Curriculum Vitae

JOHN R. REGALBUTO
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Education

Ph.D. Chemical Engineering, University of Notre Dame, 1986
M.S. Chemical Engineering, University of Notre Dame, 1983
B.S. Chemical Engineering, Cum Laude, Texas A&M University, 1981

Personal Information

Born April 14, 1959, Princeton, New Jersey
Married (wife also Ph.D. in chemical engineering), 3 children

Professional Experience

Department of Chemical Engineering, University of South Carolina
Smartstate Endowed Chair in Catalysis for Renewable Fuels, 2011-present
Professor, 2011 - present

Department of Chemical Engineering, University of Illinois at Chicago
Professor, 2005 - 2011
Associate Professor, 1992 - 2005
Assistant Professor, 1986 - 1992

National Science Foundation, Directorate for Engineering
Catalysis and Biocatalysis Program Director, 2006 - 2009

Honeywell, Division of Catalysis and Separations, Des Plaines, Illinois
Sabbatical Leave, 2003-04

UOP Research Center, Des Plaines, Illinois
Sabbatical Leave, 1994-95

Argonne National Laboratory, Argonne, Illinois
Summer Faculty Research Program, 1990, 1991

Amoco Oil Company, Naperville, Illinois
University Methane Utilization Program, 1987

Consulting

AAAS, 2010 - present
- proposal and report reviews for the King Abdulaziz City for Science and Technology

BP Chemical Company, Naperville, Illinois, 2009
- catalyst synthesis via strong electrostatic adsorption

The Catalyst Group, Spring House, Pennsylvania, 1996, 2000, 2006
- technical reviews of novel catalyst supports, catalyst characterization

Catalytic Solutions, Inc., Oxnard, California, 2005
- development of refining catalysts

Scientific Design Company, Inc., Little Ferry, New Jersey, 2002
- design of next generation epoxidation catalysts

Korean Institute of Energy Research, Taejon, Korea, 1997
- lecture series on oxide characterization

United Nations Industrial Development Organization, Vienna, Austria, 1996
- lecture series on catalyst preparation for the Tianjin Research Institute, China

Shell Chemical Company, West Hollow Technology Center, Houston, Texas, 1996
- catalytic reactor characterization

Gas Research Institute, Chicago, Illinois, 1992 - 1996
- feasibility surveys in environmental catalysis

Honors and Professional Activities

Fellow, American Institute of Chemical Engineering, 2016
Excellence in Catalysis Award, Catalysis Society of Metropolitan New York, 2014
Chair, 2014 Gordon Conference on Catalysis
Member-at-Large, ACS Catalysis and Reaction Engineering Division, 2012-present
Director's Commendation, NSF, for vision and promotion of "green gasoline", 2009
Chair, Biomass Conversion Interagency Working Group of the National Biomass R&D Initiative Board, 2007-2009
New England Catalysis Society 2006 Award Lecture
Council for Excellence in Teaching and Learning, 1996 – 2000, Chair 2005-6
Academic Affairs Subcommittee, U. Illinois Global Campus Initiative, 2005-6
Faculty Sponsor, AIChE Student Chapter, 2005-6
Catalysis Club of Chicago; Program Chair, 1999, 2004, President, 2000, 2005
Co-Chair, 5th International Symposium on Group 5 Compounds, 2005
Who's Who in American Teachers, 2002, 2005
Chair, all-U. of Illinois faculty seminar on "Teaching at an Internet Distance," 1998-9
Phi Kappa Phi Honors Society, 1999
Officer, 15th North American Catalysis Society Meeting, 1997
UIC Award for Excellence in Teaching (all-university), 1996
Professional Engineering Societies Council Best Advisor Award, 1996
Dept. of Chemical Engineering "Best Teacher Award," 1996
College of Engineering Harold A. Simon Award (teaching), 1990
Tau Beta Pi Advisor, Illinois Zeta Chapter, 1988-98
American Institute of Chemical Engineers
American Chemical Society
Eagle Scout

Research Experience and Interests

Fundamental studies of catalyst preparation, adsorption theory
Catalyst characterization, kinetics of gas-solid reactions
Engineering ethics

Refereed Publications

1. Regalbuto, J., Kaul, D., and Wolf, E., Transient FTIR Studies of the CO-NO-O_2 Reaction on Pt/SiO_2. 8th International Congress on Catalysis, Vol. 3, 1984, 253.
2. Regalbuto, J. R. and Wolf, E. E., FTIR Studies of Self-sustained Oscillations During the CO-NO-O_2 Reaction on Pt/SiO_2 Catalysts, Chemical Engineering Communications 41, 1986, 315.
3. Regalbuto, J.R., Fleisch, T.H., and Wolf, E.E., An Integrated Study of Pt/WO_3/SiO_2 Catalysts for the NO-CO Reaction I. Catalyst Characterization by XRD, Chemisorption, and XPS, Journal of Catalysis 107, 1987, 114-128.
4. Regalbuto, J.R., Allen, C.W., and Wolf, E.E., An Integrated Study of Pt/WO_3/SiO_2 Catalysts for the NO-CO Reaction II. TEM Investigation of Overlayer Formation on Model Pt/WO_3/SiO_2 Catalysts, Journal of Catalysis 108, 1987, 304-322.
5. Regalbuto, J.R., and Wolf, E.E., Promotion of Pt/SiO_2 Catalysts by WO_3 for the NO-CO Reaction. In Crucq, A., and Frennet, A., eds., Catalysis and Automotive Pollution Control, Elsevier, Amsterdam, 1987.
6. Regalbuto, J.R., and Wolf, E.E., An Integrated Study of Pt/WO_3/SiO_2 Catalysts for the NO-CO Reaction III. FTIR Kinetic Study and Correlation of Promotional Effects, Journal of Catalysis 109, 1988, 12-24.
7. Fleisch, T.H., Bell, A.T., Regalbuto, J.R., Thomson, R.T., Lane, G.S., Wolf, E.E., and Hicks, R.F., X-ray Photoemission Studies of Strong Metal-Support Interaction (SMSI): Metal Decoration and Electronic Effects, Studies in Surface Science and Catalysis 38, 1988, 791-802.
8. Datta, A., and Regalbuto, J.R., TEM and In-Situ EM Study of the Dispersion of Silica Supported MoO_3, Ultramicroscopy 29, 1989, 233-246.
9. Datta, A., Ha, J.-W., and Regalbuto, J.R., The Controlled Dispersion of Silica Supported MoO_3: the Role of Ammonia, Journal of Catalysis 133, 1992, 55.
10. Hannoun, H., and Regalbuto, J.R., The Mixing Characteristics of a MicroBerty Catalytic Reactor, Industrial and Engineering Chemistry Research, 31, 1992, 1288.
11. Kim, J.-G., Shyu, J. and Regalbuto, J.R., The Effect of Calcination On Morphology and Hydrogen Spillover in Pt/MoO_3, I. Characterization and Kinetics, Journal of Catalysis139, 1993, 153.
12. Kim, J.-G., and Regalbuto, J.R., The Effect of Calcination On Morphology and Hydrogen Spillover in Pt/MoO_3, II. Kinetic Modeling, Journal of Catalysis139, 1993, 175.
13. Shah, A., and Regalbuto, J. R., The Retardation of Pt Adsorption Over Oxide Supports at pH Extremes: Oxide Dissolution of High Ionic Strength?, Langmuir 10, 1994, 500.
14. Santhanam, N., Conforti, T., Spieker, W., and Regalbuto, J.R., On the Nature of Metal Precursors Adsorbed on Oxide Supports, Catalysis Today 21, 1994, 141.

15. Regalbuto, J.R., and Ha, J.-W., A Corrected Procedure and Consistent Interpretation for Temperature Programmed Reduction of Supported MoO_3, Catalysis Letters 29, 1994, 189.

16. Hong, Z., and Regalbuto, J. R., Nature of Adsorption Sites on Sulfided Mo Catalysts and Their Selectivity in Chemisorption of Probe Molecules, Journal of Physical Chemistry 99, 1995, 9452.

17. Park J.-H., and Regalbuto, J.R., A Simple, Accurate Determination of Oxide PZC and the Strong Buffering Effect of Oxide Surfaces at Incipient Wetness, Journal of Colloid and Interface Science 175, 1995, 239.

18. Agashe K., and Regalbuto, J.R., A Revised Physical Theory for Adsorption of Metal Complexes at Oxide Surfaces, Journal of Colloid and Interface Science 185, 1997, 174.

19. Li, W. B., Yang, R. T., Krist, K., and Regalbuto, J. R., Selective Adsorption of NO_x from Hot Combustion Gases be Ce-Doped CuO/TiO_2, Energy and Fuels 11, 1997, 428.

20. Miller, J., Glusker, E., Peddi, R., Zheng,T., and Regalbuto, J. R., The Role of Acid Sites in Cobalt Zeolite Catalysts for Selective Reduction of Lean NO_x, Catalysis Letters 51, 1998, 15.

21. Regalbuto, J.R., Agashe K., Navada, A., Bricker, M. L., and Chen, Q., A Scientific Description of Pt Adsorption onto Alumina, Studies in Surface Science and Catalysis 118, 1998, 147.

22. Regalbuto, J.R., Zheng, T., and Miller, J. T., The Bifunctional Reaction Pathway and Dual Kinetic Regimes in NO_x SCR by Methane over Cobalt Mordenite Catalysts, Catalysis Today 1848, 1999, 1.

23. Regalbuto, J.R., Shadid, S., Chen, Q., and Bricker, M., An Experimental Verification of the Physical Nature of CPA Adsorption onto Alumina, Journal of Catalysis 184, 1999, 335.

24. Spieker, W., Regalbuto, J., Rende, D., Bricker, M., and Chen, Q, Experimental Investigation and Modeling of Platinum Adsorption onto Ion-Modified Silica and Alumina, Studies in Surface Science and Catalysis 130, 2000, 203.

25. Spieker, W., and Regalbuto, J. R., A Fundamental Model of Pt Impregnation onto Alumina, Chemical Engineering Science 56, 2001, 3491.

26. Regalbuto, J. R., Schreier, M., Hao, X., Spieker, W.A., Kim, J.-G., Miller, J. T., and Kropf, J., Toward a Molecular Understanding of Noble Metal Catalyst Impregnation, Studies in Surface Science and Catalysis 143, 2002, 45.

27. Spieker, W., Liu, J., Miller, J. T., Kropf, J., and Regalbuto, J. R., An EXAFS Study of the Coordination Chemistry of Hydrogen Hexachoroplatinate I. Speciation in Aqueous Solution, Applied Catalysis A: General 232, 2002, 219.

28. Spieker, W., Liu, J., Hao, X., Miller, J. T., Kropf, J., and Regalbuto, J. R., An EXAFS Study of the Coordination Chemistry of Hydrogen Hexachoroplatinate II. Speciation of Complexes Adsorbed onto Alumina, Applied Catalysis A: General 243, 2003, 53.

29. Korah, J., Spieker, W., and Regalbuto, J. R., Why Ion-Doped, PZC-Altered Silica and Alumina Fail to Influence Platinum Adsorption, Catalysis Letters 85, 2003, 123.

30. Hao, X., Spieker, W., and Regalbuto, J. R., A Further Simplification of the Revised Physical Adsorption (RPA) Model, Journal of Colloid and Interface Science 267, 2003, 259.

31. Schreier, M., and Regalbuto, J.R., A Fundamental Study of Pt Ammine Impregnation of Silica 1. The Electrostatic Nature of Pt Adsorption, J. Catal. 225, 2004, 190.

32. Miller, J. T., Kropf, A. J., Schreier, M., and Regalbuto, J.R., A Fundamental Study of Pt Ammine Impregnation of Silica 2. The Effect of Method of Preparation, Loading, and Calcination Temperature on (Reduced) Particle Size, J. Catal. 225, 2004, 203.

33. Hao, X., Quach, L., Korah, J.,and Regalbuto, J. R., The Engineering of Pt Impregnation onto Oxides and Carbon, Journal of Molecular Catalysis 219, 2004, 97.

34. Park, C., Fenter, P., Sturchio, N., and Regalbuto, J.R., Probing Outer-sphere Adsorption of Aqueous Metal Complexes at the Oxide-Water Interface with Resonant Anomalous X-ray Reflectivity, Physics Review Letters 94, 2005, 076104/1.

35. Yang, J.Y., Henao, J. D., Costello, C., Kung, M.C., Kung, H.H., Miller, J.T., Kropf, A.J., Regalbuto, J.R., Kim, J.G., Bore, M., Pham, H.N., Datye, A.K., Laeger, J. D., and Kharas, K., Understanding Preparation Variables in the Synthesis of Au/Al_2O_3 using EXAFS and Electron Microscopy, Applied Catalysis A: General 291, 2005, 73.

36. Schreier, M., Terens, S., Belcher, L. and Regalbuto, J.R., The Nature of "Overexchanged" Copper and Platinum on Zeolites, Nanotechnology 16, 2005, S582.

37. Park, Changyong; Fenter, Paul; Sturchio, Regalbuto, John. R., Neil C.; Resonant anomalous X-ray reflectivity: A New Structural and Spectroscopic Probe of Metal Adsorption at Mineral-Water Interfaces, Geochemica et Cosmochimica Acta 69, 2005, A42.

38. Miller, J.T., Kropf, A.J., Zha, Y., Regalbuto, J.R., Delannoy, L., Louis, C., Bus, E., and van Bokhoven, J.A., The Effect of Gold Particle Size on the Au-Au Bond Distance in Supported Catalysts, J. Catal. 240, 2006, 222.

