JOHN MEYNARD MACASERO TENGCO

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(312) 912-4641

EDUCATION

University of South Carolina – Columbia (August 2011 to May 2016)
PhD in Chemical Engineering
Columbia, SC 29208
Degree Awarded: 7 May 2016

University of Illinois at Chicago (August 2010 to August 2011)
Doctoral Student - Chemical Engineering
Chicago, IL 60607

University of the Philippines Los Baños (June 2002 to May 2007)
BS in Chemical Engineering, Cognate: Management (*cum laude*)
College of Engineering and Agro - Industrial Technology, College, Laguna 4031 Philippines
Degree Awarded: 8 June 2007

University of the Philippines Rural High School (June 1998 to April 2002)
High School Diploma
Paciano Rizal, Bay, Laguna 4033 Philippines
Diploma Awarded: 19 April 2002

PROFESSIONAL EXPERIENCE

Research Assistant Professor, University of South Carolina, Department of Chemical Engineering, 301 Main St., 2C02, Columbia, SC 29208 USA
Employer Phone: 803-777-4181

Employment Period: 1 October 2021 – present
Hours per week: 40
Supervisors: Prof. John R. Regalbuto; Prof. John R. Monnier; Prof. Melissa Moss

Duties: Conduct independent research in catalysis; perform scholarly and collaborative research with department faculty and with outside collaborators engaged in areas of mutual interests in topics of preparation, characterization, and evaluation of novel catalysts; oversee the management and direction of certain research programs, including supervising students, interacting with funding agencies and/or outside companies, and leading research group meetings; prepare technical reports and proposals, write manuscripts for publication in professional journals, and give presentations at meetings and conferences; and manage research laboratory activity, equipment and inventory with procurement of research supplies, and assist other scholars and collaborators in their research activities.

Postdoctoral Fellow, University of South Carolina, Department of Chemical Engineering, 301 Main St., 2C02, Columbia, SC 29208 USA
Employer Phone: 803-777-4181

Employment Period: 11 July 2016 – 30 September 2021
Hours per week: 40
Supervisor: Prof. John R. Regalbuto

Duties: Conduct scientific research on catalyst development for conversion of lignocellulosic biomass to alternative fuels or intermediate substrates and fine chemicals. Collaborate with researchers from University of Kansas for the design and evaluation of catalysts. Perform management of activities

and needs of the research group such as maintenance of research equipment, training of instrument users, procurement of supplies, as well as safety documentation and training.

Graduate Research Assistant, University of South Carolina, Department of Chemical Engineering, 301 Main St., 2C02, Columbia, SC 29208 USA
Employer Phone: 803-777-4181

Employment Period: 16 August 2011 – 9 May 2016
Hours per week: 20
Supervisor: Prof. John R. Regalbuto

Duties: Conduct studies and collaborate with other researchers concerning principles of catalyst preparation as well as the characterization and evaluation of synthesized catalysts. Perform management of activities and needs of the research group such as maintenance of research equipment, training of instrument users, procurement of supplies, as well as safety documentation and training.

Graduate Teaching Assistant, University of Illinois at Chicago, Department of Chemical Engineering
810 S. Clinton St., Chicago, IL 60607 USA
Employer Phone: 312-996-3424

Employment Period: 16 August 2010 – 31 May 2011
Hours per week: 20
Supervisor: Prof. John R. Regalbuto

Duties: Assist in CHE 201 under Prof. J.R. Regalbuto. Duties include leading discussion classes, evaluating student output and serving as substitute lecturer.

Instructor 3, University of the Philippines Los Baños, Department of Chemical Engineering
A.P. Aglibut Ave., College, Laguna 4031 Philippines
Employer Phone: +63 49 536-2315

Employment Period: 11 December 2007 – 31 May 2010
Hours per week: 40
Supervisors: Prof. Rex B. Demafelis and Prof. Jovita L. Movillon

Duties: Full time faculty member providing instruction of assigned chemical engineering courses and serve in specific committees of the college.

