
University of Evansville, Evansville IN (March 21).  
Texas A&M University, College Station TX (February 15).  
University of Alberta, Edmonton, Canada (April 19).  
University of Calgary, Calgary, Canada (April 20).  
University of California, Irvine CA (May 17).

**2006**

Brandeis University, Waltham MA (December 1).  
University of Florida, Gainesville FL (November 13).  
Marquette University, Milwaukee WI (October 6).  
University of North Carolina at Chapel Hill, Chapel Hill NC (October 3).  
Michigan State University, East Lansing MI (September 18).  
Iowa State University, Ames IA (September 1).  
Penn State University, College Park PA (July 26).  
California Institute of Technology Pasadena, CA (April 10).  
Case Western Reserve, Cleveland OH (March 9).  
Andrews University, Berrien Springs MI (January 19).

**2005**

University of Pennsylvania, Philadelphia PA (November 1).  
Grinnell College, Grinnell IA (November 20).  
University of California at Berkeley, Berkeley CA (October 21).  
Massachusetts Institute of Technology, Cambridge MA (September 21).  
Purdue University, West Lafayette IN (March 29).  
University of California at San Diego, San Diego CA (March 11).  
University of Chicago, Chicago IL (January 21).

**2004**

University of Kansas, Kansas City KS (October 1).  
Michigan State University, East Lansing MI (September 11).  
University of Tennessee at Chattanooga, Chattanooga TN (September 24).  
Los Alamos National Laboratories, Los Alamos NM (March 15).  
University of New Mexico, Albuquerque NM (March 12).

**2003**

Indiana U-Purdue U Fort Wayne IN (November 21).  
University of North Carolina-Charlotte NC (September 6).  
Rose-Hulman Institute of Technology, Terre Haute IN (September 30 and October 1).  
Western Kentucky University, Bowling Green KY (September 12).  
Indiana State University, Terre Haute IN (March 4).

**2002**

Saint Louis University, Saint Louis MO (January 31).  
Florida International University, Miami FL (October 25).  
University of Miami, Miami FL (October 24).  
Calvin College, Grand Rapids MI (October 10).

*Graduate*

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  16. Terminal Amido and Imido Complexes of Three-Coordinate Nickel, Daniel J. Mindiola, and Gregory L. Hillhouse, *J. Am. Chem. Soc.* **2001**, *123*, 4623-4624.

#### Graduate

15. Niobaziridine Hydrides. Joshua S. Figueroa, Nicolas A. Piro, Daniel J. Mindiola, Michael G. Fickes, and Christopher C. Cummins. (Prof. Dietmar Seyferth Festschrift) *Organometallics* **2010**, *29*, 5215-5229.
14. Radical Scission of Symmetrical 1,4-Dicarbonyl Compounds: C-C Bond Cleavage with Ti(IV) Enolate Formation and Related Reactions, Theodore Agapie, Paula L. Diaconescu, Daniel J. Mindiola, and Christopher C. Cummins, *Organometallics* **2002**, *21*, 1329-1340.
13. Probing the Niobium Metallaaziridine Functionality, Daniel J. Mindiola, and Christopher C. Cummins, *Organometallics* **2001**, *20*, 3626-3628.
12. Bimetallic  $\mu$ -Cyanoimide Complexes Prepared by NCN Group Transfer, Daniel J. Mindiola, Yi-C. Tsai, Ryuichiro Hara, Qinghao Chen, Tom A. Baker, Karsten Meyer, and Christopher C. Cummins, *Chem. Commun.* **2001**, 125-126.
11. Uranium Hexakisamido Complexes, Karsten Meyer, Daniel J. Mindiola, Tom A. Baker, William M. Davis, and Christopher C. Cummins, *Angew. Chem. Int. Ed.* **2000**, *39*, 3063-3066.
10. Arene-Bridged Diuranium Complexes: Inverted Sandwiches Supported by Delta Backbonding, Paula L. Diaconescu, Polly L. Arnold, Tom A. Baker, Daniel J. Mindiola, and Christopher C. Cummins, *J. Am. Chem. Soc.* **2000**, *122*, 6108-6109.
9. Dinitrogen Cleavage Stemming from a Heterodinuclear Niobium/Molybdenum N<sub>2</sub> Complex: New Nitridoniobium Systems Including a Niobazene Cyclic Trimer, Daniel J. Mindiola, Karsten Meyer, John P.-F. Cherry, Tom A. Baker, and Christopher C. Cummins, *Organometallics* **2000**, *19*, 1622-1624.
8. A Cyclometallated Resting State for a Reactive Molybdenum Amide: Favorable Consequences of beta-Hydrogen Elimination Including Reductive Cleavage, Coupling and Complexation, Yi-C. Tsai, Marc J. A. Johnson, Daniel J. Mindiola, Wim T. Klooster,