39. Regalbuto, J.R., Ansel, O., and Miller, J.T., An Evaluation of Pt Sulfite Acid (PSA) as Precursor for Supported Pt Catalysts, Topics in Catalysis 39, 2006, 237.

40. Jiao, L., Zha, Y., Hao, X., and Regalbuto, J.R., Simple, Scientific Syntheses with Common Catalyst Precursors, Studies in Surface Science and Catalysis 162, 2006, 211.

41. D'Souza, L., Regalbuto, J.R., Miller, J.T., and Kropf, A.J., Preparation of Silica- and Carbon-supported Cobalt by Electrostatic Adsorption of Co(III) Hexaammines, Journal of Catalysis 248, 2007, 165.

42. D'Souza, L., Regalbuto, J.R., and Miller, J.T., Preparation of Carbon Supported Cobalt by Electrostatic Adsorption of $[Co(NH_3)_6]Cl_3$, Journal of Catalysis 252, 2008, 157.

43. Jiao, L., and Regalbuto, J.R., The Synthesis of Highly Dispersed Noble and Base Metals on Silica via Strong Electrostatic Adsorption: I. Amorphous Silica, Journal of Catalysis 260, 2008, 329.

44. Jiao, L., and Regalbuto, J.R., The Synthesis of Highly Dispersed Noble and Base Metals on Silica via Strong Electrostatic Adsorption: II. Mesoporous Silica, Journal of Catalysis, 260, 2008, 342.

45. S. Lambert, N. Job, L. D'Souza, M. F. R. Pereira, R. Picard, B. Heinrichs, J.L. Figuerido, J.-P. Pirard, and Regalbuto, J.R., Synthesis of Very Highly Dispersed Platinum Catalysts Supported on Carbon Xerogels by the Strong Electrostatic Adsorption Method, Journal of Catalysis, 261, 2009, 23.

46. Regalbuto, J.R., (Invited Perspective), Cellulosic Biofuels: Got Gasoline?, Science 325, 2009, 822.

47. N. Job, S. Lambert, M. Chatenet, C. J. Gommes, F. Maillard, . Berthon-Fabry, J. R. Regalbuto, J.-P. Pirard, Preparation of Highly Loaded Pt/Carbon Xerogel Catalysts for Proton Exchange Membrane Fuel Cells by the Strong Electrostatic Adsorption Method, Catalysis Today 150, 2010, 119.

48. T. E Feltes, L. Espinosa-Alonso, E. de Smit, L. D'Souza, R. J. Meyer, B. M Weckhuysen, J. R. Regalbuto , Selective Adsorption of Manganese onto Cobalt for Optimized $Mn/Co/TiO_2$ Fischer-Tropsch Catalysts, J. Catalysis 270, 2010, 95.

49. Schreier, M., Timmons, M., Feltes, T., and Regalbuto, J.R., The Determination of Surface Charging Parameters for a Predictive Metal Adsorption Model, Journal of Colloid and Interface Science 348, 2010, 571.

50. D'Souza, L., and Regalbuto, J.R., Strong Electrostatic Adsorption for the Preparation of Pt/Co/C and Pd/Co/C bimetallic Electrocatalysts, Studies in Surface Science and Catalysis 175, 2010, 715.

51. N. Job, F. Maillard, M. Chatenet, C. J. Gommes,. S. Lambert, S. Hermans, J. R. Regalbuto, and J.-P. Pirard, Synthesis and Characterization of Highly Loaded Pt/carbon Xerogel Catalysts Prepared by the Strong Electrostatic Adsorption Method, Studies in Surface Science and Catalysis 167, 2010, 169.

52. Regalbuto, J.R., An NSF Perspective on Next Generation Hydrocarbon Biorefineries, Computers & Chem. Eng., 34 , 2010, 1393.

53. Feltes, T. E., Y. Zhao, R.J. Meyer, R. Klie, and Regalbuto, J.R., The Influence of Preparation Method on Mn-Co Interactions in $Mn/Co/TiO_2$ Fischer-Tropsch Catalysts, ChemCatChem 2, 2010, 1065.

54. Zhao Y., Feltes T.E., Regalbuto J.R., Meyer R.J., and Klie R.F., In Situ Electron Energy Loss Spectroscopy Study of Metallic Co and Co Oxides , J. Appl. Phys., 108, 2010, 063704.

55. Hao, X., Barnes, S., and Regalbuto, J. R., A Fundamental Study of Pt Impregnation of Carbon: Adsorption Equilibrium and Particle Synthesis, J. Catalysis 279, 2011, 48.

56. Zhao, Y., Feltes, T.E., Regalbuto, J.R., Meyer, R.J., and Klie, R.F., In-Situ Electron Energy Loss Spectroscopy Study of Mn-Promoted Co/TiO_2 Fischer-Tropsch Catalysts, Catalysis Letters 141, 2011, 641.

57. Regalbuto, J.R., (Invited Perspective), The Sea Change in U.S. Biofuels Funding, Biofpr 5, 2011, 495.

58. Liu, J., and Regalbuto, J.R., Molecular Characterization of Noble Metal Adsorption at the Water-Aluminum Oxide Interface, Adv. Chem. Eng. 396-398, 2012, 745.

59. Zhu, X., Cho, H.-R., and Regalbuto, J.R., Charge Enhanced Dry Impregnation: A Simple Way to Improve Preparation of Supported Metal Catalysts, ACS Catalysis 3, 2013, 625.

60. Liu, J.J., Tao, R.Z., Guo, Z., Regalbuto, J.R., Marshall, C.L., Klie, R.F., Miller, J.T., and Meyer, R.J., Selective Adsorption of Manganese onto Rhodium for Optimized $Mn/Rh/SiO_2$ Alcohol Synthesis Catalysts, ChemCatChem 5, 2013, 3665.

61. Hervier, A., Blanchard, J., Costentin, G., Regalbuto, J., Louis, C., and Boujday, S., The Genesis of a Heterogeneous Catalyst: In Situ Observation of a Transition Metal Complex Adsorbing onto an Oxide Surface in Solution, Chem. Comm. 50, 2014, 2409.

62. Liu, Q., Joshi, U., Uber, K., and Regalbuto, J.R., The Control of Pt and Ru Nanoparticle Size on High Surface Area Supports, Phys. Chem. Chem. Phys. 16, 2014, 26431.

63. Blanchard, J. Hervier, A., Costentin, G., Regalbuto, J., Louis, C., and Boujday, S., In-situ monitoring of transition metal complex adsorption on oxide surfaces during the first stages of supported metal catalyst preparation, Catal. Tod. 235, 2014, 245.

64. Samad, J., Hashim, S., Ma, S., and Regalbuto, J.R., Determining surface composition of mixed oxides with pH, J. Coll. Interf. Sci. 436, 2014, 204.

65. O'Connell, K., and Regalbuto, J.R., High Sensitivity Silicon Slit Detectors for 1 nm Powder XRD Size Detection limit, Catal. Lett. 145, 2015, 777.

66. Tengco, J.M.M., Lugo-Jose, Y.K., Monnier, J.R., and Regalbuto, J.R., Chemisorption-XRD Particle Size Discrepancy of Carbon Supported Palladium: Carbon Decoration of Pd?, Cat. Tod. 246, 2015, 9.

67. Cho, H.-R. and Regalbuto, J.R., The Rational Synthesis of Pt-Pd Bimetallic Catalysts by Electrostatic Adsorption, Cat. Tod. 246, 2015, 143.

68. Cao, S., Monnier, J.R., Williams, C.T., Diao, W.J., and Regalbuto, J.R., Rational nanoparticle synthesis to determine the effects of size, support, and K dopant on Ru activity for levulinic acid hydrogenation to gamma-valerolactone, J. Catal. 326, 2015, 69.

69. Diao, W.J., Tengco, J.M.M., Regalbuto, J.R., and Monnier, J.R., Preparation and characterization of Pt-Ru Bimetallic Catalysts Synthesized by Electroless Deposition Methods, ACS Catal. 5, 2015, 5123.

70. Samad, J., Hoenig, S., and Regalbuto, J.R., Synthesis of Platinum Catalysts over Thick Slurries of Oxide Supports by Strong Electrostatic Adsorption, ChemCatChem 7, 2015, 5123.

71. Samad, J. E., Keels, J., and Regalbuto, J. R., A Comparison of Pt (II) and Pt (IV) Chloride Precursors for Strong Electrostatic Adsorption Synthesis of Pt/Alumina and Pt/Carbon Catalysts. Catal. Lett., 145, 2016, 157.

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73. D'Souza, L., Barnes, S., and Regalbuto, J.R., The Simple, Effective Synthesis of Highly Dispersed Pd/C and CoPd/C Heterogeneous Catalyst via Charge-Enhanced Dry Impregnation, Catalysts 2016, 6, 72.

74. Tengco, J.M.M., Mehrabadik, B.A.T., Zhang, Y., Wongkaew, A., Regalbuto, J.R., Weidner, J.W., and Monnier, J.R., Synthesis and Electrochemical Evaluation of Carbon Supported Pt-Co Bimetallic Catalysts Prepared by Electroless Deposition and Modified Charge Enhanced Dry Impregnation, Catalysts 2016, 6, 83.

75. Wongkaew, A., Zhang, Y.Y., Tengco, J.M.M., Blom, D.A., Sivasubramanian, P., Fanson, P.T., Regalbuto, J.R., and Monnier, J.R., Characterization and Evaluation of Pt-Pd Electrocatalysts Prepared by Electroless Deposition, Appl. Catal. B. Env. 2016, 188, 367.

76. Samad, J.E., Blanchard, J., Sayag, C., Louis, C., and Regalbuto, J.R., The Controlled Synthesis of Metal-Acid Bifunctional Catalysts: Selective Pt Deposition and Nanoparticle Synthesis on Amorphous Aluminosilicates, J.Catal. 2016, 342, 213.

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78. Kyriakidou, E.A., Alexeev, O.S., Wong, A.P., Papadimitriou, C., Amiridis, M.D., and Regalbuto, J.R., Synthesis of Ag Nanoparticles on Oxide and Carbon Supports from Ag Diammine Precursor, J. Catal. 2016, 344, 749.

79. Liu, Q., Samad, J., Copple, J.E., Eskandari, S., Satterwhite, C., and Regalbuto, J.R., A Pinch of Salt to Control Supported Pt Nanoparticle Size, Catal. Tod. 2017, 280, 246.

80. Cao, S., Monnier, Monnier, J.R., and Regalbuto, J.R., Alkali promotion of alumina-supported ruthenium catalysts for hydrogenation of levulinic acid to gamma-valerolactone, J. Catal. 2017, 347, 72.

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82. Banerjee, R., Liu, Q., Tengco, J.M.M., and Regalbuto, J.R., Detection of Ambient Oxidation of Ultrasmall Supported Pt Nanoparticles with Benchtop Powder X-ray Diffraction, Catal. Lett., 2017 147, 1754.

83. (Review paper) Tavakoli, B., Eskandari, S., Khan, U., White, R.D., and Regalbuto, J.R., A Review of Preparation Methods for Supported Metal Catalysts, Advances in Catalysis, 2017, 61, 1.

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85. Wong, A., Liu, Q., Griffin, S., Nicholls, A., and Regalbuto, J.R., A Simple Synthesis of Highly Dispersed, Homogeneously Alloyed, Supported Bimetallic Nanoparticles, Science 2017, 358, 6369.

86. Gilliland, S.E., Tengco, J.M.T., Yang, Y., Regalbuto, J.R., Castano, C.E., and Gupton, B.F., Electrostatic adsorption-microwave synthesis of palladium nanoparticles on graphene for improved cross-coupling activity, Applied Catalysis A: General 2017, 550,168.

87. Satjaritanum, P., Bringley, E., Weidner, J.W., Khunatorn, Y., Regalbuto, J.A., Regalbuto, J.R., and Shimpalee, S., Experimental and Computational Investigation of Mixing with Contra-Rotating, Baffle-Free Impellers, Chem. Eng. Res. Des. 2018, 130, 63.

88. Khivantsev, K., Biancardi, A., Fathizadeh, M., Almalki, F., Grant, J.L., Tie, H.N., Shakouri, A., Regalbuto, J.R., Blom, D., Makris, T., Caricato, M., and Yu, M., Thermally Stable Single-Site Cobalt Catalysts Supported on Silica: Catalytic Ammonia Decomposition and Direct Activity Comparison with Ultra-Small Cobalt Nanoparticles, ChemCatChem 2018, 10, 736.