Student Assistant, University of the Philippines Los Baños, Department of Chemical Engineering
A.P. Aglibut Ave., College, Laguna 4031 Philippines
Employer Phone: +63 49 536-2315

Employment Period: July 2005 – 31 October 2005
Hours per week: 20
Supervisor: Prof. Rex B. Demafelis

Duties: Assist in day to day functions of the department such as inventory, recordkeeping and file management, communications, and student affairs.

PUBLICATIONS and PRESENTATIONS

PEER REVIEWED JOURNAL ARTICLES and CONFERENCE TRANSACTIONS

1. AU Ojo, DM Shakya, J Stetzler, M Gbadamosi, RM Masudur, N Acharya, N Thornburg, J Tengco, SK Balijepalli, JR Monnier, DA Chen, JR Regalbuto, The enhanced reactivity of graphitic supports for Pd catalyzed toluene hydrogenation. *J.Catal.*, **445**, 116029. 2025

2. H Zhou, W Xiong, A Shakouri, Y Lu, JR Regalbuto, JR Monnier, JMM Tengco, Precision Size Control of Supported Pd and Pt Nanoparticles via Controlled Electroless Deposition. *Catalysts*, **15** (2), 156. 2025

3. T Larison, ER Williams, M Wright, M Zhang, J Tengco, MG Boebinger, C Tang, M Stefik, One-Pot Self-Assembly of Sequence-Controlled Mesoporous Heterostructures via Structure-Directing Agents. *ACS Nano*, **18** (31), 20133-20141. 2024

4. MM Rahman, BT Egelske, K Enyekwe, JM Tengco, JR Monnier, Characterization of Ag/α-Al2O3 olefin epoxidation catalysts containing promoters and co-promoters using pulse hydrogen titration methods. *J.Catal.*, **429**, 115244. 2024

5. Burkholder, M., Rahman, F.B.A., Chandler, E., Regalbuto, J.R., Gupton, B.F., Tengco, J.M.M., Metal supported graphene catalysis: A review on the benefits of nanoparticular supported specialty sp^2 carbon catalysts on enhancing the activities of multiple chemical transformations. *Carbon Trends*, **9**, 100196. 2022

6. Parizad, M., Wong, A.P., Reber, A.C., Tengco, J.M.M., Karakalos, S.G., Khanna, S.N., Regalbuto, J.R., Monnier, J.R., Stabilization of Catalytic Surfaces through Core–Shell Structures: Ag–Ir/Al2O3 Case Study. *ACS Catalysis*, **10** (22), 13352-13363. 2020

7. DeLucia, N.A., Jystad, A., Laan, K.V., Tengco, J.M.M., Caricato, M., Vannucci, A.K., Silica Supported Molecular Palladium Catalyst for Selective Hydrodeoxygenation of Aromatic Compounds under Mild Conditions. *ACS Catalysis*, **9** (10), 9060-9071. 2019

8. Key, R.J., Tengco, J.M.M., Smith, M.D., Vannucci, A.K., A Molecular/Heterogeneous Nickel Catalyst for Suzuki–Miyaura Coupling. *Organometallics*, **38** (9), 2007-2014. 2019

9. Srinivasan, P.D., Khivantsev, K., Tengco, J.M.M., Zhu, H., Bravo-Suarez, J.J., Enhanced ethanol dehydration on ɣ-Al_2O_3 supported cobalt catalyst. *J.Catal.*, **373**, 276-296. 2019

10. Gilliland III, S.E., Tengco, J.M.M., Yang, Y., Regalbuto, J.R., Castano, C.E., Gupton, B.F., Electrostatic adsorption-microwave synthesis of palladium nanoparticles on graphene for improved cross-coupling activity. *Appl. Catal. A-Gen*, **550**, 168-175. 2018

11. Banerjee, R., Liu, Q., Tengco, J.M.M., Regalbuto, J.R., Detection of Ambient Oxidation of Ultrasmall Supported Platinum Nanoparticles with Benchtop Powder X-Ray Diffraction. *Catal. Lett.*, **147** (7), 1754-1764. 2017

