

MICHAEL D. AMIRIDIS, Ph.D.
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Education

Diploma, Chemical Engineering, 1985, Aristotelian University of Thessaloniki

Thesis: Design of Data Acquisition Systems (Adv. Dr. A. Karabelas).

Ph.D., Chemical Engineering, 1991, University of Wisconsin-Madison

Thesis: Selective Catalytic Reduction of Nitric Oxide by Ammonia over Iron Exchanged Y Zeolites (Adv. Dr. J.A. Dumesic).

Professional Employment

Academic

8/09-Present Executive Vice President for Academic Affairs & Provost; University of South Carolina, Columbia, SC.

7/06-8/09 Dean; College of Engineering and Computing, University of South Carolina, Columbia, SC.

8/02-7/06 Chairman; Department of Chemical Engineering, University of South Carolina, Columbia, SC.

8/03-Present Professor; Department of Chemical Engineering, University of South Carolina, Columbia, SC.

8/99-8/03 Associate Professor; Department of Chemical Engineering, University of South Carolina, Columbia, SC.

8/94-8/99 Assistant Professor; Department of Chemical Engineering, University of South Carolina, Columbia, SC.

1/93-5/93 Lecturer; Department of Chemical Engineering, Johns Hopkins University, Baltimore, MD.

Industrial

10/91-8/94 Research Engineer; Catalysis Research, Research Division, W.R.Grace and Co., Columbia, MD.

6/83-8/83 Co-op Engineer; North Aegean Petroleum Company, Kavala, Greece.

Sabbaticals

1/01-6/01 Visiting Professor, Laboratory of Technical Chemistry, Swiss Federal Institute of Technology (ETH), Zurich, Switzerland.

9/00-1/01 Visiting Professor, Laboratory of Catalysis in Organic Chemistry, University of Poitiers/CNRS, Poitiers, France.

Honors, Awards & Distinctions

Commencement addresses

Doctoral hooding ceremony; University of South Carolina (2009).

Convocation ceremony; South Carolina Governor's School for Science and Mathematics (2009).

Convocation ceremony, University of South Carolina-Aiken (2010)

Research

CAREER Award; National Science Foundation (1996).

Golden Key Award for Integration of Undergraduate Teaching and Research; University of South Carolina (2000).

Catalysis Today Top Cited 2004 Article Award, Elsevier (2005).

Research Achievement Award; College of Engineering and Information Technology, University of South Carolina (2005).

Fellow, American Association for the Advancement of Science (AAAS) (2012).

W. Robert Marshall Founders' Lecture; Department of Chemical Engineering, University of Wisconsin-Madison (2014).

Editorial Appointments

Regional Editor; *Catalysis Communications* (2001-2005).

Guest Editor; Issue on "Fundamentals of Oxide Catalysts"; *Catalysis Today*; **28(4)**, (1996).

Guest Editor; Issue on "NO_x Abatement in Lean-burn and Diesel"; *Catalysis Today*; **96(1-2)**, (2004).

Editorial Board; *Applied Catalysis B: Environmental* (1998-2004).

Editorial Board; *Catalysis Communications* (2005-2008).

Technical Committee; International Gold 2006 Conference; Limerick, Ireland; September 2006.

Teaching

R.A.Ragatz Teaching Award; Department of Chemical Engineering, University of Wisconsin-Madison (1987,1989).
Excellence in Teaching Award; Graduate School, University of Wisconsin-Madison (1990).

Excellence in Teaching Award; Mortar Board, University of South Carolina (1994, 1995, 1997).

Michael J. Mungo Undergraduate Teaching Award; Office of the Provost, University of South Carolina (1998).

Samuel Litman Distinguished Professor Award; College of Engineering and Information Technology, University of South Carolina (2002).

Michael J. Mungo Graduate Teaching Award; Office of the Provost, University of South Carolina (2004).

Honorary member of Golden Key (2000), Tau Beta Pi (2001), Omikron Delta Kappa (2011), and Alpha Sigma Lamda (2013).

Service

Honor Administrator Award, South Carolina Music Educators Association (2013).

Chair, National Selection Panel for NSF Graduate Research Fellowships in Chemical Engineering (2005-2008).

Chair, Executive Panel on Information, Communication and Emergent Technologies (IC&ET); Principal Investigator Programme; Science Foundation of Ireland (2009-2012).

Visiting Committee, Department of Chemical and Biological Engineering, University of Wisconsin-Madison (2007-Present; Chair 2010-2011).

Advisory Board, Department of Chemical and Biological Engineering, Tufts University (2009-Present).

Board of Directors, University of South Carolina Research Foundation (2008-2012).

Board of Trustees, South Carolina Governor's School for Science and Mathematics (2009-Present).

Board of Trustees, Heathwood Hall Episcopal School (2010-2013).

Community

2010 Columbia's International Professional of the Year, Columbia International Fair (2010).

Student

Undergraduate Scholarship (top 5% nationwide); National Scholarship Foundation of Greece (1981-1985).

Outstanding Graduation Award; Technical Chamber of Greece (TEE) (1985).

Top Graduate (class of 1985); Department of Chemical Engineering, Aristotelian University of Thessaloniki.

Professional Activities

Membership

Registered Professional Engineer (Greece/European Union).

Member of American Association for the Advancement of Science (AAAS; Fellow 2012), American Institute of Chemical Engineers (AIChE), American Chemical Society (ACS), American Society for Engineering Education (ASEE), North American Catalysis Society (NACS).

Programming Vice-Chair, Group 20a, AIChE (2003-2004).

Programming Chair, Group 20a, AIChE (2004-2005).

Technical Meetings

Technical Committee; International Gold 2006 Conference; Limerick, Ireland; September 2006.

Chair; "Kinetics, Catalysis, and Reaction Engineering - Posters" session; 1994 Annual AIChE Meeting.

Chair; "Fundamentals of Oxide Catalysts" session; 1995 Annual AIChE Meeting.

Chair; "Characterization of Mixed Metal Oxides" session; 215th ACS National Meeting (1998).

Chair; "Fundamentals of Oxide Catalysts II" session; 1998 Annual AIChE Meeting.

Chair; "Air Pollution II" session; 5th Conference on the Protection and Restoration of the Environment (2000).

Chair; "Air Pollution" session; 6th Conference on the Protection and Restoration of the Environment (2002).

Chair; "Fuel Processing for Fuel Cells" session; 2002 Annual AIChE Meeting.

Co-chair; "Catalysis" session; 13th International Symposium of Chemical Reaction Engineering-ISCRE (1994).

Co-chair; "Fundamentals of Oxide Catalysts" session; 1994 Annual AIChE Meeting.

Co-chair; "Fundamentals of Oxide Catalysts I" session; 1998 Annual AIChE Meeting.

Co-chair; "Catalysis by Metals: C₁ Chemistry"; 16th North American Catalysis Society Meeting (1999).

Co-chair; "Fundamentals of Oxide Catalysts" session; 1999 Annual AIChE Meeting.

Co-chair; "Catalysts for Air Pollution Abatement" session; 18th North American Catalysis Society Meeting (2003).

Co-chair; "Catalytic Hydrogen Generation for Fuel Cell Applications" session; 2006 Annual AIChE Meeting.

Co-chair; "Catalytic Hydrogen Generation for Fuel Cell Applications II" session; 2008 Annual AIChE Meeting.

Moderator; "Job Creation and Wrokforce Education (STEM)" keynote session; 2012 Total Energy USA Conference. Panelist; "Industry-Academia Relationships"; 1999 NSF CAREER PI Meeting.

Review Panels – Standing Panels

ASEE-NSF Graduate Research Fellowships; Chemical Engineering Panel; Arlington, VA (2005-2009; Chair 2005-2008).

SFI; Principal Investigator Programme; Executive Panel on Information, Communication and Emergent Technologies (IC&ET); Dublin, Ireland (2009-2012; Chair 2009-2012).

Review Panels – One-time Panels

DOE Fossil Energy Program Review; Panel 11 - Treatment of Unwanted Byproducts: Gas Cleanup; Pittsburgh, PA, January 1995.

NSF SBIR Phase I; Catalysis Panel; Arlington, VA, September 1995.

NSF SBIR Phase I; Heterogeneous Catalysis Panel; Arlington, VA, September 1996.

NSF Research Experience for Undergraduates Sites; Engineering Panel; Arlington, VA, October 1998.

NSF SBIR Phase II; Chemical Engineering II Panel; Arlington, VA, January 1999.

NSF XYZ on a Chip; Panel #2; Arlington, VA, March 2000.

NSF Research Experience for Undergraduates Sites; Engineering Panel; Arlington, VA, December 2001.

NSF SBIR Phase I; Catalysis Panel; Arlington, VA, September 2002.

NSF Research Experience for Undergraduates Sites; Engineering Panel; Arlington, VA, September 2004.