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50. (keynote) “The Good News and the Bad News of Online Pedagogy,” Regalbuto, J.R., National College Testing Association, Chicago, Il., Aug. 2, 2000.
51. (invited) “The Good News and the Bad News of Online Pedagogy,” Regalbuto, J.R., American Sociological Association, Washington, D. C., Aug. 15, 2000.
52. (distinguished presenter) “The Good News and the Bad News of Online Pedagogy,” Regalbuto, J.R., International Engineering Consortium’s National Communications Forum, Chicago, Il., Oct. 15, 2000.
53. (invited) “The Good News and the Bad News of Online Pedagogy,” Regalbuto, J.R., Conference on Information Technology of the League for Innovation in Community Colleges, Anaheim, CA, Nov. 16, 2000.
54. “A Scientific Model of Catalyst Impregnation,” Spieker, W., and Regalbuto, J.R., AIChE Annual Meeting, Los Angeles, Nov. 2000.
55. “EXAFS Study of Dissolved and Adsorbed Pt Complexes,” Spieker, W., Miller, J.T., Kropf, A.J., and Regalbuto, J.R., Chicago Catalysis Club Spring Symposium, May, 2001.
56. “EXAFS Investigation of Dissolved and Adsorbed Pt Complexes Derived from CPA,” Spieker, W., Miller, J.T., Kropf, A.J., and Regalbuto, J.R., 17th North American Meeting of the Catalysis Society, Toronto, Jun. 2001.
57. “EXAFS Study of Dissolved and Adsorbed Pt Complexes,” Spieker, W., Miller, J.T., Kropf, A.J., and Regalbuto, J.R., AIChE Annual Meeting, Reno, Nov. 2001.
58. (invited) “Some Fundamentals of Noble Metal Catalyst Impregnation,” Regalbuto, J.R., ACS Annual Meeting, Orlando, March, 2002.
59. “A Molecular Characterization of Noble Metal Adsorption over Alumina,” Regalbuto, J.R., Kim, J.-G., Miller, J.T., and Kropf, A.J., Chicago Catalysis Club Spring Symposium, May, 2002.
60. (keynote) “Toward a Molecular Understanding of Noble Metal Catalyst Impregnation,” Regalbuto, J.R., Kim, J.-G., Miller, J.T., and Kropf, A.J., 8th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, Sept. 2002.
61. “Molecular Characterization of Noble Metal Catalyst Impregnation,” Hao, X., Liu, J., Regalbuto, J.R., Miller, J.T., and Kropf, A.J., AIChE Annual Meeting, Indianapolis, Nov. 2002.
62. “The Engineering of Pt Impregnation onto Carbon,” Hao, X., and Regalbuto, J.R., AIChE Annual Meeting, Indianapolis, Nov. 2002.
63. (invited) “A Simple Method to Prepare Highly Loaded, Highly Dispersed Pt on Carbon,” Hao, X., and Regalbuto, J.R., Materials Research Society Fall Meeting, Boston, Dec. 2002.
64. (invited) “A Simple Method to Prepare Highly Loaded, Highly Dispersed Pt onto Carbon Nanostructures,” Hao, X., and Regalbuto, J.R., The Knowledge Foundation Small Fuel Cell Workshop, New Orleans, May, 2003.

65. "An In-situ, Real-Time XANES and EXAFS Characterization of Noble Metal Catalyst Impregnation, Hao, X., Liu, J., Regalbuto, J.R., Miller, J.T., and Kropf, A.J., Chicago Catalysis Club Spring Symposium, May, 2003.
66. "An In-situ, Real-Time XANES and EXAFS Characterization of Noble Metal Catalyst Impregnation, Hao, X., Liu, J., Regalbuto, J.R., Miller, J.T., and Kropf, A.J., 18^{h} North American Meeting of the Catalysis Society, Cancun, Jun. 2003.
67. (invited) "A Simple Method to Prepare Highly Loaded, Highly Dispersed Pt on Carbon," Hao, X., and Regalbuto, J.R., Gordon Conference on Fuel Cells, New Orleans, July, 1993.
68. "A Survey of Noble Metal Adsorption onto Oxide Supports," Schreier, M., Liu, J., and Regalbuto, J.R., AIChE Annual Meeting, San Francisco, Nov., 2003.
69. "The Engineering of Pt Impregnation of Carbon," Hao, X., and Regalbuto, J.R., AIChE Annual Meeting, San Francisco, Nov., 2003.
70. (invited) "A Survey of Noble Metal Adsorption onto Oxide Supports," Liu, J., Schreier, M., and Regalbuto, J.R., 227th ACS Meeting, Anaheim, CA, Mar., 2004.
71. (invited) "The Nature of Over-Exchanged Metals on Zeolite Supports," Schreier, M., and Regalbuto, J.R., 227th ACS Meeting, Anaheim, CA, Mar., 2004.
72. (invited) "X-ray Reflectivity Studies of Pt Complex Adsorption at the Quartz-Water Interface," Park, C., Fenter, P., Sturchio, N., and Regalbuto, J.R., 227th ACS Meeting, Anaheim, CA, Mar., 2004.
73. "The Nature of Over-Exchanged Metals on Zeolite Supports," Schreier, M., and Regalbuto, J.R., Chicago Catalysis Club Spring Symposium, May, 2004.
74. "Non-Electrostatic Adsorption of Pt onto Alumina," Lui, J., and Regalbuto, J.R., Chicago Catalysis Club Spring Symposium, May, 2004.
75. "A Survey of Noble Metal Adsorption onto Oxide Supports," Liu, J., Schreier, M., and Regalbuto, J.R., 13th International Congress on Catalysis, Paris, Jul., 2004.
76. "The Engineering of Pt Impregnation of Carbon," Hao, X., Robles, J., Castorano, M., and Regalbuto, J.R., 13th International Congress on Catalysis, Paris, Jul., 2004.
77. "The Nonelectrostatic Adsorption of CPA onto Alumina," Liu, J., and Regalbuto, J.R., AIChE Annual Meeting, Austin, Nov., 2004.
78. "A Simple, Efficient Method to Synthesize Highly Loaded, Highly Dispered Pt on Carbon Black," Castorano, M., and Robles, J., and Regalbuto, J.R., AIChE Annual Meeting, Austin, Nov., 2004.
79. (invited) "X-ray Absorption Methods for the Molecular Characterization of Catalyst Synthesis," J. R. Regalbuto, J. T. Miller, and A. J. Kropf , 229th ACS Meeting, San Diego, Mar. 2005
80. (invited) "An Evaluation of Pt Sulfite Acid (PSA) as Precursor for Supported Pt Catalysts," J. R. Regalbuto, J. T. Miller, and A. J. Kropf , 229th ACS Meeting, San Diego, Mar. 2005
81. "Probing Geometric and Spectroscopic Structures of Aqueous Metal Species Adsorbed at Mineral-Water Interfaces with Resonant Anomalous X-ray reflectivity" Park, C., Fenter, P, Sturchio, N., and Regalbuto, J. R., 229th ACS Meeting, San Diego, Mar. 2005.
82. "Resonant Anomalous X-ray Reflectivity: a New Structural and Spectroscopic Probe of Metal Adsorption at Mineral-Water Interfaces" Park, C., Fenter, P, Sturchio, N., and Regalbuto, J. R., 15th Annual Goldschmidt Conference, Moscow, ID, May 2005.

83. "The Synthesis of Niobia-Supported Noble Metal Catalysts," J. R. Regalbuto, Y. Zha, A. Dering, and J.T. Miller, 5th International Symposium on Group 5 Compounds, Hancock, Massachusetts, May, 2005.
84. "A Simple Method to Synthesize Highly Loaded, Highly Dispersed Pt on Carbon," J. R. Regalbuto, J. T. Miller, and A. J. Kropf , 19th North American Meeting of the Catalysis Society, Philadelphia, May 2005.
85. "An Evaluation of Pt Sulfite Acid (PSA) as Precursor for Supported Pt Catalysts," J. R. Regalbuto, J. T. Miller, and A. J. Kropf , 19th North American Meeting of the Catalysis Society, Philadelphia, May 2005.
86. "Paving the Trail Blazed by Jim Schwarz: A Scientific Method to Prepare Supported Metal Catalysts," Regalbuto, J.R., 230th ACS Meeting, Washington, D.C., August, 2005.
87. "New capabilities of probing ion adsorption at solid-liquid interfaces with resonant anomalous X-ray reflectivity" Park, C., Fenter, P, Sturchio, N., and Regalbuto, J. R., 231st ACS Meeting, Atlanta, March 2006.
88. "Simple, Scientific Syntheses with Common Catalyst Precursors," Regalbuto, J.R., 9th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, Sept. 2006.
89. "A Simple, Rational Method to Prepare Highly Dispersed Catalysts," Michigan Catalysis Society, October, 2006
90. "An Overview of Biochemical Conversion Research at NSF," National Biofuels Action Plan Meeting, DOE, November, 2006
91. "The Production of Highly Dispersed Metals via 'Strong Electrostatic Adsorption'" (SEA), Liu, J., and Regalbuto, J.R., AIChE Annual Meeting, San Francisco, Nov., 2006.
92. "Electrostatic 'Nano-engineering' of Promoted and Bimetallic Catalysts," D'Souza, L., Zha, Y., and Regalbuto, J.R., AIChE Annual Meeting, San Francisco, Nov., 2006.
93. "The Catalysis and Biocatalysis Program at NSF," Regalbuto, J.R., AIChE Annual meeting, San Francisco, November, 2006
94. (invited) "The Production of Highly Dispersed Metals via 'Strong Electrostatic Adsorption'", Regalbuto, J.R., New England Catalysis Society, Springfield, MA, December, 2006
95. (invited) "The Production of Highly Dispersed Metals via 'Strong Electrostatic Adsorption'", Regalbuto, J.R., The Catalysis Society of Metropolitan New York, Woodbridge, NJ, March, 2007
96. "Highly Dispersed Noble and Base Metals on Amorphous and Mesoporous Silica via Strong Electrostatic Adsorption (SEA)," Jiao, L., and Regalbuto, J.R., Catalysis Club of Chicago, May, 2007
97. "Highly Dispersed Bimetallic Catalysts by Selective Adsorption of Metal Complexes onto Mixed Metal Oxides," Cao, C., and Regalbuto, J.R., Catalysis Club of Chicago, May, 2007
98. (invited) Workshop Overview, "Breaking the Chemical and Engineering Barriers to Lignocellulosic Biofuel," workshop ancillary to the ACS Green Chemistry and Engineering Conference, Regalbuto, J.R., June 2007, Washington, D.C.
99. "Strong Electrostatic Adsorption of Supported Metal Catalysts," Regalbuto, J.R., ACS Fall meeting, August, 2007

100. "A Rational Method to Prepare Bimetallic Catalysts," Regalbuto, J.R., ACS Fall meeting, August, 2007
101. "The CBET Division at NSF," Regalbuto, J.R., AIChE Annual Meeting, Salt Lake City, November, 2007
102. "NSF Grant Writing Workshop," Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2007
103. "Strong Electrostatic Adsorption of Metals onto Silica," Jiao, L., and Regalbuto, J.R., AIChE Annual Meeting, Salt Lake City, November, 2007
104. "A Rational Method to Prepare Promoted and Bimetallic Catalysts," AIChE Annual Meeting, Salt Lake City, November, 2007
105. (Congressional Briefing) "Green Gasoline: An Alternative Alternate Fuel," Congressional R&D Caucus, Oct. 4, 2007
106. (invited) "Green Gasoline: A New Biofuels Paradigm," Regalbuto, J.R., Institute of Medicine, November, 2007
107. (invited) "The Production of Jet Fuel from Biomass-Derived Carbohydrates," Regalbuto, J.R., 3rd Military Energy Alternatives Conference, Washington, D.C., Jan. 2008
108. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., AIChE/ACS Spring Meeting, New Orleans, LA, March 2008.
109. (invited) "A Rational Method to Prepare Bimetallic Catalysts," Regalbuto, J.R., AIChE/ACS Spring Meeting, New Orleans, LA, March 2008.
110. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., Biofuels Deployment Collaborative, Madison, Wisconsin, Apr. 2008
111. (invited) "The Production of Jet Fuel from Biomass-derived Carbohydrates," Regalbuto, J.R., World Wide Energy Conference, Washington, D.C., Apr. 2008
112. "Z-Contrast Imaging and EELS Study of Supported CoPd Nano-Catalyst, " Zhao, Y., D'Souza, L.D., Regalbuto, J.R., and Klie, R.F., Microscopy and Microanalysis 2008, Albuquerque, NM, Aug. 2008.
113. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., International Workshop of Defining Issues in Biofuels R&D, Cetraro, Italy, Aug. 2008
114. (Keynote panelist) Thermochemical Conversion of Biomass, Regalbuto, J.R., Growing the Bioeconomy Conference, Ames, Iowa, Aug. 2008
115. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., International Conference on Sorghum for Biofuels, Houston, Aug. 2008
116. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., Military Alternate Energy Conference, Wash, D.C., Oct. 2008
117. NSF grant writing workshop, Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2008
118. Young Faculty Workshop, Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2008
119. "A Simple, Rational Method to Prepare Supported Metal Catalysts," Regalbuto, J.R., American Chemical Society Spring Meeting, Salt Lake City, Mar. 2009
120. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., American Chemical Society Spring Meeting, Salt Lake City, Mar. 2009
121. (invited) "Next Generation Hydrocarbon Biorefineries," Regalbuto, J.R., Military Energy and Fuels Conference, Wash, D.C., Apr. 2009

