

## *Curriculum Vitae*

### **Eleni A. Kyriakidou, PhD**

Assistant Professor, Chemical and Biological Engineering Department

University at Buffalo, The State University of New York

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[Group Website](#)

[Google Scholar](#)

[Web of Science](#)

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### **EDUCATION**

- **PhD, Chemical Engineering** [December 2014]  
University of South Carolina (USC) – Columbia, SC  
Thesis Title: Synthesis of Au and Ag Catalysts with Controlled Sizes of Metal Particles  
Advisor: Dr. Michael D. Amiridis
- **Diploma, Chemical Engineering** (5-year curriculum; MS equivalent) [November 2007]  
(GPA: 7.24/10 – **top 10% of class**)  
Aristotelian University of Thessaloniki – Thessaloniki, Greece  
Thesis Title: Catalytic and electrocatalytic production of hydrogen (H<sub>2</sub>) Water Gas Shift (WGS) reaction in a proton-conduction cell-reactor using a Pd (palladium) catalyst.  
Advisor: Dr. Michael Stoukidis

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### **EMPLOYMENT HISTORY**

- State University of New York at Buffalo** [Jan. 2017 – present]  
Chemical and Biological Engineering Department  
Assistant Professor
- Oak Ridge National Laboratory** [Sept. 2014 – Dec. 2016]  
Postdoctoral Research Associate  
Mentor: Dr. Todd J. Toops
- University of South Carolina** [Aug. 2008 – Aug. 2014]  
Graduate Research and Teaching Assistant, Department of  
Chemical Engineering, College of Engineering and Computing  
Advisor: Dr. Michael D. Amiridis

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### **HONORS AND AWARDS**

- “Catalysis” Gordon Research Conference Travel Award (06/2018).

#### Prior to UB:

- Richard J. Kokes Award, North American Catalysis Society Meeting (NAM), Louisville, KY, 06/2013.
- Travel award (AIChE Annual Conference 2013) by the Graduate School Office, USC.
- Student Poster Gold Award, 7<sup>th</sup> International Dendrimer Symposium, Gaithersburg, MD, 06/2011.
- Scholarship from the State Scholarships Foundation of Greece (years 2008 - 11). **Only** Chemical Engineering graduate from the country to receive full graduate fellowship to study in the US.

## GRANTS TO STUDENTS

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*(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively)*

- “Synthesis of Catalysts for Nitrogen Oxide and Hydrocarbon Capture at Low Temperatures”  
Sponsor: Center of Undergraduate Research & Creative Activities Fund (CURCA), UB  
Award amount: \$373; 10/2017 – 04/2018, Awardee: *Mr. Lakshay Chopra*<sup>UG</sup>
- “Novel Catalysts Synthesis for Low Temperature Automotive Applications”  
Sponsor: Mark Diamond Research Fund (MDRF), UB  
Awarded amount: \$1,270; 07/2017 – 06/2018, Awardee: *Mr. Yiran Chen*<sup>G</sup>
- “Catalytic Conversion of Methane to Useful Chemicals”  
Sponsor: Mark Diamond Research Fund (MDRF), UB  
Awarded amount: \$1,346; 07/2017 – 06/2018, Awardee: *Ms. Yuhan Mei*<sup>G</sup>

### Prior to UB:

- “Preparation of Supported Silver Nanoparticles via a Dendrimer-Mediated Synthetic Route”  
Sponsor: Magellan Undergraduate Research Fellowship, USC  
Award amount: \$2,500; May 2012 – Aug. 2013, Awardee: *Ms. Christina Papadimitriou* (USC undergraduate student)
- “Synthesis of Ag Catalysts with relatively Small Nanoparticles”  
Sponsor: Magellan Mini-grant Undergraduate Research Fellowship, USC  
Awarded amount: \$1,000; Aug. 2012 – May 2013, Awardee: *Ms. Christina Papadimitriou* (USC undergraduate student)

## CURRENT RESEARCH GROUP

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### **Ph.D. Graduate Students (4)**

- Mr. Tala Mon (Jan. 2020 – present), CBE University at Buffalo.
- Ms. Chih Han Liu (Jan. 2018 – present), CBE University at Buffalo.
- Mr. Junjie Chen (Jan. 2017 – present), CBE University at Buffalo.
- Mr. Jungkuk Lee (Jan. 2017 – present), CBE University at Buffalo.