12. Wongkaew, A., Zhang, Y., Tengco, J.M.M., Blom, D.A., Sivasubramanian, P.K., Fanson, P.T., Regalbuto, J.R., Monnier, J.R., Characterization and Evaluation of Pt-Pd Electrocatalysts Prepared by Electroless Deposition. *Appl. Catal. B-Environ*, **188**, 367-375. 2016

13. Garrick, T.R., Diao, W., Tengco, J.M.M., Stach, E.A., Senanayake, S.D., Chen, D.A., Monnier, J.R., Weidner, J.W., The effect of the surface composition of Ru-Pt bimetallic catalysts for methanol oxidation. *Electrochim. Acta*, **195**, 106-111. 2016

14. Tengco, J.M.M., Tavakoli Mehrabadi, B.A., Zhang, Y., Wongkaew, A., Regalbuto, J.R., Weidner, J.W., 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*, **6** (6), 83. 2016

15. Diao, W., Tengco, J.M.M., Regalbuto, J.R., Monnier, J.R., Preparation and characterization of Pt-Ru bimetallic catalysts synthesized by electroless deposition methods. *ACS Catal.*, **5** (9), 5123-5134. 2015

16. Tengco, J.M.M., Lugo-José, Y.K., Monnier, J.R., Regalbuto, J.R., Chemisorption–XRD particle size discrepancy of carbon supported palladium: Carbon decoration of Pd? *Catal. Today*, **246**, 9-14. 2015

17. Galhenage, R.P., Xie, K., Diao, W., Tengco, J.M.M., Seuser, G.S., Monnier, J.R., Chen, D.A., Platinum-Ruthenium Bimetallic Clusters on Graphite: A Comparison of Vapor Deposition and Electroless Deposition Methods. *Phys. Chem. Chem. Phys.*, **17** (42), 28354-28363. 2015

18. Garrick, T.R., Diao, W., Tengco, J.M.M., Monnier, J.R., Weidner, J.W., The Effect of Bimetallic Surface Composition for Methanol Oxidation. *ECS Transactions*, **53** (29), 79-84. 2013

BOOK CHAPTER

1. Rajamanickam, M., Tengco, J.M.M., Ramanathan, A., Regalbuto, J.R., Subramaniam, B., Effects of Pd nanoparticle loading and support acidity on liquid phase hydrodeoxygenation of oxygenated aromatics. *Advanced Heterogeneous Catalysts Volume 1: Applications at the Nano-Scale, 213-238*. 2020

2. Diao, W., Tengco, J.M.M., Gaffney, A.M., Regalbuto, J.R., Monnier, J.R., Rational synthesis of bimetallic catalysts using electroless deposition methods. *Catalysts, Volume 32*, 116-150. 2020

PUBLICATIONS IN PREPARATION

1. Liu, Q., Tengco, J.M.M., Banerjee, R., Keels, J.M., Copple, J.E., Regalbuto, J.R., Accurate Subtraction and Deconvolution of Pt Nanoparticles from Crystalline Supports Using Powder XRD with a High Sensitivity Detector. *Article In Preparation*.

2. Benerjee, R., Liu, Q., Samad, J.E., Tengco, J.M.M., Regalbuto, J.R., Support Microporosity Effects on the Stability of Platinum Nanoparticles. *Article In Preparation*.

3. Cho, H.R., Barnes, S., Tengco, J.M.M., Shaw, G., Hutchings, G.J., Sanchez, S.I., Bradley, S.A., Regalbuto, J.R., Electrostatic Adsorption for the Synthesis of Highly Active Bimetallic Au/Pd/Carbon Catalysts for Benzyl Alcohol Oxidation. *Article In Preparation*.

4. Rahman, F.B.A., Tengco, J.M.M., Diao, W., Adhikari, B., Ginosar, D., Regalbuto, J.R., Corgnale, C., Monnier, J.R., Stabilization of Ir@Pt bimetallic catalysts for high temperature SO_3 to SO_2 decomposition to produce H_2 and O_2 using hybrid-sulfur water-splitting process. *Article In Preparation*.