NSF Kinetics and Catalysis Program; Unsolicited Proposals Panel; Arlington, VA, April 2005.

NSF CAREER Program; Catalysis and Biocatalysis Panel; Arlington, VA, October 2005.

NSF SBIR/STTR Phase I; Catalysis II Panel; Arlington, VA, March 2006.

NSF NIRT Program; Sensors and Catalysts Panel; Arlington, VA, March 2007.

NSF SBIR Phase II; Fuel Cells and Catalysis Panel; Arlington, VA, October 2007.

SFI (Science Foundation Ireland); Engineering Professorship and Lecturship Program Review Panel; Dublin, Ireland, December 2007.

Reviews

Articles for: ACS Symposium Series, Advances in Environmental Research, AIChE Journal, Applied Catalysis A: General, Applied Catalysis B: Environmental, Catalysis Letters, Catalysis Reviews, Catalysis Today, Chemical Engineering Communications, Chemical Engineering Science, Energy and Fuels, Environmental Science & Technology, Industrial and Engineering Chemistry Research, JACS, Journal of Catalysis, Journal of Cluster Science, Journal of Materials Chemistry, Journal of Molecular Catalysis, Journal of Physical Chemistry, Journal of Solid State Chemistry, Langmuir, Materials Research Bulletin, Science, Studies in Surface Science and Catalysis, Topics in Catalysis, Thermochemica Acta.

Proposals for: NSF, DOE, ACS-Petroleum Research Fund, USDA, The National Academies, Indiana 21st Century R&T Fund, Ohio Board of Regents, Texas Research Corporation, Louisiana EPSCoR Office, Science Foundation of Ireland, Swiss National Science Foundation.

Consulting

W.L. Gore & Associates Inc., Elkton, MD	1994-2001
Kaye, Scholer, Fierman, Hays & Handler, LLP, New York, NY	1996, 1999
Wall, Marjama, Bilinski & Burr, IPP, Syracuse, NY	1998-2000
International Flavors and Fragrances (IFF), Union Beach, NJ	1999
BASF AG, Ludwigshafen, Germany	2000-2009
Grace-Davison, Columbia, MD	2003-2009
XL Tech Group, Melbourne, FL	2005-2007
Savannah River National Laboratory, Aiken, SC	2006
Alston & Bird, LLP, Charlotte, NC	2009-Present

Research Support – A. Fundamental Research

Principal Investigator

\$7,500 "Selective Catalytic Reduction of Nitrogen Monoxide by Hydrocarbons over Noble Metal Catalysts", University of South Carolina Research & Productive Scholarship Faculty Grant Program, 1/95-12/95.

\$49,013 "Evaluation of Various Catalytic and Non-Catalytic Methods for the Production of Hydrogen from Natural Gas", Niagara Mohawk Power Corporation, 3/95-2/96.

- \$25,000 "Simultaneous Catalytic Removal of Nitrogen Oxides and Air Toxic Organic Compounds from Flue Gas", ACS-PRF G Grant (\$20,000) and 1996 Summer Research Fellowship Supplement (\$5,000), 9/95-8/97.
- \$5,000 "Development of Novel Perovskite-Based Sorbents for Sulfur Removal", University of South Carolina, School of the Environment Enhancement Grant, 5/96-8/96.
- \$345,000 "Catalytic Solutions to Emission Control Problems", NSF-CTS CAREER Award, 7/96-6/01.
- \$311,000 "New Heterogeneous Catalysts for Selective Reduction of NO_x Emissions to Improve Vehicular Transportation", DOE-Office of Energy Research, 9/96-11/00.
- \$121,061 "Synthesis and Uses of Filamentous Carbon", Niagara Mohawk Power Corporation, 8/96-12/97.
- \$89,373 "Searching for the Best DeNO_x Catalyst", W.L. Gore & Associates, 8/99-7/00.
- \$297,711 "New Heterogeneous Catalysts for Selective Reduction of NO_x Under Lean Conditions", DOE-Office of Energy Research, 11/00-6/04.
- \$148,112 "Catalytic Performance of Metal Nanoparticles on Mesoporous Supports", DOE-Office of Energy Research (via Oak Ridge National Lab), 10/01-12/04.
- \$152,000 "Novel Bimetallic Catalysts for the Selective Oxidation of CO", BASF AG (through the NSF I/UCRC on Fuel Cell Research), 9/02-12/06.
- \$15,000 "Development of Nanoscale IR-based Biosensors", USC Nanoscience Center, 4/03-3/04.
- \$240,000 "Fundamental FTIR Studies of the Mechanism of NO_x Reduction under FCC Regeneration Conditions", Grace-Davison, 3/04-3/08.
- \$290,000 "Synthesis and Studies of Bimetallic Catalysts in Solution and on Supports", DOE-Office of Energy Research, 6/04-6/07.
- \$262,510 "Synthesis and Characterization of Supported Nanostructured Metal Catalysts for Automotive Applications", Toyota Technical Center, 11/04-11/06.
- \$43,715 "Reaction of COS with CO₂ and/or H₂O over Mixed Cu-Zn Oxides", ExxonMobil, 7/06-12/06.
- \$70,000 "Desulfurization of Jet Fuel", BASF/Boeing Corp. (through the NSF I/UCRC on Fuel Cell Research), 1/06-12/07.
- \$300,938 "Synthesis and Characterization of Dendrimer-Derived Supported Bimetallics for Automotive Applications", Toyota Technical Center, 11/06-11/08.
- \$35,000 "Novel Bimetallic Catalysts for the Low Temperature Water Gas Shift Reaction", BASF AG (through the NSF I/UCRC on Fuel Cell Research), 1/07-12/07.
- \$165,000 "Development of New Heterogeneous Catalysts for NO_x Storage and Reduction (NSR)", NSF-CBET, 7/07-7/10.
- \$75,000 "Kinetic and FTIR Studies of the Mechanism of NO_x Reduction over FCC Additives", Grace-Davison, 3/08-3/09.
- \$128,281 "Development of a New Generation of Hydrotreating Catalysts: Effect of the Chelating Agent on the Sulfidation and Activity of Ni-MoS₂ Catalysts", UOP, 5/11-3/12.
- Co-Principal Investigator [Amounts correspond to MDA's funding]***
- \$91,193 "DOE/EPSCoR Research Implementation Plan" (PI: R.E. White), DOE, 10/97-9/01.
- \$51,000 "Optimization of the Cathode Long-Term Stability in Molten Carbonate Fuel Cells: Experimental Study and Mathematical Modeling" (PI: R.E. White), DOE-FETC, 10/99-9/02.
- \$39,500 "Investigation of Novel Heterogeneous Routes for the Synthesis of Pharmaceuticals" (PI: C.T. Williams), SC Commission on Higher Education, 1/00-12/00.
- \$12,500 "USC Center on Fuel Cell Research" (PI: J.W. Van Zee), University of South Carolina, Office of Vice Provost for Research, 1/02-5/02.
- \$280,208 "NIRT: Dendrimer-Stabilized Nanoparticles for Next-Generation Catalysts" (PI: H.J. Ploehn), NSF-Chemical and Transport Systems, 6/01-6/06.
- \$85,000 "Atomic Scale Design of a New Class of Alloy Catalysts for Reactions Involving Hydrogen" (PI: M. Mavrikakis, University of Wisconsin), DOE-Office of Energy Research, 10/05-9/08.
- \$45,000 "Characterization of Dendrimer-Derived Supported Rh Nanostructured Catalysts" (PI: C.T. Williams), Toyota Technical Center, 11/08-11/09.
- \$150,000 "Synthesis and Characterization of Dendrimer-Derived Ag-containing Catalysts" (PI: C.T. Williams), Toyota Technical Center, 1/10-3/12.
- \$90,500 "Synthesis and Characterization of Dendrimer-Derived Ag-containing Bimetallic Catalysts" (PI: C.T. Williams), Toyota Technical Center, 3/12-3/13.

Research Support – B. Applied Research and Testing

Principal Investigator

- \$6,600 "Catalyst/Sorbent Testing and Characterization", BASF, 11/95-5/96.
- \$174,986 "Evaluation of W.L. Gore's Proprietary Technology", W.L. Gore & Associates, 5/96-5/98.
- \$184,509 "Testing Program of W.L. Gore's Emission Control Technology", W.L. Gore & Associates, 5/98-1/01.
- \$21,610 "Literature Review of the Beneficial Reuse of Waste Carpet Fiber", Hazardous Waste Management Research Fund (HWMRF), 2/99-8/99.
- \$105,488 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 8/99-9/00.
- \$95,654 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 10/00-9/01.
- \$94,319 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 10/01-12/02.
- \$244,259 "Carbonyl Sulfide (COS) Removal from Propane", Gas Processors Association, 9/02-5/04.
- \$103,638 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/03-12/03.
- \$96,381 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/04-12/04.
- \$111,859 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/05-12/05.
- \$106,613 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/06-12/06.
- \$103,883 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/07-12/07.
- \$102,667 "Filamenotus Carbon from Waste Methane Streams: Process Development and Scale-Up", XL TechGroup, 12/06-5/08.
- \$105,107 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/08-12/08.
- \$119,182 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/09-12/09.
- \$134,602 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/10-12/10.
- \$172,493 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/11-12/11.
- \$144,937 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/12-12/12.
- \$162,659 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/13-12/13.
- \$162,659 "Parametric Studies of BASF's Purification Catalysts", BASF Corporation, 1/14-12/14.