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- Thomas F. Koetzle, and Christopher C. Cummins, *J. Am. Chem. Soc.* **1999**, *121*, 10426-10427.
7. Redox-Catalyzed Binding of Dinitrogen by Molybdenum N-tert-Hydrocarbylanilide Complexes: Implications for Dinitrogen Functionalization and Reductive Cleavage, Jonas C. Peters, John P.-F. Cherry, Chris Thomas, Luis Baraldo, Daniel J. Mindiola, and Christopher C. Cummins, *J. Am. Chem. Soc.* **1999**, *121*, 10053-10067.
  6. A Nucleophilic Chromium(V) Dioxo Radical Anion, Aaron L. Odom, Daniel J. Mindiola, Christopher C. Cummins, *Inorg. Chem.* **1999**, *38*, 3290-3295.
  5. Deprotonated 2,3:5,6-Dibenzo-7-azabicyclo[2.2.1]hepta-2,5-diene as a Nitrido Nitrogen Source via Anthracene Elimination, Daniel J. Mindiola, and Christopher C. Cummins, *Angew. Chem. Int. Ed., Engl.* **1998**, *37*, 945-948.

#### *Undergraduate*

4. Reactions of DNA Purines with Rhodium Formamidinate Compounds that Display Antitumor Behavior, Kemal V. Catalan, J. S. Hess, M. M. Maloney, Daniel J. Mindiola, Donald L. Ward, and Kim R. Dunbar, *Inorg. Chem.* **1999**, *38*, 3904-3913.
3. A Quadruply-Bonded Dirhenium Complex Bridged by Two N1/N6 Adenine Ligands, Matthew E. Prater, D. J. Mindiola, X. Ouyang, Kim R. Dunbar, *Inorg. Chem. Commun.* **1998**, *1*, 475-477.
2. A Novel Dirhodium Compound with Neutral, Bridging 9-Ethyladenine, Kemal V. Catalan, Daniel J. Mindiola, Donald L. Ward, and Kim R. Dunbar, *Inorg. Chem.* **1997**, *36*, 2458-2460.
1. Acetyltransfer Precedes Uridyltransfer in the Formation of UDP-N-acetylglucosamine in Separable Active Sites of the Bifunctional GlmU Protein of Escherichia coli, Amy M. Gehring, Watson J. Lees, Daniel J. Mindiola, Christopher T. Walsh, and Eric D. Brown, *Biochemistry* **1996**, *35*, 579-585.

#### *Patents*

US Patent No. 9,150,597, Mindiola, D. J.; Tran, B. L. Aryl alcohols and Metal Complexes Thereof.

#### *Volunteer Activities*

Soccer (football) coach and assistant coach for 8-10 year-old boys and girls in the Lower Merion area, PA.

Conduct chemical demonstrations for 2-6 grades in Cynwyd Elementary School.

#### Magazine Profile and Research Highlights:

*Chemistry World* magazine (RSC, March 21, 2018)

*C&E News*, vol 94, page 31 (July 18, 2016).