### **MS Graduate Students (3)**

- Ms. Caitlin Horvatits (Jan. 2019 – present), CBE University at Buffalo.
- Mr. Kevin Giewont (Jan. 2020 – present), CBE University at Buffalo.
- Mr. Satyarit Rao (Jan. 2020 – present), CBE University at Buffalo.

### **Undergraduate Students (1)**

- Mr. Timothy Buchanan (May 2019 – present), CBE University at Buffalo.

## RESEARCH GROUP ALUMNI

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*(Current position in italics)*

*UB Masters students (2)*

- Siming Hoo (MEng) (Jan. 2018 – May 2019). *Ph.D. candidate at the Chemical and Materials Engineering Department at New Jersey Institute of Technology*
- Yiran Chen (MS) (Jan. 2017 – June 2018). *Yield Engineer, Intel Corporation, Phoenix, AZ*

#### *UB Undergraduate students (3)*

- Benjamin D. Carlson (June 2018 – May 2019). *Ph.D. candidate at the Chemical Engineering Department at the University of Rochester*
- Lakshay Chopra (Feb. 2017 – Apr. 2018). *CBE University at Buffalo.*
- Christine Ma (Jan. 2017 – May 2017). *Markforged High Strength 3D Printing Company, Watertown, MA*

#### *USC Undergraduate students (3)*

- Christina Papadimitriou (Apr. 2011 – Apr. 2013). *Associate Software Engineer – Asset Management Technology, JPMorgan Chase & Co., New York, NY*
- Thomas M. Gostanian (May 2011 – Jul. 2011). *Process Engineer, Bio-Rad Laboratories, Haverhill, MA*
- Cristina Kubicki (Jan. 2010 – Apr. 2010). *Process Automation Engineer, The Dow Chemical Company, Houston, TX*

## **STUDENTS ACCOMPLISHMENTS**

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*(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively)*

#### *Awards*

- Three Graduate Student Association (UB) Travel Awards (3x\$550), Buffalo, NY (08-10/2019) [J. Lee<sup>G</sup>, J. Chen<sup>G</sup>, and C.-H. Liu<sup>G</sup>]
- Outstanding presentation certificate, CBE Ph.D. seminar, Buffalo, NY (12/2018) [J. Lee<sup>G</sup>]

#### Prior to UB:

- 2<sup>nd</sup> Place Oral Presentation Award, AIChE 2013 Regional Conference, University of Kentucky, KY [C. Papadimitriou]
- 2<sup>nd</sup> Place Oral Presentation Award, AIChE 2012 Regional Conference, Clemson University, SC [C. Papadimitriou]
- 3<sup>rd</sup> Place Poster Award, AIChE 2011 Annual Student Conference, Minneapolis, MN [T.M. Gostanian]
- 1<sup>st</sup> Place Award Technical Oral Presentation, Chemical Engineering REU (Research Experience for Undergraduates) Research Symposium 2011, USC [T.M. Gostanian]
- 1<sup>st</sup> Place Oral Presentation Award, Discovery Day 2010, USC [C. Kubicki]

#### *Additional Presentations*

*(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively, and (\*) indicates the presenter)*

- J. Chen<sup>G\*</sup>, B.D. Carlson<sup>UG</sup>, J.-S. Choi, Z. Li, T.J. Toops, E.A. Kyriakidou, “Complete Combustion of Methane over Ni/CeO<sub>2</sub>-based Catalysts: A Kinetic Study”, Oral Presentation, Chemical and Biological Engineering Department Annual Research Symposium, Buffalo, NY (10/2019).

#### Prior to UB:

- C. Papadimitriou, Oral Presentation - Discovery Day, USC, 04/2013
- C. Papadimitriou, Poster Presentation - AIChE Annual Undergraduate Conference, Pittsburgh, PA, 10/2012.
- C. Papadimitriou, Poster Presentation - AIChE Annual Undergraduate Conference, Minneapolis, MN, 10/2011.