Research Support – C. Educational Activities

Principal Investigator

- \$172,500 "Novel Materials for Power Sources", NSF-DMR REU Site, 5/98-4/01.
- \$208,638 "Novel Technologies in Pollution Prevention", NSF-EEC REU Site, 5/98-4/01.
- \$210,000 "Materials Research in Chemical Engineering", NSF-DMR REU Site, 5/01-4/04.
- \$513,584 "Novel Technologies for Pollution Prevention", NSF-EEC REU Site, 5/01-4/06.
- \$644,381 "Chemical Engineering Research in Japan", NSF-EEC/INT REU Site, 5/03-4/07.

Co-Principal Investigator [Amounts correspond to MDA's funding]

- \$96,000 "Plan to Increase the Number of Minority PhD's from the Department of Chemical Engineering at the University of South Carolina" (PI: F.A. Gadala-Maria), Sloan Foundation, 9/99-9/04.
- \$1,814,835 "The South East Alliance for Graduate Education and the Professorate (SEAGEP)", NSF AGEP, 5/05-6/11 (funds shown represent USC's funding; PI: H. Pastides – VP of Research –, as required by NSF-AGEP regulations; MDA was designated as Campus Director of the program).

Research Support – D. Equipment/Infrastructure

Principal Investigator

- \$19,150 "Upgrade of X-Ray Diffractometer", South Carolina Research Institute, 1/01-12/01.
- \$50,000 "Purchase of Chemisorption Equipment", USC Nanoscience Center, 9/01-12/01.
- \$3,000,000 "Center of Economic Excellence for Solid Oxide Fuel Cells", SC Research Centers of Economic Excellence/Endowed Professorships Program, 7/06-7/08.
- \$5,000,000 "Center of Economic Excellence for Strategic Environmental Approaches to Electricity Production from Coal", SC Research Centers of Economic Excellence/Endowed Professorships Program, 7/07-7/09.

Co-Principal Investigator [Amounts correspond to MDA's funding]

- \$2,547,075 "South Carolina 2004 Research Infrastructure Improvement Grant", NSF EPSCoR, 6/05-6/08 (funds shown represent USC's funding; MDA is the USC PI on the program).
- \$4,500,000 "South Carolina 2009 Research Infrastructure Improvement Grant; Advanced Tissue Biofabrication", NSF EPSCoR, 7/09-6/14 (funds shown represent USC's funding; MDA is the USC PI on the project).

Research Supervision

Postdoctoral Fellows [last known position; tenure-track academic positions underlined]

1. Dr. Tiejun Zhang (1995-96) [Merichem Co., Houston, TX]
2. Dr. Igor Yeskendirov (1996-98) [Oakwood Products Inc., Columbia, SC]
3. Dr. Slawomir Lomniski (1999-01) [Louisiana State University, Baton Rouge, LA]
4. Dr. Bert Chandler (1999-01) [Trinity University, San Antonio, TX]
5. Dr. Josemar de Moraes (1999-00) [Umicore, Sao Paulo, Brazil]
6. Dr. Zheng Liu (2001-2003) [Cummins R&D, Columbus, IN]
7. Dr. Oleg Alexeev (2002-2003) [University of South Carolina, Columbia, SC]
8. Dr. Gwendoline Lafaye (2002-2004; Lavoisier Fellow) [University of Poitiers, Poitiers, France]
9. Dr. Alexander Serykh (2005-2009) [Moscow State University, Moscow, Russia]
10. Dr. Florian Patcas (2006-2008) [Bayer R&D, Leverkusen, Germany]
11. Dr. Vasilios Komvokis (2009-2012) [BASF Refining Catalysts, Manchester, England]

Graduate Students (PhD) [last known position; tenure-track academic positions underlined]

1. Ken Roberts (PhD 1997) [North Carolina A&T State University, Greensboro, NC]
2. Sundaram Krishnamoorthy (PhD 1999) [Grace-Davison R&D, Columbia, MD]
3. Dinyar Captain (PhD 2000) [Shell R&D, Amsterdam, Netherlands]
4. Rita Aiello (PhD 2000) [Johnson Matthey Inc. R&D, Wayne, PA]
5. Vijayanand Rajagopalan (PhD 2001) [InterCat Inc. R&D, Savannah, GA]
6. Michele Drexler (PhD 2002) [Pfizer Development, Groton, CT]
7. Corina Mihut (PhD 2002) [Sabic R&D, Houston, TX]
8. Sirena Hargrove (PhD 2003; DoD Graduate Fellow; Ford Foundation Fellow) [Elon University, Elon, NC]
9. Janine Lichtenberger (PhD 2004) [UOP R&D, Des Plaines, IL]
10. Lorna Soto (PhD 2005; Sloan Foundation Fellow) [Shell R&D, Houston, TX]
11. Soo-Yin Chin (PhD 2005) [BASF AG R&D, Ludwigshafen, Germany]
12. Sam Deutsch (PhD 2006; Sloan Foundation Fellow; EPA Fellow) [ExxonMobil R&D, Houston, TX]
13. Su Yu (PhD 2007) [Chevron Phillips R&D, Houston, TX]
14. Attilio Siani (PhD 2007) [BASF AG R&D, Hannover, Germany]
15. Casey Hetrick (PhD 2008) [BP R&D, Naperville, IL]
16. Jose Cortez (PhD 2008; Sloan Foundation Fellow) [Savannah River National Laboratory, Aiken, SC]
17. Zahra Nazarpour (PhD 2011) [Catalytic Solutions R&D, Ventura, CA]
18. Karen Uffalussy (PhD 2012) [National Energy Technology Laboratory, Pittsburgh, PA]
19. Behnam Bahrami (PhD 2012) [Cummins R&D, Columbus, IN]
20. Chris DiGiulio (PhD 2013) [UOP R&D, Des Plaines, IL]
21. Artem Vityuk (PhD 2014) [BASF R&D, Iselin, NJ]
22. Elina Kyriakidou (PhD 2014; Greek Government IKY Fellow) [Oak Ridge National Lab, Oak Ridge, TN]
23. Konstantin Khivantsev (PhD expected 2015)
24. Fahad Almalki (PhD expected 2017; co-advised with Prof. Regalbuto)
25. Calvin Thomas (PhD expected 2017)

Graduate Students (MS/Diploma)

1. Platon Tsakiroglou (MS 1997)
2. Karoline Poplawski (Diplomarbeit 1999)
3. Janine Lichtenberger (Diplomarbeit 1999)
4. Yiyang Fan (MS 2000)
5. Irene Stafyla (MS 2006)

Undergraduate Students

A total of approximately 50 undergraduate students (25 of them were REU students from other Universities). Among them were students who won 1 Rhodes Scholarship, 5 NSF Graduate Fellowships, 3 Goldwater and 1 TBP Scholarships.

Teaching Experience

Chemical Process Principles, ECHE 300, University of South Carolina (1 semester).
Chemical Engineering Kinetics, ECHE 430, University of South Carolina (7 semesters).
Chemical Reactor Design, ECHE 730, University of South Carolina (7 semesters).
Heterogeneous Catalysis, ECHE 739, University of South Carolina (1 semester).
Environmental Catalysis, ECHE 739A, University of South Carolina (2 semesters).
Advanced Chemical Kinetics, ChE 642, Johns Hopkins University (1 semester).
Environmental Catalysis, Swiss Federal Institute of Technology (ETH-Zurich) (6-week minicourse).

Environmental Catalysis, University of Patras, Greece (1-week minicourse).

Administrative and Committee Duties

Regional and National Level

Southern Association of Colleges and Schools (SACS), Off-Site Reaffirmation Committee of 2014 Track B Institutions, 8/13-11/13

SEC Provosts Council, 8/09-Present.

SEC Engineering Deans Council, 9/06-8/09.

Visiting Committee, Department of Chemical and Biological Engineering, University of Wisconsin-Madison, 11/07-Present (Chair 2010).

Advisory Board, Department of Chemical and Biological Engineering, Tufts University, 1/09-Present.

City and State Level

Executive Committee, Columbia Fuel Cell Collaborative, 9/07-9/09.

Board of Trustees, South Carolina Governor's School for Science and Mathematics 9/09-Present.

Board of Trustees, Heathwood Hall Episcopal School, 8/10-7/13.