*C&E News*, vol 93, page 39 (January 26, 2015).

*C&E News*, vol 92, page 21 (January 5, 2014).

University of Pennsylvania SAS Frontiers

Prof. Mindiola's podcast video in SACNAS

*C&E News*, July 4th, 2011, p. 26.

*Chemistry World* magazine (RSC, June 2, 2011)

Author Profile: Daniel J. Mindiola, *Angew. Chem. Int. Ed.* **2011**, *50*, 4046.

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*C&E News*, January 4th, 2010, p. 33-34.  
*C&E News*, September 14th, 2009, p. 38.  
Editor's Choice, *Science Magazine* October 2007.  
*C&E News*, April 20th, 1998, p. 55.  
*C&E News*, January 25th, 1999, p. 53.  
*C&E News*, October 17th, 2005, p. 35.

External Ph.D. Committee Member  
Brandeis University, Waltham, MA, W. Weng  
UBC (Okanagan, Canada), K. C. MacLeod  
University of Delaware, D. Cummins

#### Post-doctoral Research Supervised

Feb-March 2018	Jonghoon Choi, Korea Advanced Institute of Science and Technology, Rep. of Korea (pending).
April-May 2018	Rolando Aguilar (University of Texas El Paso). Visiting graduate student from Prof. Skye Fortier.
March-June 2018	Dr. Yulia Ganushevich (Arbuzov Institute of Organic and Physical Chemistry of RAS, Kazan, Russia). Visiting Scholar.
April-2017 present	Dr. Dieter Sorsche (Ulm University, Germany). Postdoctoral Fellow.
July 2016-2017	Dr. Oleksandra Trofymchuk (Pontificia Universidad Católica de Chile, Chile). Chilean Government Postdoctoral Fellow.
May 2015-present	Dr. Takashi Kurogi (Tokyo Institute of Technology, Ookayama, Japan). JSPS Fellow.
Aug 2013-June 2015	Dr. Maria E. Carroll. Franklin and Marshall College-Visiting Assistant Professor.
June-August 2015	Dr. Mariano González Moreiras (University of Alcala, Spain) – Visiting Scholar.
Nov. 2013-May 2014	Dr. Lindsay Hounjet. Visiting Research Fellow, Natural Resources Canada, CanmetENERGY.
April 2013-April 2015	Dr. Masahiro Kamitani, Japan Society for the Promotion of Science (JSPS) Fellow. Now Assistant Professor at Kitasato University, Minato, Tokyo, Japan.
October 2011-May 2013	Dr. Skye Fortier (National Science Foundation American Competitiveness in Chemistry Postdoctoral Fellow). Assistant Professor at the University of Texas El Paso, TX.
June 2010-April 2011	Dr. Balazs Pinter. Now at the Free University of Brussels (VUB) in the quantum chemistry group directed by P. Geerlings and F. De Proft.
October 2010-2011	Dr. Octavio González del Moral. Institute of Nuclear Fusion (IFN), which is the department of the Universidad Politécnica de Madrid (UPM), Spain.
August 2010-2011	Dr. Marlena Washington. Assistant Professor at Claflin University, Columbia, SC.
August 2010- April 2013	Dr. Marco G. Crestani Gutiérrez. CONACYT Postdoctoral

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Fellow, Mexico. Now research scientist (R & D) and Supervisor of Customer Service and Technical at Signa chemical/pharmaceutical company.

August 2009-2011 Dr. Jaime A. Flores. Research scientist at Honeywell Company.

April 2009-2010 Dr. José G. Andino Martinez. Lecturer at the University of Illinois Urbana-Champaign.

February 2008-2009 Dr. Abbas Ghayoor Chotana. Assistant Professor in the Department of Chemistry, School of Science and Engineering, Lahore University of Management Sciences, Lahore Cantt, Pakistan.