5. Zhou, H., Patwary, M.F., Monnier, J.R., Tengco, J.M.M., Galvanic displacement prepared novel bimetallic Cu-Ni catalysts for methylcyclohexane dehydrogenation. *Article In Preparation*.

6. Tengco, J.M.M., Shariati, K., Mehrani, A., Zhou, H., Lauterbach, J., Yi, Y., Chen, D., The deactivation of oxide supported platinum catalysts the dehydrogenation of methylcyclohexane to toluene. *Article In Preparation*.

7. Enyekwe, K., Bhasin, M.M., Godini, H.R., Regalbuto, J.R., Monnier, J.R., Tengco, J.M.M., Improved Study of the Oxidative Coupling of Methane at Elevated Pressure and Temperature: investigating gas phase OCM using calculated void volume in a reactor. *Article In Preparation*.

8. Regalbuto, J.R., Monnier, J.R., Tate, G.L., Tengco, J.M.M., Experimental Heterogeneous Catalysis: A Primer on Catalyst Preparation, Characterization, and Evaluation. *Book In Preparation*.

PRESENTATIONS

1. MF Patwary, H Zhou, JM Tengco, J Monnier, Novel Close-Contact Cu-Ni Bimetallic Catalysts for Enhanced Methylcyclohexane Dehydrogenation.
– Oral Presentation, *29th North American Catalysis Society Meeting*, Atlanta, GA, USA (2025)

2. M Gbadamosi, K Shariati, Y Yi, JM Tengco, T Onsree, A Mehrani, JM Urban-Klaehn, J Monnier, J Lauterbach, D Chen, Development of Pt-Based Catalysts for the Dehydrogenation of Liquid Organic Hydrogen Carriers.
– Poster Presentation, *29th North American Catalysis Society Meeting*, Atlanta, GA, USA (2025)

3. K Enyekwe, JM Tengco, J Monnier, J Regalbuto, M Bhasin, HR Godini, Improved Study of the Oxidative Coupling of Methane at Elevated Pressure and Temperature: Investigating Gas Phase OCM Using Calculated Void Volume in Reactor.
– Oral Presentation, *29th North American Catalysis Society Meeting*, Atlanta, GA, USA (2025)

4. JM Tengco, H Zhou, W Xiong, B Egelske, A Wongkaew, J Regalbuto, JR Monnier, The Growth of Supported Nanoparticle Sizes Via Controlled Electroless Deposition.
– Oral Presentation, *29th North American Catalysis Society Meeting*, Atlanta, GA, USA (2025)

5. MM Rahman, BT Egelske, K Enyekwe, JM Tengco, JR Monnier, Characterization of Ag/α-Al2O3 olefin epoxidation catalysts containing promoters and co-promoters using pulse hydrogen titration methods.
– Oral Presentation, *2024 Southeastern Catalysis Society Symposium*, Atlanta, GA, USA (2024)

6. H Zhou, Y Yi, MF Patwary, JMM Tengco, DA Chen, JR Monnier, Development of Highly Controlled Cu-Ni Bimetallic Catalysts using Galvanic Displacement.
– Oral Presentation, *2024 Southeastern Catalysis Society Symposium*, Atlanta, GA, USA (2024)

7. H Zhou, Y Yi, JM Tengco, JR Monnier, Development of Highly Controlled Bimetallic Catalysts Using Galvanic Displacement.
– Oral Presentation, *28th North American Catalysis Society Meeting*, Providence, RI, USA (2023)

8. Parizad, M., Tengco, J.M.M., Tate, G., Diao, W., Monnier, J.R., Mixed Metal Oxide Catalysts for Oxidative Dehydrogenation of Ethane to Ethylene.
– Oral Presentation, *27th North American Catalysis Society Meeting*, New York, NY, USA (2022)

9. Tengco, J.M.M., Rajamanickam, M., Huynh, N.T., Ramanathan, A., Khivantsev, K., Regalbuto, J.R., Subramaniam, B., Supported palladium catalyst structure and acidity effects on liquid phase hydrodeoxygenation.
– Poster Presentation, *26th NSF EPSCoR National Conference*, Columbia, SC USA (2019)