Advisory Board, Richland I School District, Health Sciences Magnet Program, 9/10-9/11.

University Level

Executive Council, University of South Carolina, 8/09-Present.

University Budget Update Group, University of South Carolina, 10/09-Present.

Board of Directors, University of South Carolina Research Foundation, 2/08-Present.

Board of Directors, Center for Clean Coal, University of South Carolina, 7/08-12/09.

Council of Academic Deans, University of South Carolina, 7/06-Present.

Chancellor Search Committee for Palmetto College (Chair), 5/12-1/13.

Provost Search Committee, University of South Carolina, 11/03-8/04.

Vice President for Research and Graduate Education Search Committee (Chair), 10/08-7/09.

Graduate Student Life Study Group, University of South Carolina (Chair), 6/08-12/08.

University Finance Committee, University of South Carolina, 4/08-8/09.

Capital Planning Committee, University of South Carolina (co-Chair), 8/09-Present.

Focus Carolina – Operating Resources Committee, University of South Carolina, 4/09-12/10.

Steering Committee for Biomedical Engineering, University of South Carolina (Chair), 2/05-7/06.

Faculty Development Leadership Committee, 9/07-6/08.

McNair Scholarships Selection Committee, University of South Carolina, 12/01-2/09.

NSF Graduate Fellowships Committee, University of South Carolina, 9/02-6/07.

Undergraduate Research Initiative, University of South Carolina, 12/03-1/05.

Environmental Advisory Committee, University of South Carolina, 8/99-8/00, 8/01-12/02.

College Level

Dean, College of Engineering and Computing, 7/06-8/09.

Executive Committee, College of Engineering and Computing, 8/02-8/09 (Chair 8/06-8/09).

Dean Search Committee, College of Engineering and Information Technology, 9/99-7/00.

Chair Search Committee, Department of Mechanical Engineering (Chair), 8/02-8/03.

ABET Accreditation Committee, College of Engineering and Information Technology, 10/04-10/05

Faculty Advisory Committee, College of Engineering, 2/98-9/99.

Research Advisory Committee, College of Engineering, 3/97-8/97.

Ad-hoc Committee to Review Machine Shop, College of Engineering and Information Technology, 4/03-8/03

Department Level

Department Chair, Department of Chemical Engineering, 8/02-7/06.

Graduate Director, Department of Chemical Engineering, 8/95-7/96.

AIChE Student Chapter Advisor, Department of Chemical Engineering, 9/94-7/96.

Chair Search Committee, Department of Chemical Engineering, 8/01-5/02.

Tenure and Promotion Committee, Department of Chemical Engineering, 8/99-8/02.

Faculty Search Committee, Department of Chemical Engineering, 11/95-5/97, 8/98-8/00, 8/01-8/02 (Chair 11/95-5/96).

Graduate Committee, Department of Chemical Engineering, 1/95-8/00, 8/01-8/02 (Chair 8/95-7/96).

Research Experience for Undergraduates Committee, Department of Chemical Engineering (Chair), 3/97-1/03.

Seminar Committee, Department of Chemical Engineering, 9/94-8/00 (Chair 9/94-8/95).

MICHAEL D. AMIRIDIS, Ph.D.

List of Publications

A. Peer-reviewed Publications in Archival Journals and Books (ISI h-index: 34)

1. S.A. Goddard, M.D. Amiridis, J.E. Rekoske, N. Cardona-Martinez, and J.A. Dumesic, "Kinetic Simulation of Heterogeneous Catalytic Processes: Ethane Hydrogenolysis over Supported Group VIII Metals", *Journal of Catalysis*, **117**(1), 155-169, (1989).
2. M.D. Amiridis, J.E. Rekoske, J.A. Dumesic, D.F. Rudd, N.D. Spencer, and C.J. Pereira, "Simulation of Methane Partial Oxidation over Silica-Supported MoO₃ and V₂O₅", *AIChE Journal*, **37**(1), 87-97, (1991).
3. R. Schmidt, M.D. Amiridis, J.A. Dumesic, L.M. Zelewski, and W.S. Millman, "In Situ Mossbauer Spectroscopy Studies of Fe-Y Zeolites for the Selective Catalytic Reduction of Nitric Oxide by Ammonia", *Journal of Physical Chemistry*, **96**(20), 8142-8149, (1992).
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B. Patents

1. "Compositions for Use in Catalytic Cracking to Make Reduced Sulfur Content Gasoline", U.S. Patent No. 6,036,847 (3/14/00); European Patent EP 0798362 A2 (1997) [with M.S. Ziebarth, R.H. Harding, and R.F. Wormsbecker].
2. "Hydrogen Production via the Direct Cracking of Hydrocarbons", European Patent EP 1060123/WO 9943608 (12/20/00) [with C.A. Bernales].
3. "Use of a Membrane Reactor for Hydrogen Production via the Direct Cracking of Hydrocarbons", European Patent EP 1066216/WO 9943610 (1/10/01) [with C.A. Bernales and T. Zhang].
4. "Supported Catalysts with Controlled Metal Cluster Size", U.S. Patent No. 7,582,586 (1/1/09); [with P.T. Fanson, H. Hirata, C.T. Williams, D.S. Deutsch, A. Siani and S. Matsumoto].

C. Conference Proceedings and Non-refereed Publications

1. M.D. Amiridis, B.K. Na and E.I. Ko, "Selective Catalytic Reduction of NO by NH₃ over Aerogels of Titania, Silica and Vanadia", *Preprints - American Chemical Society, Division of Petroleum Chemistry*, **39**, 116-120 (1994).
2. M.D. Amiridis and F. Gadala Maria, "Chemical Engineering at The University of South Carolina", *Chemical Engineering Education*, **30**(1), 2, (1996).

3. M.D. Amiridis, D.K. Captain, K.L. Roberts, and J.A. Dumesic, "Kinetic and In-situ FTIR Studies of the Selective Catalytic Reduction of NO by Propylene over Supported Pt Catalysts", *Preprints - American Chemical Society, Division of Petroleum Chemistry*, **42**, 851-854 (1997).
4. V. Rajagopalan and M.D. Amiridis, "Novel Perovskite Based Sorbents for Hot Coal Gas Desulfurization", *Proceedings AIChE Topical Conference on Pollution Prevention and Environmental Risk Reduction*, 450-456, (1998).
5. S. Krishnamoorthy and M.D. Amiridis, "Use of V₂O₅/TiO₂-based Catalysts for Emission Control Applications", *Proceedings 4th International Conference on the Protection and Restoration of the Environment*, 469-475, (1998).
6. D.K. Captain, C. Mihut and M.D. Amiridis, "Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", *Proceedings 5th International Conference on the Protection and Restoration of the Environment*, 1007-1014, (2000).
7. M.T. Drexler and M.D. Amiridis, "Solvent Effects on the Heterogeneous Synthesis of Flavanone over MgO", *Proceedings AIChE Topical Conference on Pharmaceuticals & Biotechnology*, 322-328, (2001).
8. J. Lichtenberger and M.D. Amiridis, "Catalytic Destruction of Chlorinated Aromatics over V₂O₅/TiO₂ Catalysts", *Proceedings 6th International Conference on the Protection and Restoration of the Environment*, 1057-1063, (2002).
9. S. Yu and M.D. Amiridis, "In situ FTIR Studies of NO_x Storage Reduction Catalysts", *Proceedings 7th International Conference on the Protection and Restoration of the Environment*, XV3 1-8, (2004).
10. D. Deutsch, A. Siani, O. Alexeev, C. Williams and M.D. Amiridis, "Development of Supported Catalysts from Metal-Dendrimer Nanocomposite Precursors", *Proceedings 4th Chemical Engineering Conference for Collaborative Research in Mediterranean Countries*, 235-238, (2006).

MICHAEL D. AMIRIDIS, Ph.D.