August 2007-2008 Dr. Jennifer L. Scott (NSRC Postdoctoral Fellow). Associate Professor in the Department of Chemistry and Chemical Engineering at the Royal Military College of Canada in Kingston, Ontario, Canada.

June 2005-2009 Dr. Hongjun Fan. Professor at the Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian, China.

August 2002-2006 Dr. Falguni Basuli (now Falguni Bhattacharyya). Senior Research Staff Scientist at NIH/NHLBI in Bethesda, MD.

February 2005-2006 Dr. Aneetha Halikhedkar. Postdoctoral associate in the Center for Drug Discovery, Northeastern University, Boston MA.

#### Masters Research Supervised

August 2003-January 2006 Guangyu Zhao (M.Sc.)

November 2009-May 2012 Vincent N. Cavaliere (M.Sc.)

October 2011-January 2014 Zhenyu Wu (M.Sc.)

July 2011-January 2015 Rick Thompson (M.Sc.)

June 2015-Dec 2016 Douglas Solowey (M. Sc.)

Dec. 2013-Dec. 2016 Kyle T. Smith (M. Sc.)

#### Doctoral Research Supervising

July 2017-present Pavel Zatsepin

Oct. 2017-present Mehrafshan G. Jafari

June 2015-present Lauren N. Grant

Keith Searles (Ph.D. 2015, joint with Prof. Ken Caulton)

Postdoctoral fellow at ETH with Prof. Christophe Copéret. Ph.D. Thesis Title: Implementing New Ligand Platforms for Metal-Ligand Multiple Bond and Dinitrogen Chemistry.

Benjamin F. Wicker (Ph.D. 2012)

Assistant Professor, Department of Chemistry and Physics, Southeastern Louisiana University. Ph.D. Thesis Title: Carboamination catalysis and the synthesis and reactivity of scandium complexes having metal-ligand multiple bonds.

Ba L. Tran (Ph.D. 2012)

Chemist, Pacific Northwest National Laboratory. Ph.D. Thesis Title: The multielectron chemistry of vanadium complexes: Unusual redox reactivity of an early transition metal nitride

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and the activation of small molecules.

Alison R. Fout (Ph.D. 2009)

Associate Professor in Chemistry at the University of Illinois Urbana-Champaign. Ph.D. Thesis Title: Unraveling Strong Bonds: Small Molecule Activation via Metal-Ligand Multiple Bonds.

Uriah J. Kilgore (Ph.D. 2009)

Research Chemist at Chevron Phillips Chemical Company, Houston, TX. Ph.D. Thesis Title: Synthesis, Characterization, and Reactivity of Early Transition Metal Complexes Bearing Metal-Ligand Multiple Bonds.

Debashis Adhikari (Ph.D. 2009)

Assistant Professor in Chemistry, Indiana Institute of Science Education and Research, Mohali. Ph.D. Thesis Title: Synthesis, Structure, and Reactivity of Ni Pincer Complexes and Evaluating Redox Non-Innocence of the Ligand.

Brad C. Bailey (Ph.D. 2007)

Senior Research Chemist at Dow Chemical Company, Midland MI. Ph.D. Thesis Title: Synthesis, Characterization, and Reactivity of Titanium-Ligand Multiply Bonded Complexes Supported by Sterically Encumbering  $\beta$ -Diketiminato and PNP Pincer-Type Ligands.

Visiting Scientist/Students

Sara A. Cortez, October-December 2004

Professor and Investigator in Chemistry at the Department of Chemistry and Engineering in Guadalajara, Mexico.

Dominik Buck, September 2008-May 2009, visiting student from the University of Tübingen, Germany. Now R&D Manager Euticals, Frankfurt, Germany.

Berenice Ordoñez, February-May 2008, visiting student from the Universidad Autónoma del Estado de Hidalgo, Pachuca, Mexico

Undergraduate Research Supervised

June 2017-August 2017 Jenna Veenstra, REU student, Dordt College, IA.