122. (invited) “Next Generation Hydrocarbon Biorefineries,” Regalbuto, J.R., Year of Science Conference, Arlington, VA, May 2009
123. (invited) “Next Generation Hydrocarbon Biorefineries,” Regalbuto, J.R., Frontiers of Computer Aided Process Design Conference, Breckenridge, CO, Jun. 2009
124. (invited) “Next Generation Hydrocarbon Biorefineries,” Regalbuto, J.R., National Academies Conference on Expanding the Production of Biofuels, Madison, Wisc. Jun. 2009
125. “The Use of Strong Electrostatic Adsorption to Optimize Titania Supported Cobalt for Fischer Tropsch Synthesis,” Feltes, T., and Regalbuto, J.R., 21st Meeting of the North American Catalysis Society, San Francisco, Jun. 2009
126. (invited) “Green Gasoline at NSF,” Regalbuto, J.R., ACS Green Chemistry and Engineering Conference, Washington, D.C., June, 2009
127. (invited) “An NSF Perspective on Next Generation Hydrocarbon Biorefineries: Implications on Land and Water Use,” Regalbuto, J.R., Pan American Biofuels Conference, Atibaia, Brazil, Aug. 2009
128. (invited) “Next Generation Hydrocarbon Biorefineries,” Regalbuto, J.R., Next Generation Biofuels Markets, Amsterdam, Sept. 2009
129. “A Simple, Scientific Method to Prepare Supported Metal Catalysts,” Regalbuto, J.R., 5th Sino-U.S. Chemical Engineering Conference, Beijing, Oct. 2009
130. (invited) “Next Generation Hydrocarbon Biorefineries and Implications on Their Water Use,” Regalbuto, J.R., APSENA Conference, Urbana-Champaign, Il, Oct. 2009
131. (invited) “Next Generation Hydrocarbon Biorefineries: Drop –In Replacement Biofuels from Lignocellulose,” Regalbuto, J.R., Philadelphia Catalysis Club, Nov. 2009
132. NSF grant writing workshop, Regalbuto, J.R., AIChE Annual meeting, Memphis, Nov. 2009
133. Young Faculty Workshop, Regalbuto, J.R., AIChE Annual meeting, Memphis, Nov. 2009
134. “Pt-Promoted Fischer-Tropsch Catalysts by Electrostatic Adsorption,” Cao, C., and Regalbuto, J.R., AIChE Annual Meeting, Memphis, Nov. 2009
135. “Use of a Novel Cationic Gold Precursor for Catalyst Synthesis,” Barnes, S., and Regalbuto, J.R., AIChE Annual Meeting, Memphis, Nov. 2009
136. (invited) “Green Gasoline – A Better Biofuel,” Regalbuto, J.R., UIC Engineering Week, UIC, Feb. 2010
137. (invited) “An NSF Perspective on Hydrocarbon Biofuels,” Regalbuto, J.R., World Biofuels Market Conference, Amsterdam, March, 2010
138. (invited) Hydrocarbon Biofuels Briefing for Dr. Steve Koonin, Regalbuto, J.R., Undersecretary for Science, DOE, Washington, D.C., Apr. 2010
139. (invited) “Next Generation Hydrocarbon Biofuels,” Regalbuto, J.R., European Cooperative for Science and Technology Workshop, Oostende, Belgium, Apr. 2010
140. (invited) “An NSF Perspective on Hydrocarbon Biofuels,” Regalbuto, J.R., Frontiers in Bioenergy Symposium, Purdue University, May, 2010
141. “Study of $Ag(NH_3)_2^+$ Adsorption over Silica and Carbon Supports using Strong Electrostatic Adsorption,” Childers, D. and Regalbuto, J.R., Spring Symposium of the Catalysis Club of Chicago, May, 2010

142. "Revised Physical Adsorption (RPA) Modeling of Pt Adsorption over Carbon," Pasupan, M., and Regalbuto, J.R., Spring Symposium of the Catalysis Club of Chicago, May, 2010
143. "Engineering Bimetallic Catalyst Preparation Via Strong Electrostatic Adsorption," Zhu, X. and Regalbuto, J.R., Spring Symposium of the Catalysis Club of Chicago, May, 2010
144. (invited) "The Simple, Scientific Synthesis of Supported Metal Catalysts," Regalbuto, J.R., Gordon Research Conference, Colby-Sawyer College, Hew Hampshire, Jun. 2010
145. "Synthesis and Characterization of Highly Loaded Pt/Carbon Xerogel Catalysts Prepared by the Strong Electrostatic Adsorption Method," Job, N., Maillard, F., Chatenet, M., Gommes, C.J., Lambert, S., Hermans, S., Regalbuto, J.R., and Pirard, J.-P., 10th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, Sept. 2010
146. "Electrostatic Adsorption for the Preparation of Bimetallic Catalysts," Dsouza, L., Feltes, T., Cao, C., and Regalbuto, J.R., 10th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, Sept. 2010 (poster)
147. NSF grant writing workshop, Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2010
148. Young Faculty Workshop, Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2010
149. "A Novel Gold Cation for Catalyst Preparation by Strong Electrostatic Adsorption," Barnes, S. and Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2010
150. "Engineering Bimetallic Catalysts by Strong Electrostatic Adsorption," Zhu, X. and Regalbuto, J.R., AIChE Annual meeting, Salt Lake City, Nov. 2010
151. (invited) "Catalysis and Biocatalysis for Hydrocarbon Biofuels," Regalbuto, J.R., "Energy and Materials from the Sun" European Summer School, Rolduc Abbey, The Netherlands, June 2011.
152. (invited) "An NSF Perspective on Next Generation Hydrocarbon Biofuels," Regalbuto, J.R., European Cooperative in Science and Technology Strategic Initiative Workshop, Sustainable Production of Transportation Fuels and Chemicals: Challenges and Opportunities, Ostend Belgium, April 2010.
153. "Synthesis of Au-Pd Bimetallic Catalysts by Strong Electrostatic Adsorption for Direct Hydrogen Peroxide Synthesis," Barnes, S., and Regalbuto, J.R., 22nd North American Meeting of the Catalysis Society, Detroit, MI, June 2011
154. "The Electroless Deposition of Ruthenium onto Carbon Supported Platinum." Tengco, J.M.M., Diao, W., Regalbuto, J.R., and Monnier, J.R., 11th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2011
155. "The Rational Synthesis of Pd/Pt Bimetallic Catalysts by Electrostatic Adsorption," Cho, H.-R., and Regalbuto, 11th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2012
156. "Ruthenium Based Catalysts for the Conversion of Levulinic acid to Gamma-Valerolactone," Cao, S., and Regalbuto, 11th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2012 (poster)

157. "Evidence of Carbon Support Decoration on Palladium by Temperature Programmed Oxidation., Tengco, J.M.M., Lugo-Jose, Y.K., Regalbuto, J.R., and Monnier, J.R.," 11th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2012 (poster)
158. "Simulation of Surface Composition of Mixed Metal Oxides by Simple pH Measurement Data," Samad, J.E., Hashim, S., Ma, S. and Regalbuto, J.R., 11th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2012 (poster)
159. "An Overview of Hydrocarbon Biofuels," Regalbuto, J.R., Sun Grant Initiative 2012 National Conference, New Orleans, 2012
160. "Synthesis, Characterization and Evaluation of Highly Dispersed Bimetallic Catalysts for Fischer-Tropsch Reaction," Tengco, J.M.M., Diao, W., Monnier, J.R., and Regalbuto, J.R., 23rd North American Meeting of the Catalysis Society, Louisville, KY, June 2013
161. "Characterization of Gold Nanoparticles via Advanced Powder X-ray Diffraction Analysis," O'Connell, K., Zhong, C.-J., and Regalbuto, J.R., 23rd North American Meeting of the Catalysis Society, Louisville, KY, June 2013
162. "The Rational Synthesis of Pd/Pt Diesel Exhaust Catalysts," Cho, H.-R., and Regalbuto, J.R., 23rd North American Meeting of the Catalysis Society, Louisville, KY, June 2013 (poster)
163. "Effect of Nano-Particle Size, Support, and Potassium Dopant on Ruthenium Activity for Levulinic Acid Hydrogenation to Gamma-Valerolactone," Cao, S., and Regalbuto, J.R., 12th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2013
164. "Synthesis of Well Dispersed Ru and Pt on SBA-15 for Pyrolysis Oil Upgrading," Liu, Q., Joshi, U., and Regalbuto, J.R., 12th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2013
165. "The Rational Synthesis of Supported Pd/Pt Bimetallic Catalysts by Electrostatic Adsorption," Cho, H.-R., and Regalbuto, J.R., AIChE Annual meeting, San Francisco, November 2013
166. "Synthesis, Characterization of Bimetallic Ruthenium-Rhenium Catalysts by Strong Electrostatic Adsorption for Hydrogenation of Levulinic Acid to Gamma-Valerolactone," Cao, S., and Regalbuto, AIChE Annual meeting, San Francisco, November 2013
167. "Low Power, Baffle-Free Mixing With Contra-Rotating Impellers," Register, J., Regalbuto, J.A., and Regalbuto, J.R., AIChE Annual meeting, San Francisco, November 2013
168. "A Systematic Study of Alkali Promotion of Alumina Supported Ruthenium for Levulinic Acid Hydrogenation to ɣ-Valerolactone," Cao, S., Diao, W., Monnier, J.R., Williams, C.T., and Regalbuto, J.R., 24th North American Catalysis Society Meeting of the Catalysis Society, Pittsburgh, PA, June 2014
169. "Strong Electrostatic Adsorption Synthesis and Evaluation of Pyrolysis Oil Hydrodeox ygenation Catalysts on Hydrothermally Stable Supports," Liu, Q., Joshi, U., and Regalbuto, J.R., 24th North American Catalysis Society Meeting of the Catalysis Society, Pittsburgh, PA, June 2014 (poster)

170. "Resolving the XRD/STEM Versus Chemisorption Size Discrepancy of Pd/Carbon Catalysts: Chloride Poisoning or Carbon Decoration?," Banerjee, R., Tengco, J.M.M., and Regalbuto, J.R., 24th North American Catalysis Society Meeting of the Catalysis Society, Pittsburgh, PA, June 2014 (poster)
171. "Platinum Adsorption onto Acidic Composite Supports," Samad, J.E., Sayag, C., Blanchard, J., Louis, C. and Regalbuto, J.R., Gordon Research Conference on Catalysis, Colby-Sawyer College, NH, June 2014.
172. "The Rational Synthesis of Pt/Pd Catalysts by Electrostatic Adsorption," Cho, H.-R. and Regalbuto, J.R., 11th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, July 2014
173. "Chemisorption - XRD Particle Size Discrepancy of Carbon Supported Palladium: Carbon Decoration of Pd?," Tengco, J.M.M., Lugo-Jose, Y.K., Monnier, J.R., and Regalbuto, J.R., 11th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, July 2014 (poster)
174. "The Curious Sintering of Noble Metal Ethylenediamine Complexes in the Presence of Ammonium Hydroxide," O'Connell, K., and Regalbuto, J.R., 11th International Symposium of the Scientific Bases for the Preparation of Heterogeneous Catalysts, Louvain-la-Neuve, Belgium, July 2014 (poster)
175. "Rational Nanoparticle Synthesis to Study the Effects of Ruthenium Particle Size, Supports and Potassium Dopant for Levulinic Acid Hydrogenation to ɣ-Valerolactone," Cao, S., and Regalbuto, 248th ACS Meeting, San Francisco, August 2014
176. "Rational Synthesis of Pyrolysis Oil HDO Catalysts on Hydrothermally Stable Supports and Their Evaluation," Liu, Q., Joshi, U., and Regalbuto, J.R., 248th ACS Meeting, San Francisco, August 2014
177. (keynote) "Study of Ruthenium Particle Size Effect on Hydrogenation of Levulinic Acid (LA) to ɣ-Valerolactone (GVL)," Cao, S. and Regalbuto, J.R., 8th International Conference on Environmental Catalysis, Asheville, North Carolina, September, 2014
178. "Chemisorption - XRD Particle Size Discrepancy of Carbon Supported Palladium: Carbon Decoration of Pd?," Tengco, J.M.M., Lugo-Jose, Y.K., Monnier, J.R., and Regalbuto, J.R., 13th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2014
179. "Rational Synthesis of Pyrolysis Oil HDO Catalysts on Hydrothermally Stable Supports and Their Evaluation," Liu, Q., Joshi, U., and Regalbuto, J.R., 13th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2014
180. "A Scientific Method of Metal-Acid Bifunctional Catalyst Synthesis," Samad, J.E., Sayag, C., Blanchard, J., Louis, C. and Regalbuto, J.R. 13th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2014
181. "Preparation of Ru - Pt Bimetallic Catalysts Using Electroless Deposition, Characterization, and Applications for DMFC," Diao, W., Tengco, J.M.M., Monnier, J.R., and Regalbuto, J.R., 13th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, October 2014 (poster)
182. "A Systematic Study of Alkali Promotion of Alumina Supported Ruthenium for Levulinic Acid Hydrogenation to ɣ-Valerolactone," Cao, S., Diao, W., Monnier, J.R., Williams, C.T., and Regalbuto, J.R., 250th ACS Meeting, Boston, August 2015