List of Presentations

A. Invited Seminars

Academic

1. "Ethane Hydrogenolysis; An Old Reaction Revisited", Aristotelian University of Thessaloniki, Department of Chemical Engineering, Thessaloniki, Greece, June 1988.
2. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", Swiss Federal Institute of Technology (ETH), Department of Materials Science, Zurich, Switzerland, December 1993.
3. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", University of Cincinnati, Department of Chemical Engineering, Cincinnati, OH, January 1994.
4. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", University of Massachusetts, Department of Chemical Engineering, Amherst, MA, March 1994.
5. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", Imperial College, Department of Chemical Engineering, London, England, April 1994.
6. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", University of South Carolina, Department of Chemical Engineering, Columbia, SC, May 1994.
7. "Environmental Catalysis: An Emerging Field", Winthrop University, Department of Chemistry, Rock Hill, SC, October 1996.
8. "Use of V_2O_5/TiO_2 -Based Catalysts for Emission Control Applications", University of South Carolina, Department of Chemistry, Columbia, SC, February 1997.
9. "Use of V_2O_5/TiO_2 -Based Catalysts for Emission Control Applications", North Carolina A&T State University, Department of Chemical Engineering, Greensboro, NC, February 1997.
10. "Environmental Catalysis: An Emerging Field", University of Patras, Department of Chemical Engineering, Patras, Greece, January 1998.
11. "Environmental Catalysis: An Emerging Field", Swiss Federal Institute of Technology (EPFL), Department of Chemistry, Lausanne, Switzerland, January 1998.
12. "Emission Control Applications of Heterogeneous Catalysis", North Carolina State University, Department of Chemical Engineering, Raleigh, NC, October 1998.
13. "Use of Supported Transition Metal Oxides for Emission Control Applications", Lehigh University, Zettlemoyer Center for Surface Studies, Bethlehem, PA, November 1999.
14. "The Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", Lehigh University, Department of Chemical Engineering, Bethlehem, PA, November 1999.
15. "The Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", Technical University of Munich, Faculty of Mechanical Engineering, Garhing, Germany, September 2000.
16. "The Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", University of Poitiers, Department of Chemistry, Poitiers, France, November 2000.
17. "Hydrogen Production for Fuel Cells: An Alternative Approach", University of Poitiers, Department of Chemistry, Poitiers, France, December 2000.
18. "Environmental Catalysis: Opportunities and Challenges", Delft University of Technology, Department of Chemical Technology, Delft, Netherlands, December 2000.
19. "The Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", Technical University of Eindhoven, Department of Chemical Engineering, Eindhoven, Netherlands, December 2000.
20. "The Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", Aristotelian University of Thessaloniki, Process Engineering Research Institute, Thessaloniki, Greece, December 2000.

21. "Emission Control Applications of Vanadia/Titania Based Catalysts", Swiss Federal Institute of Technology (ETH), Department of Process Engineering, Zurich, Switzerland, April 2001.
22. "Production of Hydrogen for Fuel Cell Applications", Swiss Federal Institute of Technology (EPFL), Department of Chemistry, Lausanne, Switzerland, May 2001.
23. "Environmental Catalysis: Challenges and Opportunities", Democritian University of Thrace, Department of Environmental Engineering, Xanthi, Greece, May 2003.
24. "Bimetallic Nanostructures: Challenges and Opportunities for Applications in Heterogeneous Catalysis", University of Virginia, Department of Chemical Engineering, Charlottesville, VA, October 2003.
25. "Bimetallic Nanostructures: Challenges and Opportunities for Applications in Heterogeneous Catalysis", University of Osaka, Division of Chemical Engineering, Osaka, Japan, December 2003.
26. "Bimetallic Nanostructures: Challenges and Opportunities for Applications in Heterogeneous Catalysis", Clemson University, Department of Chemical Engineering, Clemson, SC, February 2004.
27. "Bimetallic Nanostructures: Challenges and Opportunities for Applications in Heterogeneous Catalysis", UCLA, Department of Chemical Engineering, Los Angeles, CA, October 2004.
28. "Bimetallic Nanostructures: Challenges and Opportunities for Applications in Heterogeneous Catalysis", University of Houston, Department of Chemical Engineering, Houston, TX, November 2004.
29. "Bimetallic Nanostructures: Synthetic Challenges and Catalytic Opportunities", Swiss Federal Institute of Technology (EPFL), Department of Chemistry, Lausanne, Switzerland, November 2005.
30. "Chemical Engineering in the 21st Century", University of Osaka, Division of Chemical Engineering, Osaka, Japan, December 2005.
31. "Large Scale "Designer" Catalysts: Using Molecular Blocks to Construct Active Ensembles", Tufts University, Department of Chemical and Biological Engineering, Boston, MA, May 2008.
32. ""Designer" Catalysts: Using Molecular Blocks to Construct Active Ensembles", National Taiwan University, Department of Chemical Engineering, Taipei, Taiwan, October 2008.
33. "An Environmentally-Conscious Sustainable University", University of Aruba, Oranjestad, Aruba, March 2012.
34. ""Designer" Catalysts: From Molecular Building Blocks to Active Catalytic Sites and Ensembles", University of Wisconsin-Madison, Department of Chemical Engineering (W. Robert Marshall Founders' Lecture), Madison, WI, September 2014.

Industrial

35. "Ethane Hydrogenolysis; An Old Reaction Revisited", W.R. Grace & Co., Columbia, MD, February 1990.
36. "Ethane Hydrogenolysis; An Old Reaction Revisited", Chevron Research Co., Richmond, CA, February 1990.
37. "Ethane Hydrogenolysis; An Old Reaction Revisited", Occidental Chemical Corporation, Grand Island, NY, March 1990.
38. "Ethane Hydrogenolysis; An Old Reaction Revisited", Shell Research Co., Houston, TX, March 1990.
39. "Ethane Hydrogenolysis; An Old Reaction Revisited", Mobil R&D Corporation, Paulsboro, NJ April 1990.
40. "Ethane Hydrogenolysis; An Old Reaction Revisited", Merck & Co., Rahway, NJ, April 1990.
41. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of Nitric Oxide by Ammonia over Vanadium Oxide Catalysts", Johnson Matthey Inc., Wayne, PA, May 1994.
42. "Overview of NO_x Removal from Stationary Sources", W.L. Gore & Associates, Elkton, MD, August 1994.
43. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of NO by NH₃ over Vanadium-Titanium Catalysts", Roche Carolina Inc. 2nd Annual Symposium, Florence, SC, May 1995.
44. "Fundamental Investigation of SCR over Vanadia/Titania Catalysts", W.L. Gore & Associates, Elkton, MD, September 1995.
45. "Control of Chlorinated Air Toxic Compounds over Vanadia/Titania Catalysts", W.L. Gore & Associates, Elkton, MD, November 1998.
46. "Hydrogen Production via the Direct Cracking of Hydrocarbons", UOP, Des Plaines, IL, January 1999.
47. "Hydrogen Production via the Direct Cracking of Methane", BASF AG, Ludwigshafen, Germany, September 2000.
48. "Catalytic Destruction of 2,4,6-Trichlorophenol over Vanadia/Titania Catalysts", W.L. Gore & Associates, Elkton, MD, November 2000.

49. "The Selective Catalytic Reduction of NO by Hydrocarbons: From Mechanisms to "Designer" Catalysts", BASF AG, Ludwigshafen, Germany, November 2001.
50. "COS and AsH₃ Removal from Propane/Propylene Streams", BASF AG, Ludwigshafen, Germany, May 2003.
51. "Mechanistic Studies of the Selective Catalytic Reduction of NO by Propylene over Supported Pt Catalysts", Grace-Davison, Columbia, MD, January 2004.
52. "Hydrogen Production via the Direct Cracking of Methane", XL Tech Group, Melbourne, FL, December 2005.

B. Technical Meetings

Keynote/Invited Speaker

1. "Catalysts for VOC Control: Challenges and Opportunities", 4th International Conference on Advanced Materials, Cancun, Mexico, August 1995 (invited speaker).
2. "Catalytic Solutions to Emission Control Problems", Spring Symposium, The Catalysis Club of Philadelphia, Newark, DE, May 1998 (invited speaker).
3. "Environmental Catalysis: Opportunities and Challenges", Annual Regional Meeting (Central and East Central Regions) of Societe Francaise de Chimie, Poitiers, France, January 2001 (keynote speaker).
4. "The Selective Catalytic Reduction of NO by Hydrocarbons: From Mechanisms to "Designer" Catalysts", 2nd Eastern Mediterranean Chemical Engineering Conference, Ankara, Turkey, May 2001 (invited speaker).
5. "Selective Catalytic Reduction of NO by Propylene over Noble Metal Catalysts", 223rd ACS National Meeting, Orlando, FL, April 2002 (invited speaker).
6. "Kinetic and Characterization Studies of Supported Pt-Au Cluster-Derived Catalysts", 77th ACS Colloid and Surface Science Symposium, Atlanta, GA, June 2003 (invited speaker).
7. "Cluster-Derived Supported Bimetallic Catalysts", 55th Southeast Regional ACS Meeting, Atlanta, GA, November 2003 (invited speaker).
8. "Development of Supported Catalysts from Metal-Dendrimer Nanocomposite Precursors", 4th Eastern Mediterranean Chemical Engineering Conference, Dead Sea, Israel, January 2006 (invited speaker).
9. "Synthesis and Characterization of Supported Metal Catalysts Derived from Metal-Dendrimer Nanocomposites", 231st ACS National Meeting, Atlanta, GA, March 2006 (invited speaker).
10. "Synthesis and Characterization of Supported Bimetallic Catalysts Derived from Organometallic Cluster Precursors", 231st ACS National Meeting, Atlanta, GA, March 2006 (invited speaker).
11. "PAMAM Dendrimers as Templates for the Preparation of Supported Pt and Rh Catalysts", International Symposium on Hydrocarbon Catalysis and Catalytic Engineering: Present Status and Perspectives, in honor of Professor Iacovos A. Vasalos, Sifnos, Greece, June 2007 (invited speaker).
12. "Synthesis of Cluster-Derived Supported Catalysts", 235th ACS National Meeting, New Orleans, LA, April 2008 (invited speaker).
13. "Governance of US Universities", US-Greece University Rectors Meeting, Washington, DC, January 2011 (invited speaker).
14. "Dendrimer-Mediated Synthesis of Supported Rh and Pt Catalysts: Challenges and Solutions", 243th ACS National Meeting, San Diego, CA, March 2012 (invited speaker).
15. "Exploring the Reactivity of Zeolite-Supported Rh complexes", 244th ACS National Meeting, Philadelphia, PA, August 2012 (invited speaker).
16. "Exploring ""Designer" Catalysts: From Molecular Building Blocks to Active Catalytic Sites and Ensembles", 13th Panhellenic Symposium on Catalysis, Agios Athanasio Pellas, Greece, October 2014 (keynote speaker).