10. Tengco, J.M.M., Monnier, J.R., Regalbuto, J.R., Well-Dispersed Pt-Co Catalysts with Alloy Nanoparticles Using Electrostatic Adsorption and Electroless Co-Deposition Synthesis Methods.
– Oral Presentation, *26th North American Catalysis Society Meeting*, Chicago, IL, USA (2019)

11. Tengco, J.M.M., Tavakoli, B.A., Diao, W., Weidner, J.W., Monnier, J.R., Regalbuto, J.R., Bimetallic Ru-Pt/C catalysts prepared by strong electrostatic adsorption and electroless deposition for direct methanol fuel cell application.
– Oral Presentation (delivered by JR Regalbuto), *16th International Congress on Catalysis*, Beijing, China (2016)
– Poster Presentation, *15th Southeastern Catalysis Society Annual Fall Symposium*, Asheville, NC, USA (2016)
– Oral Presentation, *25th North American Catalysis Society Meeting*, Denver, CO, USA (2017)

12. Tengco, J.M.M., Tavakoli, B.A., Wongkaew, A., Zhang, Y., Diao, W., Weidner, J.W., Monnier, J.R., Regalbuto, J.R., Bimetallic Ru-Pt and Pt-Co fuel cell catalysts prepared by Strong Electrostatic Adsorption and Electroless Deposition.
– Oral Presentation, *14th Southeastern Catalysis Society Annual Fall Symposium*, Clemson, NC, USA (2015)
– Oral Presentation, *252nd National Meeting of the American Chemical Society*, Philadelphia, PA, USA (2016)
– Oral Presentation, *2016 American Institute of Chemical Engineers Annual Meeting*, San Francisco, CA, USA (2016)

13. Tengco, J.M.M., Lugo-Jose, Y.K., Monnier, J.R., Regalbuto, J.R., Chemisorption - XRD Particle Size Discrepancy of Carbon Supported Palladium: Carbon Decoration of Pd?
– Poster Presentation, *11th International Symposium on the Scientific Bases for the Preparation of Heterogeneous Catalysts*, Louvain-la-Neuve, Belgium (2014)
– Oral Presentation, *13th Southeastern Catalysis Society Annual Fall Symposium*, Asheville, NC, USA (2014)

14. Tengco, J.M.M., Lugo-Jose, Y.K., Regalbuto, J.R., Monnier, J.R., Evidence of Carbon Support Decoration on Palladium by Temperature Programmed Oxidation.
– Poster Presentation, *12th Southeastern Catalysis Society Annual Fall Symposium*, Asheville, NC, USA (2013)

15. Tengco, J.M.M., Diao, W., Monnier, J.R., Regalbuto, J.R., Synthesis, Characterization and Evaluation of Highly Dispersed Bimetallic Catalysts for Fischer-Tropsch Reaction.
– Oral Presentation, *North American Catalysis Society – 23rd North American Meeting*, Louisville, KY, USA (2013)

16. Tengco, J.M.M., Diao, W., Regalbuto, J.R., Monnier, J.R., The Electroless Deposition of Ruthenium onto Carbon Supported Platinum.
– Poster Presentation, *11th Southeastern Catalysis Society Annual Fall Symposium*, Asheville, NC, USA (2012)

17. Tengco, J.M.M., Maguyon, M.C.C., Capunitan, J.A., Migo, V.P., Alfafara, C.G., Electrolytic removal of ammonia in simulated seawater in the presence of organic matter from shrimp feed extract.
– Poster Presentation, *36th Annual Convention of the Kapisanang Kimika ng Pilipinas (Chemical Society of the Philippines) – Southern Tagalog Chapter*, College, Laguna, Philippines (2007)

PATENTS AND PATENT APPLICATIONS

1. Monnier, J.R., Diao, W., Regalbuto, J.R., Tengco, J.M.M., D. Ginosar,D., Adhikari, B., "Thermally Stable Porous Catalyst Systems and Methods to Produce the Same," US Patent 11,826,728.