June 2016-August 2016 Juan Cisneros, Emory Undergraduate Visiting Scholar.

August 2014-2015 ByeongChan "Luke" Lee, undergraduate researcher.

March-August 2014 Max Learner, undergraduate researcher.

February 2014-August 2014 Matthew Eernisse, undergraduate researcher.

June 2014-August 2014 Elys Paola Rodríguez, REU student, University of Puerto Rico at Cayey.

Sept 2012-July 2013 Thomas Gallmeyer, undergraduate researcher.

July 2011-July 2013 Hayley Smith, undergraduate researcher (IU STARS program)

June 2010-2012 Adam Nichols, undergraduate researcher (IU STARS program, Cox Program).

August 2010-May 2011 Christina Romer, undergraduate researcher.

May 2010-May 2012 Danielle Henckel, undergraduate researcher. Now a graduate student at the University of Washington, Seattle.

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February 2010-June 2010	John-Peter Lynch, undergraduate researcher.
April 2009-June 2010	Madhavi Singhal, undergraduate researcher. MD from Indiana University School of Medicine, now an MD in pediatrics in St. Louis, MO.
April 2009-August 2009	RaeAnn D. Hirschy, undergraduate researcher.
September 2004-May 2008	Deanna Miller, IU STARS student. Ph.D. from the University of Minnesota, now a staff scientist at BorgWarner Inc., Detroit, MI.
June-August 2007	Jamie Ellis, Elli Lilly Undergraduate Intern from Xavier University, New Orleans, LA.
September 2004-May 2006	Corinne D. Sulok, undergraduate researcher.
June-August 2004	Rodney Clark Jr., MEDIC-B student. MD from Howard University College of Medicine, now at NEA Baptist Clinic, AR.
June 2003-May 2004	Alex A. Saleh, McNair student and undergraduate researcher. Now a graduate Student at the University of Texas at Arlington
June-August 2003	Uriah Kilgore, REU student. Ph.D. Indiana University, now Research Chemist at Chevron Phillips Chemical Company
October 2006-May 2007	Christoph Schadle (visiting student from the University of Tübingen, Germany)

#### High-School Students

Carly G. Menker	Fall 2015 (under the guidance of Lauren Grant)
Peter Bixler	Fall 2015-2017 (under the guidance of Lauren Grant and Kyle Smith)
JuHyun Lee	Summer of 2012 (under the guidance of Dr. Skye Fortier, Dr. Maren Pink)

#### Visiting Professors or Scientists

Dr. Jun-ichi Ito	Nov. 2012-Jan 2013 (Department of Applied Chemistry, Graduate School of Engineering, Nagoya University, Japan). JSPS Fellow.
Dr. Tsubasa Hatanaka	August 2011 (Tokyo Institute of Technology, Okayama, Japan). JSPS Fellow.
Dr. Komine Nobuyuki	April 2011-January 2012 (Tokyo Institute of Agriculture and Technology, Japan). JSPS Fellow.
Dr. Francisco Zuno-Cruz	Summer of 2007 and 2008 (Universidad Autónoma del Estado de Hidalgo, Pachuca, Mexico)
Dr. Gloria Sanchez Cabrera	Summer of 2007 and 2008 (Universidad Autónoma del Estado de Hidalgo, Pachuca, Mexico)

#### Visiting High-School Teachers

Wanda Cruz, Woodrow Wilson High School, Camden NJ (Summer of 2015)

#### Present Collaborators

Professor Patrick Walsh (University of Pennsylvania)  
Professor Jeffrey Winkler (University of Pennsylvania)  
Professor Milton Smith III (Michigan State University)  
Professor Kyle Lancaster (Cornell University)