Speaker

17. "Selective Catalytic Reduction of Nitric Oxide by Ammonia over Fe-Y Zeolites", 202th ACS National Meeting, New York, NY, August 1991.
18. "Selective Catalytic Reduction of Nitric Oxide by Ammonia over Fe-Y Zeolites", 1991 Annual AIChE Meeting, Los Angeles, CA, November 1991.
19. "Structure-Reactivity Relationships for the Selective Catalytic Reduction of NO by NH₃ over Vanadia/Titania Catalysts", 14th North American Catalysis Society Meeting, Snowbird, UT, June 1995.

20. "Kinetic Studies of the Selective Catalytic Reduction of NO by Hydrocarbons over Supported Pt Catalysts", 1995 Annual AIChE Meeting, Miami Beach, FL, November 1995.
21. "Kinetic and In-situ FTIR Studies of the Selective Catalytic Reduction of NO by Propylene over Supported Pt Catalysts", 214th ACS National Meeting, Las Vegas, NV, September 1997.
22. "Kinetic and Infrared Spectroscopic Investigation of 1,2-Dichlorobenzene Oxidation over Vanadia-Based Catalysts", 215th ACS National Meeting, Dallas, TX, April 1998.
23. "Use of V₂O₅/TiO₂-Based Catalysts for Emission Control Applications", 4th International Conference on the Protection and Restoration of the Environment, Sani, Greece, July 1998.
24. "Kinetic and Spectroscopic Investigation of the Catalytic Oxidation of 1,2-Dichlorobenzene over Vanadia-Based Catalysts", 2nd World Congress on Environmental Catalysis, Miami Beach, FL, November 1998.
25. "Hydrogen Production via the Direct Cracking of Methane", 18th Interamerican Congress of Chemical Engineering, San Juan, Puerto Rico, December 1998.
26. "Catalytic Oxidation of 1,2-dichlorobenzene over Transition Metal Oxide Catalysts", 18th Interamerican Congress of Chemical Engineering, San Juan, Puerto Rico, December 1998.
27. "Catalytic Solutions to Emission Control Problems" (poster), NSF CAREER PI Meeting, Washington, DC, January 1999.
28. "Kinetic and In-situ FTIR Studies of the Selective Catalytic Reduction of NO by Propylene over Supported Pt Catalysts", 16th North American Catalysis Society Meeting, Boston, MA, June 1999.
29. "The Catalytic Oxidation of 1,2-dichlorobenzene over Supported Transition Metal Oxide Catalysts", 1999 Annual AIChE Meeting, Dallas, TX, November 1999.
30. "Catalytic Oxidation of 1,2-dichlorobenzene over Perovskite-Based Catalysts" (poster), 1999 Annual AIChE Meeting, Dallas, TX, November 1999.
31. "Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts", 5th International Conference on the Protection and Restoration of the Environment, Thasos, Greece, July 2000.
32. "On the Mechanism of the Selective Catalytic Reduction of Nitric Oxide over Supported Platinum Catalysts" (poster), 12th International Congress of Catalysis, Granada, Spain, July 2000.
33. "The Selective Catalytic Reduction of NO by Propylene over Supported Platinum Catalysts", 11th DOE/BES Heterogeneous Catalysis and Surface Science Meeting, Rockville, MD, August 2000.
34. "The Selective Catalytic Reduction of NO by Hydrocarbons: From Mechanisms to "Designer" Catalysts", 2002 Symposium of the Southeastern Catalysis Society, Clemson, SC, May 2002.
35. "Catalytic Destruction of Chlorinated Aromatics over V₂O₅/TiO₂ Catalysts", 6th International Conference on the Protection and Restoration of the Environment, Skiathos, Greece, July 2002.
36. "Synthesis and Characterization of Bimetallic Pt-Au Cluster-Derived Catalysts", Gold 2003, Vancouver, Canada, September 2003.
37. "Mechanistic Investigation of NO_x Storage Reduction (NSR) Catalysts", 7th International Conference on the Protection and Restoration of the Environment, Mykonos, Greece, July 2004.
38. "Dendrimer-Based Routes to Metallic Nanoparticles for Next-Generation Catalysts and Reactor Systems", 2004 Annual AIChE Meeting, Austin, TX, November 2004.
39. "Cluster-Derived Gold Catalysts for the Low Temperature Oxidation of CO", 2004 Annual AIChE Meeting, Austin, TX, November 2004.
40. "In-situ FTIR Studies of the Mechanism of NO_x Storage and Reduction on Pt/Ba/Al₂O₃ Catalysts", 2004 Annual AIChE Meeting, Austin, TX, November 2004.
41. "Catalytic Oxidation of o-Chlorobenzene over V₂O₅/TiO₂", 2005 Annual AIChE Meeting, Cincinnati, OH, November 2005.
42. "PAMAM Dendrimers as Templates for the Preparation of Supported Pt and Rh Catalysts", 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
43. "PAMAM Dendrimers as Templates for the Preparation of Pt and Rh Clusters in Solutions and on Supports", 14th International Congress of Catalysis, Seoul, South Korea, July 2008.

Senior Author

44. "Deactivation and Subsequent Regeneration of Silica-Supported Nickel Catalysts During Methane Cracking", 211th ACS National Meeting, New Orleans, LA, March 1996.

45. "Kinetic Studies of the Catalytic Oxidation of 1,2-Dichlorobenzene Over Vanadia-Based Catalysts", 1996 Annual AIChE Meeting, Chicago, IL, November 1996.
46. "A Kinetic Investigation of the Selective Catalytic Reduction of NO_x by Propylene Over Supported Pt Catalysts", 1996 Annual AIChE Meeting, Chicago, IL, November 1996.
47. "In-situ FTIR Studies of the Selective Catalytic Reduction of NO by Propylene Over Supported Pt Catalysts", 1996 Annual AIChE Meeting, Chicago, IL, November 1996.
48. "The Selective Catalytic Reduction of NO by Propylene over Pt/Al₂O₃ and Pt/SiO₂", National Conference on Environmental Remediation Science and Technology, Greensboro, NC, September 1998.
49. "Kinetic and In-situ FTIR Studies of the Catalytic Oxidation of 1,2-Dichlorobenzene over Vanadia-Based Catalysts", National Conference on Environmental Remediation Science and Technology, Greensboro, NC, September 1998.
50. "The Selective Catalytic Reduction of NO by Propylene over Pt/Al₂O₃ and Pt/SiO₂: An In-situ FTIR Investigation" (poster), 2nd World Congress on Environmental Catalysis, Miami Beach, FL, November 1998.
51. "Novel Perovskite-based Sorbents for Hot Coal Gas Desulfurization", 1998 Annual AIChE Meeting, Miami Beach, FL, November 1998.
52. "Catalytic Oxidation of 1,2-Dichlorobenzene over Supported Transition Metal Oxides" (poster), 16th North American Catalysis Society Meeting, Boston, MA, June 1999.
53. "Catalytic Destruction of Polychlorinated Organics over Commercial SCR Catalysts" (poster), Dioxin 99 – 19th International Symposium on Halogenated Environmental Pollutants and POPs, Venice, Italy, September 1999.
54. "Recycling of Waste Carpet Fibers" (poster), 8th South Carolina Environmental Symposium, Pawleys Island, SC, October 1999.
55. "Selective Catalytic Reduction of Nitrogen Oxides by Propylene over Supported Pt Catalysts", 1999 Annual AIChE Meeting, Dallas, TX, November 1999.
56. "Heterogeneous Synthesis of Flavanone over MgO" (poster), 18th Conference on Catalysis of Organic Reactions, Charleston, SC, May 2000.
57. "On the Mechanism of the Catalytic Oxidation of Chlorinated Aromatic Compounds over Supported Metal Oxide Catalysts", 220th ACS National Meeting, Washington, DC, August 2000.
58. "Supported Pt-Au Cluster-Derived Catalysts for the Selective Catalytic Reduction of Nitric Oxide by Propylene", 2000 Annual AIChE Meeting, Los Angeles, CA, November 2000.
59. "The Heterogeneous Catalytic Synthesis of Flavanone", 2000 Annual AIChE Meeting, Los Angeles, CA, November 2000.
60. "Hydrogen Production from the Direct Cracking of Methane", 2000 Annual AIChE Meeting, Los Angeles, CA, November 2000.
61. "Supported Pt-Au Cluster-Derived Catalysts for the Selective Catalytic Reduction of Nitrogen Oxides by Propylene", 17th North American Catalysis Society Meeting, Toronto, Canada, June 2001.
62. "Kinetic Study of the Synthesis of Flavanones over MgO", 17th North American Catalysis Society Meeting, Toronto, Canada, June 2001.
63. "Catalytic Oxidation of Chlorinated Aromatics over V₂O₅/TiO₂ Catalysts", 2001 Annual AIChE Meeting, Reno, NV, November 2001.
64. "Kinetic and Characterization Studies of Supported Pt-Au Cluster-Derived Catalysts", 2001 Annual AIChE Meeting, Reno, NV, November 2001.
65. "Solvent Effects on the Heterogeneous Synthesis of Flavanone over MgO", 2001 Annual AIChE Meeting, Reno, NV, November 2001.
66. "Catalytic Oxidation of Chlorinated Aromatics over V₂O₅/TiO₂ Catalysts", 223rd ACS National Meeting, Orlando, FL, April 2002.
67. "Catalytic Oxidation of Chlorinated Hydrocarbons over V₂O₅/TiO₂ Catalysts" (poster), 2002 Symposium of the Southeastern Catalysis Society, Clemson, SC, May 2002.
68. "Production of Hydrogen via the Catalytic Decomposition of Ethane over Ni/SiO₂" (poster), 2002 Symposium of the Southeastern Catalysis Society, Clemson, SC, May 2002.
69. "Synthesis and Characterization of Gold Nanocatalysts" (poster), 2002 Fall Symposium of the Southeastern Catalysis Society, Asheville, NC, September 2002.
70. "Heterogeneous Catalytic Synthesis of Substituted Flavanones" (poster), 2002 Fall Symposium of the Southeastern Catalysis Society, Asheville, NC, September 2002.