183. "A Sprinkle of Salt for Simple Control of Metal Nanoparticle Size," Samad, J., Liu, Q., Eskandari, S., Copple, J., Satterwhite, C., and Regalbuto, J.R., 250th ACS Meeting, Boston, August 2015
184. "Role of Chloride in the Genesis of Supported Nanoparticles from Adsorbed Platinum Precursor," Regalbuto, J.R., Samad, J.E. and Liu, Q., 250th ACS Meeting, Boston, August 2015
185. "Bimetallic Ru-Pt and Pt-Co Fuel Cell Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition," Tengco, J.M.M., Wongkaew, A., Zhang, Y., Tavakoli, B.A., Diao, W., Weidner, J.W., Monnier, and Regalbuto, J.R., 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015
186. "A Systematic Study of Alkali Promotion of Alumina Supported Ruthenium for Levulinic Acid Hydrogenation to ɣ-Valerolactone," Cao, S., Diao, W., Monnier, J.R., Williams, C.T., and Regalbuto, J.R., 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015
187. "Effect of Balance and Proximity of Active Sites in Metal-Acid Bifunctional Catalysts," Samad, J.E., Sayag, C., Blanchard, J., Louis, C. and Regalbuto, J.R., 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015
188. "Mechanistic Approach to Pt Nanoparticle Synthesis of Mo_2C Surface," 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015 (poster)
189. "Investigation on Metal Particle Size Control: Hard and Soft Chemistry," Liu, Q., Samad, J., Copple, J., Satterwhite, C., and Regalbuto, J.R., 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015 (poster)
190. "Role of Carbon Supports in Stabilizing Platinum Nanoparticles," Banerjee, R., Tengco, J.M.M., and Regalbuto, J.R., 14th Annual Symposium of the Southeastern Catalysis Society, Ashville, NC, September 2015 (poster)
191. "Catalyst Synthesis of Ruthenium Hexammine on Silica by Strong Electrostatic Adsorption at High Surface Loadings," Bringley, R., Samad, J., and Regalbuto, J.R., AIChE Annual meeting, San Francisco, November 2015
192. "The Catalytic Behavior of Pt-Pd Bimetallic Catalysts," Wong, A., North American Catalysis Society Meeting, June 2015
193. "Bimetallic Ru-Pt and Pt-Co Fuel Cell Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition," Tengco, J.M.M., Wongkaew, A., Zhang, Y., Tavakoli, B.A., Diao, W., Weidner, J.W., Monnier, and Regalbuto, J.R., American Chemical Society, March 2016.
194. "Decoration in Carbon Supported Palladium Catalysts" Banerjee, R., and Regalbuto, J.R., 251st ACS Meeting, San Diego, March 2016
195. "Rational Design and Synthesis of Pt/Silica-Alumina Metal-Acid Bifunctional Catalysts," Samad, J., Blanchard, J., Sayag, C., Louis, C., and Regalbuto, J.R., 251st ACS Meeting, San Diego, March 2016
196. "Surface Free Energy Stabilization of Au Shells over Noble Metal Cores for the Hydrodechlorination of Acetylene," O'Connell, K.C., and Regalbuto, J.R., 251st ACS Meeting, San Diego, March 2016
197. "Controlling Supported Pt Nanoparticle Size with NaCl," Eskandari, S., and Regalbuto, J.R., 251st ACS Meeting, San Diego, March 2016 (poster)

198. "Optimizing Catalysts for Biomass Conversion," Regalbuto, J.R., SETA 2016, Bangkok, Thailand, March 2016
199. "Powder XRD Deconvolution of Crystalline Support from Metal Nanoparticles with High Sensitivity Silicon Slit Detector", Banerjee, R., Tengco, J.M.M., Liu, Q., and Regalbuto, J.R., 16th International Congress on Catalysis, Beijing, China, July 2016
200. "Bimetallic Ru-Pt and Pt-Co Fuel Cell Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition," Tengco, J.M.M., Tavakoli Mehrabadi, B.A., Diao, W., Zhang, Y., Wongkaew, A., Garrick, T.R., Weidner, J.W., Regalbuto, J.R., Monnier, J.M., 252nd American Chemical Society National Meeting, Philadelphia, August 2016
201. "Green Gasoline: A Better Biofuel," Regalbuto, 252nd American Chemical Society National Meeting, Philadelphia, August 2016
202. "Bimetallic Ru-Pt/C Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition for Direct Methanol Fuel Cell Application," Tengco, J.M.M., Diao, W., Tavakoli Mehrabadi, B.A., Garrick, T.R., Weidner, J.W., Regalbuto, J.R., Monnier, J.M., (poster) Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016
203. "Precise Deposition of Platinum Promoter Onto Silica Supported Cobalt and Iron Catalysts for Fischer-Tropsch Synthesis," Almalki, F., and Regalbuto, J.R., Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016.
204. "Role of Support in the Spontaneous Oxidation of Ultra-small Platinum Nanoparticles," Banerjee, R., and Regalbuto, J.R., Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016
205. "Preparation of Bimetallic Ni-Pt Catalysts by Electroless Deposition for Dry Reforming of Methane," Keels, J., Monnier, J.R., and Regalbuto, J.R., Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016
206. "Rational Synthesis and Evaluation of Pd Bimetallic Catalysts for Furfural Rearrangement to Cyclopentanone in Aqueous Phase," Liu, Q., and Regalbuto, J.R., Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016
207. "Synthesis of Highly-Alloyed Pt-Pd Bimetallics Over Mixed-Oxide Supports Using Strong Electrostatic Adsorption," Wong, A. Toops, T.J., and Regalbuto, J.R., Southeastern Catalysis Society Annual Meeting, Asheville, NC, September 2016
208. "Precise Deposition of Platinum Promoter onto Silica Supported Cobalt and Iron Catalysts for Fischer-Tropsch Synthesis," Almalki, F., Monnier, J.R., and Regalbuto, J.R., 2nd International Symposium on Catalytic Science and Technology in Sustainable Energy and Environment (EECAT), Tianjin, China, October 2016.
209. "Bimetallic Ru-Pt and Pt-Co Fuel Cell Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition," Tengco, J.M.M., Tavakoli Mehrabadi, B.A., Wongkaew, A., Zhang, Y., Diao, W., Garrick, T.R., Weidner, J.W., Regalbuto, J.R., Monnier, J.M., American Institute of Chemical Engineers Annual Meeting, San Francisco, November 2016.
210. "Precise Deposition of Pt Promoter onto Silica Supported Cobalt for Fischer-Tropsch Synthesis," Almalki, F., Monnier, J.M., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, November 2016.

211. "Carbon Decoration in Supported Palladium Catalysts: Discrepancy in STEM-Chemisorption Particle Sizes," Banerjee, R., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2016.
212. "Electrostatic Adsorption of Platinum onto Carbon Nanotubes and Fibers," Banerjee, R., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2016.
213. "Rational Synthesis and Evaluation of Pd Bimetallic Catalysts for Furfural Conversion," Liu, Q., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2016.
214. "Evaluation of the Stability of Electroless Deposition-Derived Nipt Bimetallic Catalysts for Dry Reforming of Methane," Keels, J., Monnier, J.R., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2016.
215. "Supported, Homogeneously Alloyed Bimetallic Nanoparticles by Electrostatic Adsorption," Wong, A., Liu, Q., and Regalbuto, J.R., American Institute of Chemical Engineers Annual Meeting, San Francisco, CA, November 2016.
216. "Supported, Homogeneously Alloyed Bimetallic Nanoparticles by Electrostatic Adsorption," Wong, A., Liu, Q., and Regalbuto, J.R., American Chemical Society Meeting, San Francisco, CA, April 2017.
217. "Nanoparticle Synthesis Via Electrostatic Adsorption Using Incipient Wetness Impregnation," Eskandari, S., and Regalbuto, J., American Chemical Society, San Francisco, CA, April 2017.
218. "Rectifying the Characterization of Carbon Supported Pd: Chloride Poisoning, Carbon Decoration, or Both?, Banerjee, R., and Regalbuto, J., American Chemical Society, San Francisco, CA, April 2017.
219. "Highly Dispersed Pt-Pd Bimetallic Catalysts for Diesel Exhaust Treatment," Wong, A., Toops, T., and Regalbuto, J., American Chemical Society, San Francisco, CA, April 2017.
220. "Bimetallic Ru-Pt/C Catalysts Prepared by Strong Electrostatic Adsorption and Electroless Deposition for Direct Methanol Fuel Cell Application," Tengco, J.M.M., Diao, W., Tavakoli Mehrabadi, B.A., Garrick, T.R., Weidner, J.W., Regalbuto, J.R., Monnier, J.M., North American Catalysis Society Meeting, June 2017.
221. "Employing Electrostatic Adsorption of Metal Precursors for the Preparation of Highly Dispersed Heterogeneous Catalysts," Rocky Mountain Catalysis Society, Idaho Falls, ID, May 2018.
222. "Synthesis of Active Bimetallic Catalysts for Direct Methanol Fuel Cells," Mehrabadi, B.A.T. White, R., Regalbuto, J.R., Weidner, W., and Monnier, J.R. The Electrochemical Society, Seattle, WA, May 2018.
223. Preparation of Small, Monodisperse Supported Au Nanoparticles via Strong Electrostatic Adsorption of Au Ethylenediamine, Noble, S.R., Barnes, S.E., Banerjee, R., and Regalbuto, J.R., Gold 2018, Paris, France.
224. "Effect of Carbon Oxidation on Supported Au/C Activituy and Stability for Acetylene Hydrochlorination," Noble, S.R., Alers, J., Monnier, J.R., and Regalbuto, J.R., Gold 2018, Paris, France.
225. "Catalytic Activity of Ultra-Small, Homogeneously Alloyed Bimetallic Nanoparticles Prepared by Co-Electrostatic Adsorption," De Castro, L.T., Shakouri, A., Adams,

R.D., Williams, C.T., and Regalbuto, J.R. American Chemical Society, San Diego, CA, March 2019.

226. "A Stability Analysis of Electroless Deposition Derived Ni-Pt Catalysts for the Dry Reforming of Methane," Egelske, B., Keels, J., Regalbuto, J.R., Monnier, J.R. 257th ACS National Meeting, Orlando, FL., March 2019.
227. "Catalytic Activity of Ultra-Small, Homogeneously Alloyed Bimetallic Nanoparticles Prepared by co-Electrostatic Adosrption," Regalbuto, J.R., Liu, Q.l, Keels, J., De Castro, A., and Dong, A., 257th ACS National Meeting, Orlando, FL., March 2019.
228. "Pushing the Limits of Charge Enhanced Dry Impregnation for Supported Metal Catalyst Preparation," Regalbuto, J.R., Eskandari, S., Dong, A., De Castro, L., Rahman, F., and Lipp, J., and., 257th ACS National Meeting, Orlando, FL., March 2019.
229. "A Stability Analysis of Electroless Deposition Derived Ni-Pt Catalysts for the Dry Reforming of Methane," Egelske, B., Keels, J., Regalbuto, J.R., and Monnier, J., 257th ACS National Meeting, Orlando, FL., March 2019.
230. "Rationalize Synthesis of Pt-Ru/ MWCNTs Bimetallic Catalysts for Methanol Oxidation Reaction," Mehrabadi, B.A.T., Xiong, W., White, R., Shakouri, A., Monnier, J., Weidner, J., and Regalbuto, J.R. 26th North American Meeting of the Catalysis Society, Chicago, IL, June 2019.
231. "Preparation of Small, Monodisperse Supported Au Nanoparticles Via Strong Electrostatic Adsorption of Au Ethylenediamine," Noble, S., Barnes, S., Banerjee, R., and Regalbuto, J.R. 26th North American Meeting of the Catalysis Society, Chicago, IL, June 2019.
232. "A Stability Analysis of Electroless Deposition Derived Ni-Pt Catalysts for the Dry Reforming of Methane," Egelske, B., Keels, J., Regalbuto, J.R., and Monnier, J., Natural Gas Symposium, San Antonio, TX, June 2019.
233. "Pushing the Limits of Electrostatic Adsorption: Charge Enhanced Dry Impregnation of SBA-15," Eskandari, S., Dong, A., De Castro, L., Rahman, F., Lipp, J., Blom, D., and Regalbuto. J.R. Southeastern Catalysis Society, June 2019.
234. "Selective Deposition of Pd onto Silica Supported Iron for Maintaining Fe0 during Hydrodeoxygenation," Lipp, J. Southeastern Catalysis Society 18th Annual Fall Symposium, September 2019.
235. "Stability of Platinum Nanoparticles Supported on Nitrogen-Doped Carbon," Rahman, F.B.A. Southeastern Catalysis Society 18th Annual Fall Symposium, September 2019.
236. "Strong Electrostatic Adsorption for the facile synthesis of supported, dilute limit alloy nanoparticles," De Castro, L. AIChE Fall Meeting, Orlando, FL, November 2019.
237. "Preparation of Small, Monodisperse Supported Au Nanoparticles Via Strong Electrostatic Adsorption of Au Ethylenediamine," Noble, S. National Organization for the Professional Advancement of Black Chemists and Chemical Engineers Meeting, November 2019.
238. "Nitrogen-doped Carbon: A Support to Synthesize Ultra-Small and Stable Pt - Nanoparticles," AIChE Fall Meeting, Orlando, FL, November 2019.
239. "Catalytic Activity of Ultra-Small, Homogeneously Alloyed Bimetallic Nanoparticles Prepared by co-Electrostatic Adsorption," Regalbuto, J.R., Liu, Q., De Castro, L.T., 28th Biennial Conference of the Organic Reactions Catalysis Society, Orlando, FL., March 2019 (cancelled due to pandemic).

240. "A Simple Synthesis of Supported, Dilute Limit Alloy Nanoparticles," De Castro, L., and Regalbuto, JR. 17th International Congress on Catalysis, San Diego, June 2020 (cancelled due to pandemic).
241. "Synthesis of Supported Pd/Au Dilute Limit Alloy Nanoparticles," Shakouri, A., Dong, A., Williams, C., and Regalbuto, JR. 17th International Congress on Catalysis, San Diego, June 2020 (cancelled due to pandemic).
242. "An In-Situ XRD Study of the Stabilization of Ultra-Small Platinm Nanoparticles by Nitrogen-Doped Carbon Supports," Rahman, F.B.A., Tien, H.N., Colon-Mercado, H., and Regalbuto, J.R., 17th International Congress on Catalysis, San Diego, June 2020 (cancelled due to pandemic).
243. "The Electrostatic Adsorption of Pd over Metal-Doped KIT-5 and KIT-6 for the Synthesis of Ultra-Small Pd Nanoparticles," Dong, A., Tengco, J.M.M., Ramanathan, A., and Regalbuto, J.R., 17th International Congress on Catalysis, San Diego, June 2020 (cancelled due to pandemic).
244. "Infrared Diagnosis of Site Isolation in Dilute Limit Alloys," De Castro, L, Williams, C., and Regalbuto, JR. 17th International Congress on Catalysis, San Diego, June 2020 (cancelled due to pandemic).
245. "Stabilization of Catalytic Surfaces Using Bimetallic Core-Shell Structures with Different Surface Free Energies (SFE)," Diao, W., Wong, A., Tengco, J.M.M., Regalbuto, J.R., and Monnier, J.R., AIChE Annual Meeting (Virtual), November 2020.
246. "Stabilization of Catalytic Surfaces Using Bimetallic Core-Shell Structures with Different Surface Free Energies (SFE)," Diao, W., Wong, A., Tengco, J.M.M., Regalbuto, J.R., and Monnier, J.R., AIChE Annual Meeting (Virtual), November 2020.
247. "Stabilization of Catalytic Surfaces Through Core-Shell Structures:" Ag-Ir/Al2O3 Case Study," Parizad, M., Wong, A., Tengco, J.M.M., Reber, A.C., Karakalos, S., Khanna, S., Regalbuto, J.R., and Monnier, J.R., AIChE Annual Meeting (Virtual), November 2020.
248. "A Simple, Generalizable Synthesis of PdAu/SiO2 Single Atom Alloy Catalysts," Dong, A., Shakouri, A., and Regalbuto, J.R., AIChE Annual Meeting (Virtual), November 2020.
249. "CO-FTIR Diagnosis of Atomic Isolation in Dilute Limit Alloy Catalysts," De Castro, L.T., Williams, C.T., and Regalbuto, J.R., AIChE Annual Meeting (Virtual), November 2020.