2. Gilliland, S.E., Gupton, B.F., Castano, C.E., Tengco, J.M.M., Regalbuto, J.R., "Carbon based materials as solid-state ligands for metal nanoparticle catalysts," US Patent 11,219,892.

3. Monnier, J.R., Tengco, J.M.M., Rahman, M., "Thermodynamic-based methods for formation of promoted metal catalysts," US Patent Application 18,748,743.

4. Monnier, J.R., Tengco, J.M.M., Zhou, H., Yi, Y., Patwary, M.F., "Bimetallic Fuel Cell Catalysts for dehydrogenation reactions," US Patent Application 18,819,427.

THESES AND DISSERTATIONS

1. Tengco, J.M.M., Chen, D.A., Weidner, J.W., Monnier, J.R., Regalbuto, J.R., Synthesis of Well Dispersed Supported Metal Catalysts by Strong Electrostatic Adsorption and Electroless Deposition.
- Doctoral Dissertation, *University of South Carolina*, Columbia, SC, USA (May 2016)

2. Tengco, J.M.M., Maguyon, M.C.C., Capunitan, J.A., Migo, V.P., Alfafara, C.G., Electrolytic removal of ammonia in simulated seawater in the presence of organic matter from shrimp feed extract.
- Undergraduate Thesis, *University of the Philippines Los Baños*, College, Laguna (May 2007)

3. Tengco, J.M.M., Cerico, D.J.V., Biobutanol Production from Corn Stover.
– Undergraduate Plant Design, *University of the Philippines Los Baños*, College, Laguna (March 2007)

GRANTS FUNDED, AWARDS, and HONORS

GRANTS ("PI" – Principal Investigator, "co-PI" – co-Principal Investigator):

[Application Submitted] Department of Energy – EPSCoR (co-PI): *Development of Ferromagnetic Catalysts Through Spin Manipulation for On-Demand Hydrogen Production. DE-FOA-0003444. Co-PI Funding Amount: $283,333 to co-PI, 8/16/2025 to 8/15/2027*

Department of Energy – Clean Energy Manufacturing (co-PI): *Design of New Catalysts for the Generation of Clean H2 from Liquid Organic Hydrogen Carriers: Dehydrogenation of Methylcyclohexane on Bimetallic Catalysts. Grant No. DE-SC0023376. Co-PI Funding Amount: $600,048 to co-PI, 9/1/2022 to 8/31/2025*

EcoC2 Industries, LLC (PI): *Evaluate catalysts for EcoC2 Industries, LLC. PI Funding Amount: $250,000 to PI, 4/1/2022 to 8/31/2025*

Center for Rational Catalyst Synthesis – A National Science Foundation Industry-University Cooperative Research Center (PI: $120,000)

CeRCaS Project 69 (co-PI): *Promoted copper-based bimetallic catalysts prepared using electroless deposition and galvanic displacement for carbon dioxide conversion to higher alcohols (Project 55 Year 2). Funding Amount: $52,000 to PI*
CeRCaS Project 59 (co-PI): *Bimetallic Single Atoms, Clusters, and Nanoparticles via Switched Solvent Chelate Enhanced Synthesis. Funding Amount: $52,000 to PI*
CeRCaS Project 58 (PI): *Supported Mixed Metal Oxide Catalysts for Oxidative Dehydrogenation of Ethane to Ethylene. Funding Amount: $60,000*
CeRCaS Project 55 (co-PI): *Improved Catalysts for Direct Reduction of CO2 to Methanol Using Bimetallic Catalysts Using Electroless Deposition Methods. Funding Amount: $60,000 to PI*
CeRCaS Project 48 (PI): *Bimetallic Catalysts on Commercial Extruded Supports Prepared by Electroless Deposition. Funding Amount: $60,000*
CeRCaS Project 38 (co-PI): *Development of Highly Dispersed Bimetallic Catalysts using the method of Galvanic Displacement. Funding Amount: $60,000 to PI*
CeRCaS Project 27 (co-PI): *Precision tuning of supported nanoparticle size via Electroless Deposition: $60,000 to PI*