71. "Dendrimer-Stabilized Nanoparticles for Next Generation Catalysts" (poster), 2002 Fall Symposium of the Southeastern Catalysis Society, Asheville, NC, September 2002.
72. "Heterogeneous Catalytic Synthesis of Substituted Flavanones", 2002 Annual AIChE Meeting, Indianapolis, IN, November 2002.
73. "Dendrimer-Stabilized Nanoparticles for Next Generation Catalysts", 2002 Annual AIChE Meeting, Indianapolis, IN, November 2002.
74. "FTIR Characterization Studies of Alumina Supported Bimetallic Rh-Ge Catalysts Prepared by Surface Redox Reactions", 2002 Annual AIChE Meeting, Indianapolis, IN, November 2002.
75. "Catalytic Oxidation of Chlorinated Hydrocarbons over V_2O_5/TiO_2 Catalysts", 18th North American Catalysis Society Meeting, Cancun, Mexico, June 2003.
76. "Catalytic Oxidation of Chlorinated Hydrocarbons over V_2O_5/TiO_2 Catalysts", 77th ACS Colloid and Surface Science Symposium, Atlanta, GA, June 2003.
77. "Synthesis and Characterization of Dendrimer-Derived Monometallic Ru and Bimetallic Pt-Ru Catalysts", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2003.
78. "FT-IRRAS Spectroscopic Studies of Molecular Recognition of Proteins on Dendrimer-Containing SAMs", 2003 Annual AIChE Meeting, San Francisco, CA, November 2003.
79. "Deactivation Effects Observed During the Catalytic Oxidation of Chlorinated Hydrocarbons over V_2O_5/TiO_2 Catalysts", 2003 Annual AIChE Meeting, San Francisco, CA, November 2003.
80. "Substitution Effects in the Heterogeneous Catalytic Synthesis of Flavanones", 2003 Annual AIChE Meeting, San Francisco, CA, November 2003.
81. "Synthesis and Characterization of Dendrimer-Derived Bimetallic Pt-Ru Catalysts", 2003 Annual AIChE Meeting, San Francisco, CA, November 2003.
82. "Synthesis and Characterization of Dendrimer-Derived Bimetallic Pt-Sn Catalysts" (poster), 2003 Annual AIChE Meeting, San Francisco, CA, November 2003.
83. "Investigation of Chlorine Substitution Effects in the Claisen-Schmidt Condensation of 2'-hydroxyacetophenone with Chlorobenzaldehydes over MgO" (poster), 20th Conference on Catalysis of Organic Reactions, Hilton Head, SC, March 2004.
84. "Novel PtAu Nanoclusters as CO Tolerant PEMFC Anodes" (poster), 205th ECS Meeting, San Antonio, TX, May 2004.
85. "Metal-support Interactions on the Catalytic Activity of Pt for the Oxidation of CO in the Presence and Absence of H_2 ", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2004.
86. "Synthesis and Characterization of Dendrimer-Derived Bimetallic Pt-Ru and Pt-Sn Catalysts", 2004 Annual AIChE Meeting, Austin, TX, November 2004.
87. "Selective Oxidation of CO under Excess H_2 Conditions over Ru Catalysts", 2004 Annual AIChE Meeting, Austin, TX, November 2004.
88. "Dendrimer-Stabilized Nanoparticles for Advanced Catalyst Synthesis", 19th North American Catalysis Society Meeting, Philadelphia, PA, May 2005.
89. "Selective Oxidation of CO under Excess H_2 Conditions over Ru-based Catalysts", 19th North American Catalysis Society Meeting, Philadelphia, PA, May 2005.
90. "The Effect of the Support on the Catalytic Properties of Pt for the Oxidation of CO in the Presence and Absence of H_2 " (poster), 19th North American Catalysis Society Meeting, Philadelphia, PA, May 2005.
91. "Characterization of Dendrimer-Derived Supported Metal Nanoparticles", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2005.
92. "Mechanistic Investigation of Nitrogen Oxide Storage Reduction (NSR) Catalysts", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2005.
93. "Synthesis and Characterization of Pt Clusters in Aqueous Solutions and on a $\gamma-Al_2O_3$ Surface" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2005.
94. "Characterization of Dendrimer-Derived Supported Metal Nanoparticles", 2005 Annual AIChE Meeting, Cincinnati, OH, November 2005.
95. "Oxidation of o-Chlorophenol over V_2O_5/TiO_2 Catalysts", 2006 Annual Meeting of the Chemical Society of Japan, Funabashi, Japan, March 2006.
96. "EXAFS Characterization of Pt/Dendrimer Nanocomposites Used for the Preparation of Pt/ Al_2O_3 Catalysts" (poster), 13th International Conference on X-Ray Absorption Fine Structure, Stanford, CA, July 2006.