Invited Seminars

1. "The Effect of Calcination on Hydrogen Spillover Kinetics in Pt/MoO_3," U. Wisconsin at Milwaukee, April, 1988.
2. "A Theoretical Perspective of Industry's Responsibility for the Environment," Massachusetts Institute of Technology, Boston, Massachusetts, Dec. 8, 1989.
3. "A Fundamental Model for Wet Impregnation of Catalysts," University of Notre Dame, Jan. 29, 1991.
4. "Short Course on Catalyst Impregnation Fundamentals," UOP Research Center, Riverside, Illinois, July 30, 1995.

5. “A Structured Approach to Engineering Ethics,” Tulane University, Nov. 1996.
6. “Some Fundamentals of Pt Impregnation onto Alumina,” University of Iowa, Oct. 20, 1997.
7. “Some Fundamentals of Pt Impregnation onto Alumina,” Northwestern University, Feb. 20, 1998.
8. “The Good News and the Bad News of Online Pedagogy,” Lorain County Community College (Ohio), Aug. 20, 1999.
9. “The Science of Pt Impregnation onto Alumina,” Engelhard Corp., Iselin, N. J., Feb. 1, 2000.
10. “The Good News and the Bad News of Online Pedagogy,” UI-Online Retreat (U. of Illinois), Decatur, Il., Feb. 28, 2000.
11. “The Good News and the Bad News of Online Pedagogy,” Savannah State University, Savannah, Ga., Mar. 10, 2000.
12. “The Good News and the Bad News of Online Pedagogy,” Lehigh University, Mar. 15, 2000.
13. “The Good News and the Bad News of Online Pedagogy,” keynote address at the University of Richmond Tech Fair, May 2, 2000.
14. “The Good News and the Bad News of Online Pedagogy,” keynote address at the Austin Community College Faculty Workshop, Austin, Tx., Jan. 8, 2001.
15. “The Science of Pt Impregnation onto Alumina,” Engelhard Corp., Beachwood, OH, August, 2001.
16. “The Science of Pt Impregnation onto Alumina,” Scientific Design Corp., Little Ferry, N. J., March, 2002.
17. “Molecular Fundamentals of Noble Metal Catalyst Impregnation,” ABB Lummus, Newark, NJ, May, 2002.
18. “The Science of Pt Impregnation onto Alumina,” Degussa Corp., Paducah, KY., Jan. 2003.
19. “On the Way to Scholarship,” University of Notre Dame, March 2003.
20. “Molecular Fundamentals of Noble Metal Catalyst Impregnation,” Degussa Corp., Wolfgang-Hanau, Germany, July, 2003.
21. “The Engineering of Pt Adsorption onto Carbon,” Degussa Corp., Wolfgang-Hanau, Germany, July, 2003.
22. “Molecular Fundamentals of Noble Metal Catalyst Impregnation,” Umicore Corp., Wolfgang-Hanau, Germany, July, 2003.
23. “The Engineering of Pt Adsorption onto Carbon,” Umicore Corp., Wolfgang-Hanau, Germany, July, 2003.
24. “Molecular Fundamentals of Noble Metal Catalyst Impregnation,” Johnson Matthey Corp., Royston, England, July, 2003.
25. “Molecular Fundamentals of Noble Metal Catalyst Impregnation,” Catalytic Solutions, Inc. and Heraeus, Oxnard, CA, October, 2003.
26. “A Structured Approach to Engineering Ethics,” UOP/Honeywell Research Center, Des Plaines, Il., April, 2004.
27. “A Simple, Scientific Model of Noble Metal Catalyst Impregnation,” Rutgers University, September, 2004.
28. “A Simple, Scientific Method to Prepare Catalysts with Conventional Precursors,” Catalytic Solutions, Inc., Oxnard, CA, February, 2005.

29. “A Simple, Efficient Method to Prepare Pt/C Electrocatalysts,” Dow Chemical Company, Midland, MI, June, 2005.
30. “A Simple, Efficient Method to Prepare Pt/C Electrocatalysts,” Engelhard Corporation, Beachwood, OH, June, 2005.
31. “A Scientific Approach to Catalyst Impregnation,” Division of Chemical Engineering, Argonne National Laboratory, Argonne, Il, October, 2005.
32. “A Scientific Approach to Catalyst Impregnation,” Division of Chemistry, Argonne National Laboratory, Argonne, Il, January, 2006.
33. “The Impregnation of Carbon with Noble Metals,” University of Missouri at Rolla, March, 2006.
34. “The Catalysis and Biocatalysis Program at NSF,” U. Michigan, October, 2006
35. “A Rational Synthesis of Pt/C Fuel Cell Electrocatalysts,” Ford Research Center, Dearborn, Michigan
36. “The Catalysis and Biocatalysis Program at NSF,” U. Massachusetts Amherst, December, 2006.
37. “Funding in Catalysis at the National Science Foundation,” Honeywell/UOP Research Center, Des Plaines, Illinois, February, 2007.
38. “The Production of Highly Dispersed Metals via “Strong Electrostatic Adsorption”,” BASF, Iselin, NJ, March, 2007.
39. “Catalysis for Biofuels,” National Renewable Energy Laboratory, Golden, Colorado, March, 2007.
40. “A Simple, Rational Method to Prepare Highly Dispersed Catalysts,” Utrecht University, Utrecht, The Netherlands, March, 2007.
41. “Catalysis for Biofuels: an NSF Perspective,” Pacific Northwest National Laboratory, Pasco, Washington, April, 2007.
42. “Next Generation Hydrocarbon Biorefineries,” University of Iowa, Sept. 2007.
43. “Rational Methods of Catalyst Preparation,” Chevron Philips, Houston, Jan. 2008.
44. “Tales from a Schizophrenic Engineer: Funding Catalysis Research and Doing It, Too,” Columbia University, Feb. 2008.
45. “Green Gasoline,” NSF Press Briefing, Arlington, VA, Sept. 2008.
46. “Green Gasoline,” Congressional Briefing, Wash. D.C., Sept. 2008.
47. ”Clean Energy Research at NSF,” Joint Consultative Meeting with Poland, State Department, Wash. D.C., Mar. 2009.
48. “Next Generation Hydrocarbon Biorefineries,” Earth Day Talk, Ft. Belvoir, VA Apr. 2009.
49. “Next Generation Hydrocarbon Biorefineries,” American Petroleum Institute, Austin, Tx., Oct. 2009.
50. “Simple, Scientific Syntheses of Supported Catalysts,” University of Delaware, Newark, DE, Nov., 2009.
51. “Next Generation Hydrocarbon Biorefineries,” Philadelphia Catalysis Club, Philadelphia, PA, Nov. 2009.
52. “Next Generation Hydrocarbon Biorefineries: Drop –In Replacement Biofuels from Lignocellulose,” U. Illinois at Urbana Champaign, Dec. 2009.
53. “Tales of a Schizophrenic Engineer: Funding Catalysis Research and Doing It, Too,” U. Kansas, Lawrence, Kansas, Mar. 2010.
54. “Green Gasoline – A Better Biofuel,” U. South Carolina, Columbia, SC, Apr. 2010.

55. “A Simple, Scientific Method to Prepare Supported Metal Catalysts,” U. South Carolina, Columbia, SC, Apr. 2010.
56. “A Simple, Scientific Method to Prepare Supported Metal Catalysts,” Johnson Matthey Technical Center, Reading, UK, Apr. 2010.
57. “An NSF Perspective on Next Generation Hydrocarbon Biofuels,” Purdue University, May 2010.
58. “The Rational Preparation of Supported Metal Catalysts,” Northwestern University, May, 2010.
59. “A Rational Preparation of Supported Metal Catalysts,” Dow Chemical Company, Freeport, TX, October 2010.
60. “A Rational Synthesis of Supported Metal Catalysts,” ExxonMobil Research Center, Clinton, NJ, November 2010.
61. “Nanosctructured Catalysts for “Green Gasoline,”” 2010 NSF Nanoscale Science and Engineering Grantees Conference, Arlington, VA, December 2010.
62. “A Rational Synthesis of Supported Metal Catalysts,” Eastman Chemical Company, Kingston, TN, February 2011.
63. “A Rational Synthesis of Supported Metal Catalysts,” BP Research Center, Naperville, IL, March 2011.
64. “A Rational Synthesis of Supported Metal Catalysts,” SUNY Buffalo, Buffalo, NY, March 2011.
65. “A Rational Synthesis of Supported Metal Catalysts,” University of New Mexico, Albuquerque, NM, May 2011.
66. “The Importance and Measurement of the Point of Zero Charge for Supported Metal Catalyst Synthesis,” U. Pierre et Marie Curie, Paris, France, June 2011.
67. “Strong Electrostatic Adsorption for the Synthesis of Supported Metal Catalysts,” U. Pierre et Marie Curie, Paris, France, July 2011.
68. “Next Generation Hydrocarbon Biofuels,” IEP Energies Nouvelles, Lyon, France, July 2011.
69. “Green Gasoline – A Better Biofuel,” Green Technology Organization of Greater Chicago, Harper College, Chicago, IL, October 2011.
70. “Strong Electrostatic Adsorption for the Synthesis of Supported Metal Catalysts,” UOP, Des Plaines, IL, November 2011.
71. “A Rational Synthesis of Supported Metal Catalysts,” USDA Agricultural Research Service, Wyndmoor, PA, January 2012.
72. “A Rational Synthesis of Supported Metal Catalysts,” U. South Carolina Chemistry Department, Columbia, SC, January 2012.
73. “A Rational Synthesis of Supported Metal Catalysts,” Virginia Commonwealth University, Richmond, VA, October 2012.
74. “The Rational Synthesis of Supported Metal Catalysts,” Oak Ridge National Laboratory, Oak Ridge, TN, March 2014.
75. “The Rational Preparation of Supported Metal Catalysts,” BP Research Center, Naperville, IL, April 2014.
76. (Award lecture) “A Rational Synthesis of Supported Metal Catalysts,” The Catalysis Society of Metropolitan New York, New York, NY, May 2014.
77. “A Rational Preparation of Single and Bi-Metal Supported Catalysts,” The Tri-State Catalysis Society, Louisville, KY, September, 2014.

78. “A Rational Preparation of Single and Bi-Metal Supported Catalysts,” Clariant, Louisville, KY, September, 2014.
79. “A Rational Synthesis of Single and Bi-Metal Supported Catalysts,” Chulalongkorn University, Bangkok, Thailand, October 2014.
80. “A Rational Synthesis of Supported Metal Catalysts,” UNICAT Colloquium, Berlin, Germany, October 2014.
81. “With Shale Gas Do We Still Need Biofuels?” Regalbuto, J.R., Science Café, Columbia, SC, December 2015
82. “Simple, Scientific, Effective Methods to Prepare Supported Metal Catalysts,” Chiang Mai University, Thailand, March 2016.
83. “Simple, Scientific, Effective Methods to Prepare Supported Metal Catalysts,” Burapha University, Thailand, March 2016.
84. “A Rational Preparation of Supported Metal Catalysts,” 2nd European Summer School on Catalyst Preparation: Fundamental Concepts and Industrial Requirements, Vogue, France, June, 2016.
85. “The Importance and Measurement of the Point of Zero Charge for Supported Metal Catalyst Synthesis,” 2nd European Summer School on Catalyst Preparation: Fundamental Concepts and Industrial Requirements, Vogue, France, June, 2016.
86. “Extending Powder XRD Nanoparticle Characterization with High Sensitivity Solid State Detectors,” 2nd European Summer School on Catalyst Preparation: Fundamental Concepts and Industrial Requirements, Vogue, France, June, 2016.
87. “A Simple, Scientific Method to Prepare Highly Dispersed Supported Metal Catalysts,” Idaho National Lab, Idaho Falls, October, 2016.
88. “A Simple, Scientific Method to Prepare Highly Dispersed Supported Metal Catalysts,” Evonik Corporation, Calvert City, KY, November, 2016.
89. “A Simple, Scientific Method to Prepare Highly Dispersed Supported Metal Catalysts,” ThalesNano Corporation, Budapest, Hungary, November, 2016.
90. “A Simple, Scientific Preparation of Single and Bi-Metal Supported Metal Catalysts,” University of Pittsburgh, January, 2018
91. “Employing Electrostatic Adsorption of Metal Precursors for the Preparation of Highly Dispersed Heterogeneous Catalysts,” Chevron Phillips Chemical Company, Houston, February 2018.
92. “A Simple, Scientific Preparation of Single and Bi-Metal Supported Metal Catalysts,” Catalysis Society of Metropolitan New York, Bethlehem, PA, March, 2018
93. “Notes on Catalyst Preparation by Strong Electrostatic Adsorption,” Purdue University, Lafayette, IN, April, 2018.
94. “Pushing the Limits of Charge Enhanced Dry Impregnation for Supported Metal Catalyst Preparation,” Sorbonne -University of Pierre et Marie Curie, Paris, France, June 2019.
95. “Surface Physico-Chemistry, Interfacial Chemistry,” 3rd European Summer School in Catalyst Preparation, Vogue, France, June, 2019.
96. “The Importance and Measurement of the Point of Zero Charge for Supported Metal Catalyst Synthesis,” 3rd European Summer School in Catalyst Preparation, Vogue, France, June, 2019.
97. “A Scientific Method to Prepare Supported Catalysts,” Regalbuto, J.R. Chiang Mai University, Chiang Mai, Thailand, August 2019.