ASPIRE I - Track 2B (PI, Postdoctoral Research, University of South Carolina): *Well-dispersed Pt-based supported metal catalysts with alloy nanoparticles using electrostatic adsorption and electroless co-deposition synthesis methods. Funding Amount: $5,000*

Southeastern Catalysis Society
2nd Place Award for Oral Presentation, 14th Annual Fall Symposium (September 2015)

Southeastern Catalysis Society
Best Oral Presentation, 13th Annual Fall Symposium (September 2014)

Professional Regulation Commission – Board of Chemical Engineering
7th Place, November 2007 Philippine National Chemical Engineering Licensure Examination (13-15 November 2007)

College of Engineering and Agro-Industrial Technology, University of the Philippines Los Baños
Graduate with Honors (April 2007)
University Scholar (1st and 2nd Sem, AY 2002-2003; 1st and 2nd Sem, AY 2003-2004; 1st Sem, AY 2004-2005)
College Scholar (2nd Sem, AY 2004-2005; 1st Sem, AY 2005-2006; 2nd Sem, AY 2006-2007)

University of the Philippines Rural High School
Natatanging Gawad Panday-Dunong (Special Achievement Award) (April 2002)
4th year Honor Student (April 2002)
3rd year Honor Student (April 2001)

Philippine Chemistry Congress - 1st Philippine National Chemistry Olympiad
Champion
Cagayan de Oro City (May 2001)

PROFESSIONAL GATHERINGS

29th North American Catalysis Society Meeting
Hyatt Regency, Atlanta, GA (8-13 June 2025)

2024 Southeastern Catalysis Symposium
GRTI Conference Center / Georgia Tech Convention Center, Atlanta, GA (12-13 February 2024)

Catalysis Club of Philadelphia November 2022 Meeting and Seminar
Brandywine Plaza Hotel, Claymont, DE (10 November 2022)

27th North American Catalysis Society Meeting
Hilton Midtown, New York, NY (22-27 June 2022)

26th NSF EPSCoR National Conference
Columbia Metropolitan Convention Center, Columbia, SC (27-30 October 2019)

26th North American Catalysis Society Meeting
Hyatt Regency, Chicago, IL (23-28 June 2019)

16th Southeastern Catalysis Society Annual Fall Symposium
Four Points by Sheraton Hotel, Asheville, NC (24-25 September 2017)

25th North American Catalysis Society Meeting
Hyatt Regency, Denver, CO (4-9 June 2017)

2016 American Institute of Chemical Engineers Annual Meeting
San Francisco, CA (13-18 November 2016)

15th Southeastern Catalysis Society Annual Fall Symposium
Crowne Plaza Resort, Asheville, NC (18-19 September 2016)

252nd National Meeting of the American Chemical Society
Philadelphia, PA (21-25 August 2016)

14th Southeastern Catalysis Society Annual Fall Symposium
Madren Conference Center and James F. Martin Inn, Clemson, SC (27-28 September 2015)

13th Southeastern Catalysis Society Annual Fall Symposium
Crowne Plaza Resort, Asheville, NC (14-15 September 2014)

12th Southeastern Catalysis Society Annual Fall Symposium
Crowne Plaza Resort, Asheville, NC (29-30 September 2013)

23rd North American Catalysis Society Meeting
Galt House Hotel, Louisville, KY (2-7 June 2013)

11th Southeastern Catalysis Society Annual Fall Symposium
Crowne Plaza Resort, Asheville, NC (30 September - 1 October 2012)

Catalysis Club of Chicago Annual Spring Symposium
BP Research Center, Naperville, IL (19 May 2011)

Energy Forward 2011, The University of Chicago Booth School of Business Energy Group Conference
UChicago Gleacher Center, Chicago IL (2 March 2011)

Workshop on Self-Assembled Bio-Inspired Materials for Energy
Argonne National Laboratory, IL (4-5 February 2011)