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Professor Clark Landis (University of Wisconsin, Madison)  
Professor Muralee Murugesu (University of Ottawa, Ottawa, Canada)  
Professor Bas de Bruin (University of Amsterdam)  
Professor Hansjörg Grützmacher (ETH Zürich, Switzerland)  
Professor Karsten Meyer (University of Erlangen – Nuremberg, Germany)  
Professor Gang Wu (Queen's University, Canada)  
Professor Mu Hyun Baik (KAIST, Republic of Korea)  
Professor Kit Cummins (MIT)  
Professor Joshua Telser (Roosevelt University)  
Dr. Andrew Ozarowski (National High Magnetic Field Laboratory, Florida State University)  
Dr. J. Krzystek (National High Magnetic Field Laboratory, Florida State University)

#### Sponsored Research

Title: Early-Transition Metal Chemistry

Source: Office of Sponsored Research at Indiana University, Bloomington, IN (start-up funds)

Dates: 02-02/07-05

Amount: \$500,000

Title: Preparation of Isocyanates, Carbodiimides, and Isocyanides from Carbon Dioxide and Atmospheric Nitrogen. A Recycling and Catalytic Tale Involving CO-, C-, N-, N<sub>2</sub>-Transfer, and Isotopic Labeling Studies.

Source: Cambridge Isotope Laboratories (CIL)

Dates: 03-06/03-08

Amount: Isotopically Labeled N<sub>2</sub> and CO<sub>2</sub> (approximately \$5,000 value)

Title: Preparation of Carboamination Catalysts Using Unsaturated Early-Transition Metal Imides.

Source: Boulder Scientific (CIL)

Date: 05-06

Amount: Perfluoroaryl boranes and borate salts (approximately \$3,000 value)

Title: New Vistas in Early-Transition Metal Complexes Containing Metal-Ligand Multiple Bonds

Source: National Science Foundation (CAREER)

Dates: 02-04/02-09

Amount: \$500,000

Title: Lanthanide (II) complexes supported by a pincer-type PCP ligand: Redox and reactivity studies stemming from the +2/+3 couple

Source: The Camille and Henry Dreyfus Foundation

Dates: 09-02/09-05

Amount: \$40,000

Title: Beta-Diketiminates: A Renaissance of Reaction Chemistries.

Source: Petroleum Research Fund

Dates: August-September 2005

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Amount: \$3,600

Title: New Paradigms in Early Transition Metal Complexes Containing Reactive Metal-Ligand Multiple Bonds.

Source: The Camille and Henry Dreyfus Foundation

Dates: 07-01-05/06-30-10

Amount: \$60,000

Title: Future Directions in Early-Transition Metal Complexes Having Metal-Ligand Multiple Bonds

Source: The Alfred P. Sloan Foundation

Dates: 09-05/09-07

Amount: \$45,000

Title: Complexed nitrous oxide in catalytic oxidation reactions

Source: The Ford Foundation and Indiana University

Dates: 04-03/04-04

Amount: \$5,000

Title: NOBCCChE (National Organization of Black Chemists and Chemical Engineers) Student Chapter Development and Promoting Underepresentated Groups in the Physical Sciences at Indiana University

Source: AGEP (The Alliance for Graduate Education and the Professoriate) Breaking Ground Initiatives, Indiana University, Bloomington, IN

Dates: 11-07/11-08

Amount: \$10,000

Title: New Precursors to Metal-Nitride Films: Molecular Metal-Nitrides Supported by a Monoanionic and Tripodal Ligand Containing a Diimine Template

Source: Office of the Vice President for Research (OVPR) of Indiana University, Bloomington, IN

Dates: Summer, 2004

Amount: \$16,000

Title: Early-Transition Metal Chemistry and Departmental Equipment Purchase (Bruker DUO X-ray Diffractometer, UV-vis, FT-IR, FT-Raman II, Gloveboxes, Combustion Analysis Apparatus)

Source: Office of Sponsored Research at Indiana University, Bloomington, IN

Dates: 10-06/10

0-10

Amount: \$1,000,000

Title: Carboamination and Hydrophosphination of Alkynes Using Titanium Precatalysts. An Efficient Approach to Catalytic C–N, C–C, and C–P Bond Forming Reactions.