98. "Fundamentals of Catalyst Synthesis," workshop in advance of the 17th International Congress on Catalysis, June, 2020, San Diego (cancelled due to pandemic).
99. "A Simple, Generalizable Synthesis of Highly Dispersed Single Metal and Bimetal Supported Catalysts," ACS CATL Division Educational Seminar, October, 2020.

Research Funding

No.	Proposal Title	Sponsor	Status	Amount ($k) (Co-PI Amt.)	Period
1.	Hydrogen Bronze Promoters for Reduction Reactions	CRB	PI	6.5	07/1/86 – 6/30/87
2.	Characterization of HDS Catalysts	UOP	PI	10	3/1/87 – 2/28/88
3.	The Direct Conversion of Methane to Ethylene	Amoco	PI	26	6/1/87 – 5/30/88
4.	Methane Conversion Catalysis	Amoco	PI	26	2/1/88 – 1/31/89
5.	Improved Utilization of Natural Gas Resources	Illinois DCCA	PI	25	
6.	Fundamental Studies of Catalyst Preparation	NSF	PI	77	01/01/87 – 12/30/90
7.	Analysis of Post-Combustion Catalytic Emissions Treatment	GRI	PI	60	6/8/92 – 8/31/94
8.	A Catalytic Converter for Natural Gas Engines	CRB	PI	14	1/7/96 – 6/30/97
9.	The Selectivity of Noble Metal Adsorption over Mixed Oxides	UOP	PI	84.6	1/1/96 – 9/30/98
10a.	The Extension of a Scientific Model of Catalyst Impregnation	NSF	PI	299	12/15/99 – 11/30/02
10b	IBHE match	IBHE	PI	80	7/1/99 – 6/30/01
10c.	REU Supplement	NSF	PI	15.4	12/15/99 – 11/30/02
10. total				394	
11	REU Site for Novel Materials	NSF	coPI (1/5)	204 (40.8)	2/1/02 – 3/31/05
12a.	The Engineering of Noble Metal Catalyst Impregnation	NSF	PI	306	1/1/03 – 6/30/06
12b	IBHE match	IBHE	PI	44.6	7/1/03 – 6/30/04
12c.	REU supplement	NSF	PI	8.5	7/1/03 – 6/30/06
12d	Foreign travel supplement	NSF	PI	10	7/1/04 – 6/30/05
12. total				369	
13a.	Acquisition of Surface Analysis Instrumentation for Teaching and Research at the University of Illinois at Chicago	NSF	PI, 4 co-PIs	280	8/15/03 – 2/28/05
13b	IBHE match	IBHE	PI, 4 co-PIs	165	7/1/03 – 6/30/04
13. total				465	

14.	A Survey of Metal Adsorption onto Bulk and Supported Niobia	CBMM	PI, 1 co-PI	180	8/1/04 – 7/31/07
15.	The Development of Metal Supported Carbon Materials	Honey-well	PI	150	3/1/05 – 12/31/06
16a.	Simple, Scientific Syntheses of Bimetallic and Mixed Oxide Catalysts	NSF	PI	320	7/1/06 – 6/30/09
16b	REU supplement	NSF	PI	6	7/1/07 – 6/30/08
16c.	IREE supplement	NSF	PI	18	7/1/07 – 6/30/08
16. total				344	
17a.	Non-Platinum Cathode Catalysts	DOE/ EERE	PI sub-contract by ANL	400	2/01/07 – 1/30/11
17b	OVCR match	UIC		80	2/01/07 – 1/30/11
17. total				480	
18.	Supported Pt Catalysts for Propane Oxidation	Honey-well	PI	50	3/1/09 – 2/28/11
19.	Optimized Fischer-Tropsch Catalysts	Chevron Phillips	PI	80	3/1/09 – 2/28/11
20.	GOALI: Scientific Syntheses of Bimetallic Catalysts	NSF	PI	332	9/1/12 – 8/30/16
21.	Distributed On-Farm Bioenergy (Task 2.4)	USDA-NIFA	Co-PI	7,800 (350)	10/1/13 – 9/30/17
22.	Bimetallic Electrocatalyst Synthesis	USC	Co-PI	100 (33)	4/1/13 – 3/30/14
23.	Support for the 2014 Gordon Conference on Catalysis	NSF	PI	15	4/1/14 – 3/30/15
24.	Support for the 2014 Gordon Conference on Catalysis	DOE	PI	10	4/1/14 – 3/30/15
25.	Planning Grant for the Center of Rational Catalyst Synthesis	NSF	PI	17	3/1/14 – 2/28/15
26.	Fundamental Studies of Bimetallic Fuel Cell Catalysts	Toyota	Co-PI	180 (90)	3/1/14 – 2/28/15
27.	The Center for Rational Catalyst Synthesis (I/UCRC) Phase I	NSF	PI	1,955	3/1/15 – 2/28/20
28.	The Selective Chlorination of Acetylene to Vinyl Chloride using Au-based Catalysts	NSF	Co- PI	450 (225)	8/15/15 – 8/14/18
29.	Catalysis for Renewables: Application, Fundamentals, and Technology (EPSCoR)	NSF	PI	4,000 (2,000)	6/1/15 – 5/31/19
30.	High Temperature Stable Bimetallic Catalysts for SO_3 Decomposition	DOE/ Greenway	Co-PI	100	12/1/18 – 11/30/17

31.	Catalysts for Heavy Oil Upgrading	DOE/ RAPID	PI	150	3/1/19 – 2/28/21
32.	EM-Enhanced Thermocatalytic Depolymerization of Mixed Plastic	DARPA	Co-PI	560 (159)	10/1/20-2/28/22
33.	EM-Enhanced Thermocatalytic Depolymerization of Waste Plastic	DOE/ EERE	Co-PI	560 (40)	06/01/20-05/31/23
34.	Em-Enhanced HyPOR Loop for Fast Fusion Fuel Cycles	ARPA-E	Co-PI	3,300 (195)	10/01/20-09/30/23
35.	Thermocatalytic Ethylene Production using Targeted RF Induction Heating	DOE/ EERE	Co-PI	2,500 (385)	01/01/21-12/31/23
36.	The Center for Rational Catalyst Synthesis (I/UCRC) Phase II	NSF	PI	1,150	01/01/20-12/31/24
Total PI + (co-PI): $10.15 million					

Postdoctoral Associates Advised

1. Marc Schreier, "Fundamental Studies of Noble Metal Impregnation of Titania and other Oxides," 2005.
2. Stefanie Lambert (Fullbright Scholar, U. Liege, Belgium), "The Impregnation of Platinum onto Novel Carbon Xerogels," 2006.
3. Lawrence D'Souza, "Fundamental Studies of Noble Metal Impregnation of Titania and Other Oxides," 2006-2008.
4. E. Sambandan, "The Preparation of Bimetallic Electrocatalysts," 2008.
5. Chongjiang Cao, "Optimization of Promoted FT Catalysts," 2008-10.
6. Upendra Joshi, "Development of Hydrothermally Stable Supports for Biomass Conversion," 2014
7. Weijin Diao, "Rational Bimetallic Catalyst Synthesis," 2015-16
8. John Tengco, "Rational Bimetallic Catalyst Synthesis," 2016-present
9. Ritubarna Banerjee, "Noble Metal Nanoparticle Synthesis and Characterization on Carbon Supports," 2016-2019
10. Bahareh Mehrabadi, "Catalyst Precursor Adsorption Modelling and Electrocatalyst Synthesis," 2017-2018
11. Sonia Eskandari, "Charge Enhanced Dry Impregnation," 2017-2018
12. Ngoc Tien Huynk, "Carbon Supported Catalyst Synthesis," 2018-2019

Graduate Students Advised

Ph. D. degrees completed

1. Abhay Datta, "A Study of the Morphology of Silica Supported MoO_3," 1990.

2. Promod Kumar, “Preparation of Silica, Surface Characterization and Adsorption at the Oxide/Aqueous Interface,” 1991.
3. Jin-Gul Kim, “The Effect of Calcination on Benzene Hydrogenation over $Pt/MoO_3/SiO_2$, 1992.
4. Muhamed Kazeminy, “An A-Priori Model for Pt Adsorption over Alumina,” 1992.
5. Jin-Wook Ha, “Structure-Function Relationships in Controlled Morphology MoO_3/SiO_2 for Methanol Oxidation, 1993.
6. Jaehyeon Park, “The pH Buffering Effect and Charging Behavior of Oxides in Aqueous Solutions,” 1995.
7. Su Manarungsun, “The Selectivity of Pd Adsorption onto CeO_2/Al_2O_3 Supports, 1995
8. Krishna Agashe, “A Revised Physical Adsorption Model,” 1998.
9. Wolfgang Spieker, “The Selectivity of Pt Adsorption over Mixed Oxides,” 2000.
10. Xianghong Hao, “The Engineering of Pt Adsorption onto Carbon,” 2004.
11. Marc Schreier, “Toward a Fundamental Understanding of Oxide Impregnation,” 2004.
12. Bill Newren (with co-advisors June Wencel-Drake and James Ferguson), “Flow Dependent Blood-Material Interactions on Prosthetic Vasculature,” 2004.
13. Jianming Liu, “A Fundamental Investigation of Noble Metal Adsorption onto Alumina,” 2005.
14. Yuhui Zha, “Noble Metal Adsorption over Niobia Supports,” 2007.
15. Ling Jiao, “The Synthesis of Highly Dispersed Metals on Silica by Strong Electrostatic Adsorption,” 2007.
16. Theresa Feltes, “The Selective Adsorption of a Manganese Promoter over Supported CO Hydrogenation Catalysts,” 2010.
17. Sean Barnes, “Synthesis of Single and Bimetallic Catalysts Using Strong Electrostatic Adsorption,” 2010.
18. Xiaoru Zhu, “The Preparation of Pt/Re/C and Pd/Re/C Bimetallic Catalysts by Strong Electrostatic Adsorption,” 2012.
19. HyeRan Cho, “The Preparation of Pd/Pt/C Bimetallic Catalysts by Strong Electrostatic Adsorption,” 2013.
20. John Tengco, “Synthesis of Well Dispersed Supported Metal Catalysts by Strong Electrostatic Adsorption and Electroless Deposition,” 2016.
21. Kerry O’Connell, “Characterization, Synthesis and Stabilization of Au Based Bimetallic Catalysts for the Hydrochlorination of Acetylene,” 2016.
22. Jadid Samad, “Rational Design and Synthesis of Pt/Silica-Alumina Metal-Acid Bifunctional Catalysts,” 2016
23. Shuo Cao, “Rational Synthesis to Optimize Ruthenium-Based Biomass Conversion Catalysts,” 2016

24. Ritubarna Banerjee, “The Oxidation and Decoration Chemistry of Platinum and Palladium Nanoparticles on Carbon Supports,” 2016
25. Qiuli Liu, “Rational Synthesis of Catalysts for Biomass Conversion,” 2017
26. Jay Keels, “Development of Bimetallic Catalysts for Dry Reforming of Methane and Hydrogenation of Succinic Acid,” 2018
27. Sonia Eskandari, “Design, Synthesis and Characterization of Monometallic and Bimetallic Catalysts,” 2018
28. Sean Noble, “Investigation of Oxidized carbon supported Au catalysts synthesized via Strong Electrostatic Adsorption of $Au(en)_2Cl_3$ for the Hydrochlorination of Acetylene to Vinyl Chloride Monomer,” 2020

Ph. D. degrees in progress

1. Jeremiah Lipp, expected 2021
2. Andy De Castro, expected 2021
3. Mozhdeh Parizad, expected 2022
4. Fahim Rahman, expected 2022
5. Anhua Dong, expected 2023
6. Saqib Patwary, expected 2023
7. Alaba Ojo, expected 2024

M.S. degrees completed

1. Hasan Hannoun, “Characterization of a Novel Micro-Berty Reactor,” 1989
2. Amal Shah, “Retardation of Platinum Adsorption over Different Supports,” 1992
3. Narendra Santhanam, “The Reversibility of Metal Precursor Adsorption onto Oxide Supports,” 1993.
4. Zongxuan Hong, “A Study of Sulfided Mo Catalysts: On Structure-Function Relationships and Nature of Adsorption Sites,” 1995.
5. Elina Glusker (with co-advisor, Jeff Miller), “Selective Reduction of Nitrogen Oxides by Methane with Cobalt-Mordenite Catalysts in the Presence of Excess Oxygen,” 1995.
6. Rajasekar Peddi (with co-advisor, Jeff Miller), “The Role of Metal and Proton Sites in Lean NO_x Reduction with Propylene,” 1997.
7. Safoora Hashim, “The Estimation of Oxide Surface Composition by pH Measurement,” 1998
8. Krithiga Sundaram, “A Comparison of Pt Adsorption on Oxide and Zeolite Supports,” 1998
9. Silas Shadid, “A Fundamental Study of CPA Adsorption onto Alumina,” 1998.
10. Syed Massarat, “Catalytic Lean NO_x Reduction,” 2000.
11. Weiyu Xu, “The Speciation of Noble Metal Coordination Complexes,” 2002.