2008 UPLB Seminar on Teaching
AG Samonte Hall, UPLB, Laguna, PH (May 2008)

36th Annual Convention of the Kapisanang Kimika ng Pilipinas (Chemical Society of the Philippines) – Southern Tagalog Chapter
Local Government Academy, UPLB (6 – 7 November 2007)

29th National Academy of Science and Technology Annual Scientific Meeting
Manila Hotel, Manila, PH (11 – 12 July 2007)

OTHER EXPERIENCES, PROJECTS, AND EVENTS ORGANIZATION

University of South Carolina – Columbia (Research Assistant Professor):

PhD Committee Member for:

Haiying Zhou, PhD awarded 2024, committee for dissertation defense
Kevin Enyekwe, PhD candidate 2025, committee for comprehensive exam

Peer Reviewer for Journals:

Articles reviewed (17): AIChE Journal (1), Elsevier Applied Catalysis A: General (3), RSC Catalysis Science and Technology (3), MDPI Catalysts (4), MDPI Materials (2), MDPI Molecules (1), MDPI Nanomaterials (3)

University of South Carolina – Columbia (Postdoctoral Fellowship):

"Catalysis for Renewables Applications Fundamentals and Technologies" – NSF EPSCoR Grant (1539105)
- Development of bifunctional catalysts for biomass conversion to value added chemicals

University of South Carolina – Columbia (Graduate Studies):

"New Catalysts for Direct Ethanol Fuel Cells" – USC ASPIRE Grant 2012-2013
- Development of Pt-Ru catalysts using Electroless Deposition Method

"Bimetallic Fuel Cell Catalysts" – Toyota and USC Center for Rational Catalyst Synthesis Project
- Development of Pt-Pd and Pt-Co catalysts using Electroless Deposition Method

Assistance to Visiting Scholars:

Dr. Catherine Louis - Laboratoire de Réactivité de Surface, CNRS-Université Pierre et Marie Curie, France

Dr. Akkarat Wongkaew – Burapha University, Thailand

USC Catalysis and Electrocatalysis Graduate Student Seminars: *"The Catalysis and Krispy Kremes Early Seminars (T-CAKKES)" usccatalysistalks.wordpress.com – Organizer and Web Administrator*

University of the Philippines Los Baños (Faculty Appointment):

UPLB-Botolan,Bataan Community Rehabilitation/Relocation Site Assessment
Team Member
January 2010 to April 2010

Department of Chemical Engineering, CEAT, UP Los Baños
25th Anniversary of the institution of the BS Chemical Engineering program
Preparations/Planning, Fund Raising, Audio-Visual Presentations and Website Administration
- February 2010 to March 2010
Web Developer and Administrator – DChE and CEAT Websites

- June 2008 to May 2010
Additional committee appointments (e.g. Laboratory Safety, Computer and Academic)
- January 2008 to May 2010

University of the Philippines Los Baños (Undergraduate):
Makiling Challenge (Road Race)
13 September 2009 – Member, Results Processing and Advising Committee
12 September 2008 – Race Director
29 July 2007 – Member, Executive Committee, Web Admin and Advising Committee
23 July 2006 – Member, Executive Committee and Web Admin
11 September 2005 – Member, Executive Committee and Web Admin
10 September 2004 – Member, Route Marshalls

1st Runners Confederation of the Philippines National Convention
Audio-Visual Materials Design and Production Team
26 August 2006

ORGANIZATIONS

American Chemical Society
Joined July 2016

North American Catalysis Society
Joined April 2013

Southeastern Catalysis Society
Joined September 2012

Catalysis Club of Chicago
Joined February 2011

Philippine Institute of Chemical Engineers
Joined December 2007

Kapisanang Kimika ng Pilipinas (Chemical Society of the Philippines) – Southern Tagalog Chapter
Joined November 2007

Gamma Sigma Delta Honor Society of Agricultue – UPLB Chapter
Joined March 2007

Makiling Campus Runners
Joined April 2004
Junior Faculty Adviser (June 2008 – May 2010)
President (November 2005 – October 2006)
Treasurer (November 2004 – October 2005)