97. "EXAFS Characterization of Pt-Dendrimer Nanocomposites Used for the Preparation of Pt/ γ -Al₂O₃ Catalysts", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2006.
98. "Improved CO Oxidation Activity in the Presence of Hydrogen over Pt-Fe/SiO₂ Catalysts" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2006.
99. "Kinetic Characterization of Pt-Ru-Sn Cluster-Derived Catalysts Using an α,β -unsaturated Aldehyde Probe Reactions" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2006.
100. "Effect of Basic Properties of MgO on the Heterogeneous Synthesis of Flavanone" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2006.
101. "Benzene Oxidation to Phenol Using Vanadium Oxide Supported on α -Zirconium Phosphate" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2006.
102. "Mechanistic Investigation of NSR Catalysts", 2006 Annual AIChE Meeting, San Francisco, CA, November 2006.
103. "EXAFS Characterization of Pt-Dendrimer Nanocomposites Used for the Preparation of Pt/Al₂O₃ Catalysts", 2006 Annual AIChE Meeting, San Francisco, CA, November 2006.
104. "Improved CO Oxidation Activity in the Presence and Absence of Hydrogen over Cluster-Derived PtFe/SiO₂ Catalysts", 2006 Annual AIChE Meeting, San Francisco, CA, November 2006.
105. "Support Effects on the Catalytic Decomposition of N₂O to N₂ over Supported CuO Catalysts", 2006 Annual AIChE Meeting, San Francisco, CA, November 2006.
106. "Heterogeneous Synthesis of Flavanone over Lithium-Promoted MgO", 2006 Annual AIChE Meeting, San Francisco, CA, November 2006.
107. "Structure and Reactivity of Model Cluster-Derived PtFe/SiO₂ Catalysts", 233rd ACS National Meeting, Chicago, IL, March 2007.
108. "Structure and Reactivity of Cluster-Derived PtFe/SiO₂ Catalysts", 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
109. "Investigation of NO_x Reduction over Pd-Based FCC Additives Using In-situ FTIR", 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
110. "Formation and Thermal Stability of Ni⁺ Cations in Ni-ZSM-5" (poster), 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
111. "Influence of Steam on the Destructive Oxidation of m-Dichlorobenzene over V₂O₅/TiO₂ Catalysts" (poster), 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
112. "Nature of Active Sites in MgO Catalysts for the Synthesis of Flavanone" (poster), 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
113. "Kinetic Characterization of Multimetallic Cluster-Derived Catalysts Used for the Selective Hydrogenation of Citral", 2007 Annual AIChE Meeting, Salt Lake City, UT, November 2007.
114. "Nature of the Active Sites in Lithium-Doped Magnesia Catalysts and their Role in the Synthesis of Flavanone", 2007 Annual AIChE Meeting, Salt Lake City, UT, November 2007.
115. "Catalytic Oxidation of Chlorinated Aromatics over V₂O₅/TiO₂ Catalysts in the Presence of Steam", 2007 Annual AIChE Meeting, Salt Lake City, UT, November 2007.
116. "New Spectroscopic Evidence for the Formation of Gallium Hydrides in Supported Gallium Oxide Catalysts" (poster), 2007 Annual AIChE Meeting, Salt Lake City, UT, November 2007.
117. "Synthesis and characterization of Cluster-Derived PtFe/SiO₂ Catalysts" (poster), 14th International Congress of Catalysis, Seoul, South Korea, July 2008.
118. "Effect of Li modification on the activity of MgO for the synthesis of falvanone", 2008 Annual AIChE Meeting, Philadelphia, PA, November 2008.
119. "Kinetic Characterization of Multimetallic Cluster-Derived Catalysts Used for the Selective Hydrogenation of Citral", 2008 Annual AIChE Meeting, Philadelphia, PA, November 2008.
120. "Synthesis and Characterization of Subnanometer-Sized Rh Particles on ZrO₂", 2008 Annual AIChE Meeting, Philadelphia, PA, November 2008.
121. "The role of Ammonia in NO_x Reduction over Pd-based FCC CO/NO_x Control Additives: Kinetic and FTIR Characterization", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2009.
122. "Preparation and Quantitative Analysis of PAMAM-Stabilized Metal Nanoparticles: Effect of Dialysis and pH Adjustment" (poster), Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2010.

123. "The Use of Oxygen Plasma in the Activation of Dendrimer-Derived Pt Catalysts", 2010 Annual AIChE Meeting, Salt Lake City, UT, November 2010.
124. "NH₃ Interactions with O₂ over Noble Metal Based FCC CO Emission Control Additives", 2010 Annual AIChE Meeting, Salt Lake City, UT, November 2010.
125. "Preparation of M-G4OH Nanocomposites in Aqueous Solution: Effect of Dialysis and pH Adjustment" (poster), 22th North American Catalysis Society Meeting, Detroit, MI, June 2011.
126. "The Role of Isocyanates in the Reduction of NO_x over Model NSR Catalysts: An *In Situ* FTIR Study", 22th North American Catalysis Society Meeting, Detroit, MI, June 2011.
127. "Reactivity and Structural Properties of HY-Supported Rhodium Complexes" (poster), 22th North American Catalysis Society Meeting, Detroit, MI, June 2011.
128. "Investigation of NO_x Formation and Reduction over Noble Metal-Based FCC CO Emission Control Additives", 22th North American Catalysis Society Meeting, Detroit, MI, June 2011.
129. "New Nanostructured Heterogeneous Catalysts with Increased Selectivity and Stability", 22th North American Catalysis Society Meeting, Detroit, MI, June 2011.
130. "Preparation of M-G4OH Nanocomposites in Aqueous Solution: Effect of Dialysis and pH Adjustment" (award winning poster), 7th International Dendrimer Symposium, Gaithersburg, MD, June 2011.
131. "NO_x Reduction by CO over Noble Metal-Based FCC CO Emission Control Additives", 2011 Annual AIChE Meeting, Minneapolis, MN, October 2011.
132. "Preparation and Quantitative Analysis of PAMAM-Stabilized Metal Ions in Aqueous Solutions: Effect of pH and Dialysis", 2012 Annual AIChE Meeting, Pittsburgh, PA, October 2012.
133. "NO_x Reduction and Ammonia Generation over Three-Way Catalysts and LNTs for Use in Lean Gasoline Vehicles Equipped with SCR", 2012 Annual AIChE Meeting, Pittsburgh, PA, October 2012.
134. "Chemical Characterization of Pt-Ru-Sn Multimetallic Catalysts", 2012 Annual AIChE Meeting, Pittsburgh, PA, October 2012.
135. "Investigation of Ag Diammine Impregnation on Low/High PZC Oxides and Carbon Supports Using Strong Electrostatic Adsorption" (poster), 2012 Annual AIChE Meeting, Pittsburgh, PA, October 2012.
136. "Exploring the Reactivity of Zeolite-Supported Rh Complexes", 2012 Annual AIChE Meeting, Pittsburgh, PA, October 2012.
137. "Ag Diammine Impregnation on Oxides/Oxidized Carbon Using Strong Electrostatic Adsorption", 23rd North American Catalysis Society Meeting, Louisville, KY, June 2013.
138. "Preparation and Quantitative Analysis of Dendrimer-Stabilized Au Nanoparticles" (poster), 23rd North American Catalysis Society Meeting, Louisville, KY, June 2013.
139. "Synthesis and Characterization of HY Zeolite-Supported Rhodium Carbonyl Hydride Complexes" (poster), 23rd North American Catalysis Society Meeting, Louisville, KY, June 2013.
140. "Understanding NH₃ Formation over Lean NO_x Trap (LNT) Catalysts: Effects of Lean/Rich Cycle Timing and Temperature", 23rd North American Catalysis Society Meeting, Louisville, KY, June 2013.

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141. "Microkinetics of Metal-Catalyzed Reactions", 197th ACS National Meeting, Dallas, TX, April 1989.
142. "Selective Catalytic Reduction of NO by NH₃ over Aerogels of Titania, Silica and Vanadia", 207th ACS National Meeting, San Diego, CA, March 1994.
143. "Raman Spectroscopic Studies of Selective Catalytic Reduction (SCR) Catalysts", 21st Annual Conference of the Federation of Analytical Chemistry and Spectroscopy Societies (FACSS), St. Louis, MO, October 1994.
144. "Synthesis of Al₂O₃-SiO₂ Xerogels: Effect of Calcination on the Surface Area, Pore Volume, and Pore Structure" (poster), 1995 Annual AIChE Meeting, Miami Beach, FL, November 1995.
145. "Synthesis of SiO₂-Al₂O₃ Xerogels; Effect of Calcination on the Surface Area, Pore Volume, and Pore Structure" (poster), 211th ACS National Meeting, New Orleans, LA, March 1996.
146. "The Effect of Preparation and Aging on the Structure of Mixed-Oxide Iron-Silicon Xerogels" (poster), 5th World Congress of Chemical Engineering, San Diego, CA, July 1996.
147. "Sol-gel Synthesis and Surface Area Investigation of Titanium Zirconate Phosphates", 101st Annual Meeting of the American Ceramic Society, Indianapolis, IN, April 1999.
148. "Mesoporous Au Catalysts: Synthesis, Characterization and Catalytic Oxidation", 2002 Annual AIChE Meeting, Indianapolis, IN, November 2002.

149. "Dendrimer Templates for Compositional Control of Bimetallic Catalysts", 18th North American Catalysis Society Meeting, Cancun, Mexico, June 2003.
150. "Effect of Au Oxidation State and Cluster Size upon Catalytic Activity of Au Catalysts on Allotropic Titania Supports", Gold 2003, Vancouver, Canada, September 2003.
151. "Structures of Supported Metal Catalysts in Reactive Atmospheres: Characterization by X-ray Absorption Fine Structure Spectroscopy", Fall Symposium Southeastern Catalysis Society, Asheville, NC, September 2004.
152. "Dendrimer-Stabilized Metal Nanoparticles: Synthesis, Mechanisms and Catalytic Applications", 233rd ACS National Meeting, Chicago, IL, March 2007.
153. "In-situ FTIR Study of o-DCB Interaction with Pd-Co Supported on Mordenite and Sulfated Zirconia" (poster), 20th North American Catalysis Society Meeting, Houston, TX, June 2007.
154. "Lean Gasoline Emissions Control: NH₃ Generation over Commercial Three-Way Catalysts and Lean NO_x Traps", US DOE 2012 DEER Conference, Dearborn, MI, October 2012.
155. "Passive SCR for Lean Gasoline Engine Emissions Control", 23rd North American Catalysis Society Meeting, Louisville, KY, June 2013.