12. Mark Liska "The Activity of Novel Nanolayer Catalysts for the Water Gas Shift Reaction," 2003.
13. Mike Castorano "Optimization of Pt Adsorption over High Surface Area Carbon Blacks," 2005.
14. Eric Kratzer "The Impregnation of Carbon with Palladium," 2006.
15. Rick Shen, "TPR and XPS Characterization of $Co/Nb_2O_5/Al_2O_3$ Materials," 2007.
16. Kirk McNamara "The pH and Coverage Dependence of Pt Adsorption onto Silica via Strong Electrostatic Adsorption," 2007.
17. PJ Patel, "Pt/TiO_2 catalysts for Propane Oxidation," 2011.
18. Malini Pasupan, "The Simulation of Platinum Adsorption onto Carbon," 2011.
19. Manuel Nieto, "Optimization of Pt/Carbon Catalyst Synthesis," 2012.
20. Shuo Cao, "Effect of Nanoparticle Size, Support and Potassium Dopant on Ruthenium Activity for Levulinic Acid Hydrogenation to γ-Valerolactone," 2013

Undergraduate Projects Completed:

1. Alpen Pandy, 1996
2. Harsh Walia, 1996
3. Seema Verma, 1997
4. Tim Gilligan, 1996-7
5. Elinor Yu, 1997
6. Ginalyn Teng, 1997
7. Kelly Harmon, 1999.
8. Erika Villareal, 2000.
9. Nelida Flores, 2001.
10. Jancy Korah (REU), 2001.
11. Linh Quach (REU), 2001.
12. Teresa Feltes (REU), 2002.
13. Melanie Timmons (REU), 2002.
14. Barbara Hendrickson (REU), 2002.
15. Jenny Anderson, 2002.
16. Peter O'Brien, 2002.
17. Joe Bucik, 2002.
18. Sarah Terens (REU), 2003.
19. Tonya Belcher (REU), 2003.
20. Jaime Robles (REU), 2003-4
21. Joe Lahay, 2005-6
22. Tom Vander Velde, 2006-6
23. Jennifer Hamlet, 2006-7
24. Joe Gomes, 2007-8
25. Anna Gawel, 2010
26. Jeff Tyska, 2010
27. Dennis Rodarte, 2010
28. Brian Mottel, 2010
29. Kevin Uber, 2012
30. Joshua Blease, 2012
31. Sean Hoenig (REU), 2013
32. Eric Bringley, 2015
33. John Copple (REU), 2015
34. Christine Satterwhite (REU), 2015
35. Shirlandra Griffin (REU), 2015
36. Khalid Askar, 2016
37. Nathan Leaphart, 2017
38. Susan McQuiston, 2016
39. Brandon Bolton, 2016
40. Rembert White, 2017-2019
41. Jessica Alers, 2018
42. John Weiss, 2019
43. Gillian Donnelly, 2019
44. Connor McDonough, 2019
45. Matt Shelly, 2019
46. Ashton Aleman, 2019

Summary of Teaching Assignments and Evaluations

Year	Fall	Winter	Spring
1985-6			ChE 493 (5.8/6) Catalyst Characterization
1986-7	ChE 201 (5.5/6, 5.2/6) Intro. Thermodynamics		ChE 235/7 (4.5/6, 4.8/6) Unit Operations Lab.
1987-8	ChE 201 (5.2/6, 5.1/6) Intro. Thermodynamics	ChE 493 Catalyst Characterization	ChE 287 (5.3/6) Mass Transfer
1988-9	ChE 201 (5.4/6, 5.3/6) Intro. Thermodynamics	ChE 299 (4.9/5) Engineering Ethics	ChE 287 (4.0/5) Mass Transfer
1989-90	CEMM 393 Solid Thermodynamics	CEMM 392 Electron Microscopy	ChE 287 (4.5/5) Mass Transfer
1990-1	ChE 424 (4.8/5) Catalyst Characterization	ChE 299 (4.3/5) Engineering Ethics	ChE 201 (4.3/5, 4.4/5) Intro. Thermodynamics
1991-2	ChE 321 (4.3/5) Reaction Engineering		ChE 392 (4.6/5) Engineering Ethics
1992-3	ChE 321 (4.6/5) Reaction Engineering ChE 524 Catalyst Characterization		ChE 527 (4.2/5) Advanced Reaction Engineering ChE 201 (summer) Intro. Thermodynamics
1993-4	ChE 210 (4.2/5) Material and Energy Balances		ChE 527 (4.3/5) Advanced Reaction Engineering ChE 423 (4.3/5) Catalytic Reaction Engineering ChE 210 (summer) Material and Energy Balances
1994-5	Sabbatical leave		
1995-6	ChE 321 (4.5/5) Reaction Engineering		ChE 201 (4.5/5) Intro. Thermodynamics ChE 301 (4.0/5) ChE Thermodynamics
1996-7	ChE 321 (4.3/5) Reaction Engineering ChE 524 Catalyst Characterization		ChE 311 Transport I
1997-8	ChE 494 (4.4/5) Intro to Catalysis		ChE 321 (4.3/5) Reaction Engineering ChE 301 ChE Thermodynamics
1998-9	ChE 524 (4.2/5) Catalyst Characterization		ChE 398 (3.8/5) Senior Design II ChE 381/2 Unit Operations Lab HON 201 (1 hr) Ethics Seminar

1999-00	ChE 201 (4.5/5) Intro. Thermodynamics ChE 313 (4.3/5) Transport III	ChE 321 (4.7/5) Reaction Engineering HON 201 (1 hr) Ethics Seminar
2000-1	ChE 201 (4.5/5) Intro. Thermodynamics ChE 524 (4.4/5) Catalyst Characterization	ChE 313 (4.5/5) Transport III HON 201 (1 hr) Ethics Seminar
2001-2	ChE 321 (4.7/5) Reaction Engineering ChE 423 Catalytic Reaction Engineering	ChE 313 (4.9/5) Transport III HON 201 (1 hr) (4.7/5) Ethics Seminar
2002-3	ChE 201 (4.7/5) Intro. Thermodynamics	ChE 301 (4.6/5) ChE Thermodynamics ChE 527 (4.5/5) Advanced Reaction Engineering ChE 397 (project advisor) Senior Design II
2003-4	Sabbatical leave	
2004-5	ChE 201 (4.7/5) Intro. Thermodynamics HON 201 (1 hr) Ethics Seminar	ChE 201 (4.8/5.0) Intro. Thermodynamics ChE 321 (3.6/5.0) Reaction Engineering
2005-6	ChE 201 (4.7/5) Intro. Thermodynamics	Hon 103 (4.6/5) Professional Ethics ChE 524 (4.9/5) Catalyst Characterization
2006-9	(IPA assignment to NSF – no teaching)	
2009-10	ChE 301 (4.4/5) Chem. Engr. Thermodynamics	ChE 201 (4.2/5) Intro. Thermodynamics
2010-11	ChE 201 (4.7/5) Chem. Engr. Thermodynamics ChE 524 (4.8/5) Catalyst Characterization	ChE 201 (4.8/5) Intro. Thermodynamics
2011-12		ECHE 310 (4.50/5) Intro. Thermodynamics
2012-13	ECHE 300 (4.75/5) Chem. Process Principles	ECHE 573 (4.85/5) Next Energy
2013-14	ECHE 300 (4.53/5) Chem. Process Principles	ECHE 300 (4.76/5) Chem. Process Principles
2014-15	ECHE 440 (3.76/5) Separation Process Design	ECHE 589 (4.33/5) Catalyst Characterization ENCP 789 (4.83) Engineering Ethics

2015-16	ECHE 440 (4.24/5) Separation Process Design	ECHE 310 (4.36/5) Intro. Thermodynamics
2016-17	ECHE 310 (4.66/5) Intro. Thermodynamics	ECHE 573 (4.29/5) Next Energy ENCP 789 Engineering Ethics
2017-18	ECHE 310 (4.69/5) Intro. Thermodynamics	ECHE 300 (4.8/5) Chem. Process Principles
2018-19	Sabbatical leave	
2019-20	ECHE 440 (4.30/5) Separation Process Design	ECHE 589 (4.56/5) Heterogeneous Catalysis
2020-21	ECHE 440 (tbd) Separation Process Design	ECHE 300 (tbd) Chem. Process Principles

Service

Departmental

Graduate Working Group of the EAB, 2012-13
Graduate Committee 1992-3, 2009-10 (DGS, 1995-8, 2002-3, Assoc. DGS 1998-2001, 2004-6)
Search Committee, Department Head, 1995-6, 2001-2002
Undergraduate Committee 1992-4, 98-99, 2000-01 (chair, 1997-8, 2001-2)
Advisory Committee 1992-3, 95-6, 2004-6
Student Appeals Board, 1991-2, 2001-2, 2003-6
Seminar Coordinator, 1993-4
Computer/Unit Ops Lab Committee 1992-3

College of Engineering

Awards Committee, 1995-9, 2000-01
Faculty Advisor for Tau Beta Pi, 1988-98
Galassini Award Committee Chair, 1992-8
Materials Education Committee, 1994
Environmental Engineering Program Development Committee 1993-4
Educational Policy Committee, 1999-2001

University

Director, NSF I/UCRC, Center for Rational Catalyst Synthesis (CeRCaS), 2015-present
UIC Council for Excellence in Teaching and Learning (CETL), 1996-2000, Chair 2005-6
U. of Illinois Global Campus Initiative, Academic Affairs Subcommittee, 2005-6
UIC Online Oversight Committee, 2000-3, 2005-6
UIC Blended Learning Steering Committee, 2005-6
Campus Research Board Reviewer, 2003-5
RRC Advisory Committee, 1988, 2006
RRC Project Coordinator Search Committee, 1994
UIC Excellence in Teaching Awards Committee, 1997, 98

Internal Review Committee, MPA program, 1998-9
Graduate College Executive Committee, 1998-2000
Chair, all-U. of Illinois (Chicago, Urbana-Champaign, Springfield) faculty seminar on "Teaching at an Internet Distance: The Pedagogy of Online teaching and Learning," 1998-99

External to University

Session Chair: Characterization and Kinetic Studies of Multimetallic Catalysts, AIChE Annual Meeting, 1989
Session Chair: Fundamentals of Oxides II, AIChE Annual Meeting, 1992
Registration Chair: 15th North American Meeting of the Catalysis Society, Chicago, 1997
Program Chair, Catalysis Society of Chicago, 1999-2000, 2004-5
President, Catalysis Society of Chicago, 2000-01, 2005-6
Session Chair: Fundamentals of Supported Catalysts, AIChE Annual Meeting, 2001
Session Chair: Fundamentals of Supported Catalysts, AIChE Annual Meeting, 2002
Symposium Organizer: The Science and Engineering of Catalyst Preparation, 227th ACS Meeting, 2004
Conference Co-Chair and Secretary: The 5th International Symposium on Group 5 Compounds, 2005
Session Organizer/Chair: Symposium in Memory of Professor Jim Schwarz, 230th ACS Meeting, 2005
Session Organizer/Chair: Science and Engineering of Catalyst Preparation, AIChE Annual Meeting, 2006-present
Chair, Interagency Working Group (DOE, USDA, NSF, DOI, EPA) on Biomass Conversion of the National Biomass R&D Initiative Board, 2006-09
Session Chair: Basic Understanding and Innovations in Unit Operations, 10th International Symposium on the Scientific Bases for the Preparation of Heterogeneous Catalysts, 2010
Academic Chair, 2011 NSF Nanoscale Science and Engineering Grantees Conference, Arlington, VA.
Vice Chair, Gordon Research Conference on Catalysis, Colby Sawyer College, New Hampshire, 2012
External Advisory Board, Institute for Catalysis in Energy Processes, Northwestern University, 2010-12
Session Organizer/Chair: Synthesis of Catalysts I and II, 244th ACS Meeting, 2012
Director/Member at Large, Catalysis and Reaction Engineering Div., American Chemical Society, 2013-2019
North American Catalysis Society Awards Committees (multiple years)
Participant, National Roundtable on Industrial Catalysis Revitalization, American Council on Chemistry Working Group, Pittsburgh, 2015

Reviewer:

Nature, Science, J. Catalysis, Applied Catalysis A, Applied Catalysis B, J. Colloid and Interface Science, Langmuir, J. Physical Chemistry, Catalysis Today, Catalysis Letters, J. Molecular Catalysis, J. American Chemical Society, Energy and Fuel, California Energy Agency, NSF Individual and Panel Reviews: XYZ on a Chip

(2001), NIRT Catalysis (2002), SBIR Phase I Manufacturing Innovations (2003), Unsolicited – Catalysis and Biocatalysis (2005), SBIR Phase II Manufacturing Innovations (2005), SBIR Phase I Manufacturing Innovations (2006), AAAS (2009-present), NSF ERC review team, Center for Biorenewable Chemicals (CBiRC, Iowa State), 2010-2016, Advisory Board, NSF CREST Center, North Carolina AT&T Bioenergy Center, 2013-present, DOE EERE BioEnergy Technology Office ChemCatBio Program Peer Review Team, 2019.