Agency: Department of Energy, Division of Chemical Sciences, Geosciences, and Biosciences.

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Office of Basic Energy Sciences, Catalysis.

Dates: 08-15-07/08-14-10

Amount: \$420,000

Title: Synthetic Entries to Early-Transition Metal Complexes Containing Terminal and Reactive Metal-Ligand Multiple Bonds.

Source: National Science Foundation

Dates: 02-01-09/01-31-2012

Amount: \$519,000

Title: NOBCCChE (National Organization of Black Chemists and Chemical Engineers) Student Chapter Development and Promoting Minority Groups in the Physical Sciences at Indiana University

Source: President's University Diversity Initiative, Indiana University, Bloomington, IN

Dates: 01-09/01-2011

Amount: \$29,000

Title: New routes to O/O Bond Formation using Greenhouse Gases CO<sub>2</sub> and N<sub>2</sub>O. New and Efficient Routes to Catalytic Oxidation and Carbonylation Reactions.

Source: IU – Faculty Research Support Program (FRSP)

Dates: 04-2010/03-2011

Amount: \$67,500 (PI Daniel J. Mindiola, w/Kenneth G. Caulton as collaborator)

Title: Synthesis and Exploratory Catalysis of 3d Metals: Group-Transfer, and Alkane Activation and Functionalization with Greenhouse Gases. (Renewal DE-FG02-07ER15893)

Source: Department of Energy Division of Chemical Sciences, Geosciences, and Biosciences. Office of Basic Energy Sciences, Catalysis

Dates: 08-2010/08-2013

Amount: \$465,000

Title: Metal-Ligand Multiple Bonds and Their Role in Alkane Metathesis, Dehydrogenation and Group-Transfer Chemistry.

Source: National Science Foundation (CHE-1152123)

Dates: 06-01-12/06-01-2015

Amount: \$420,000

Title: Alkane Metathesis and Dehydrogenation Chemistry of Methane.

Source: Chevron-Phillips

Dates: 08-15-12/12-15-12

Amount: \$30,000

Title: Alkane Metathesis and Dehydrogenation Chemistry of Methane.

Source: Chevron-Phillips

Dates: 01-01-13/12-15-13

Amount: \$50,000

Title: Synthesis and Exploratory Catalysis of 3d Metals: Atom and Group-Transfer Reactions

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and the Activation and Functionalization of Small Molecules Including Greenhouse Gases.  
(Renewal DE-FG02-07ER15893)

Source: Department of Energy Division of Chemical Sciences, Geosciences, and Biosciences.  
Office of Basic Energy Sciences, Catalysis

Dates: 09-2014/09-2017

Amount: \$380,000

Title: Metal-Ligand Multiple Bonds and Their Role in Alkane Metathesis, Dehydrogenation  
and Group-Transfer Chemistry.

Source: National Science Foundation (CHE-1464659)

Dates: 07-01-15/07-01-2018

Amount: \$435,000

Title: Synthesis and Exploratory Catalysis of 3d Metals: Atom and Group-Transfer Reactions  
and the Activation and Functionalization of Small Molecules Including Greenhouse Gases  
(Renewal, DE-FG02-07ER15893)

Source: Department of Energy Division of Chemical Sciences, Geosciences, and Biosciences.  
Office of Basic Energy Sciences, Catalysis

Dates: 09-2017/09-2020

Amount: \$550,000

Title: Metal-Ligand Multiple Bonds and Their Exploratory Chemistry in Transfer  
Dehydrogenation, Group-Transfer and Dehydrocoupling.

Source: National Science Foundation (CHE-1464659 renewal)

Dates: 07-01-18/06-01-2021

Amount: \$450,000