**PUBLICATIONS IN REFEREED JOURNALS (Google Scholar Citations: 100, h-index: 5, i10-index: 4)**

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(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively, and (†) indicates the corresponding author(s))

**Patents**

1. **E.A. Kyriakidou**, T.J. Toops, J.-S. Choi, M.J. Lance, J.E. Parks II, “Exhaust Treatment Catalysts with Enhanced Hydrothermal Stability and Low-Temperature Activity.” US Patent 10,427,137 B2 (October 1, 2019). **Citations: 1.**

**Peer-reviewed publications at UB**

**Manuscripts submitted to Referred Journals**

10. J. Chen<sup>G</sup>, B.D. Carlson<sup>UG</sup>, J.-S. Choi, Z. Li, T.J. Toops, **E.A. Kyriakidou**<sup>†</sup>, “Complete methane combustion over Ni/Ce<sub>x</sub>Zr<sub>1-x</sub>O<sub>2</sub> catalysts.” *Under Review* (September 2019).
9. S. Hoang, Y. Guo, X. Lu, W. Tang, S. Wang, S. Du, C.-Y. Nam, Y. Ding, A. Binder, **E.A. Kyriakidou**, T.J. Toops, W. Xiao, J. Ding, P.-X. Gao<sup>†</sup>, “Activating Low-Temperature Diesel Oxidation by Single-Atom Pt on TiO<sub>2</sub> Nanowire Array.” *Under Review* (December 2019).
8. **E.A. Kyriakidou**<sup>†</sup>, J. Lee<sup>G</sup>, J.-S. Choi, M. Lance, T.J. Toops<sup>†</sup>, “A comparative study of silver- and palladium-exchanged zeolites in propylene and nitrogen oxide adsorption and desorption for cold-start applications.” *Under Review* (October 2019).

**Published Journal Articles**

7. J. Lee<sup>G</sup>, J.R. Theis, **E.A. Kyriakidou**<sup>†</sup>, “Vehicle emissions trapping materials: successes, challenges, and the path forward.” *Applied Catalysis B: Environmental*, 243, 397-414 (2019). **IF: 14.229, Citations: 15.**
6. S. Du, W. Tang, Y. Guo, A. Binder, **E.A. Kyriakidou**, T.J. Toops, S. Wang, Z. Ren, S. Hoang, P.-X. Gao<sup>†</sup>, “Understanding Low Temperature Oxidation Activity of Nano-Array Based Monolithic Catalysts: from Performance Observation to Structural and Chemical Insights.” *Emission Control Science and Technology*, 3, 18-36 (2017). **IF: -, Citations: 4.**

**Peer-reviewed publications prior to UB (as Postdoctoral Research Associate and Graduate Research and Teaching Assistant)**

**Published Journal Articles**

5. A.P. Wong, **E.A. Kyriakidou**, T.J. Toops, J.R. Regalbuto<sup>†</sup>, “The Catalytic Behavior of Precisely Synthesized Pt-Pd Bimetallic Catalysts for Use as Diesel Oxidation Catalysts.” *Catalysis Today*, 267, 145-156 (2016). **IF: 4.888, Citations: 25.**
4. M.-Y. Kim, **E.A. Kyriakidou**, J.-S. Choi<sup>†</sup>, T.J. Toops, A.J. Binder, C. Thomas, J.E. Parks II, V. Schwartz, J. Chen, D.K. Hensley, “Enhancing Low-Temperature Activity and Durability of Pd-based Diesel Oxidation Catalysts Using ZrO<sub>2</sub> Supports.” *Applied Catalysis B: Environmental*, 187, 181-194 (2016). **IF: 14.229, Citations: 30.**

3. **E.A. Kyriakidou**, O.S. Alexeev, A.P. Wong, C. Papadimitriou, M.D. Amiridis, J.R. Regalbuto<sup>†</sup>, “Synthesis of Ag Nanoparticles on Oxide and Carbon Supports from Ag Diammine Precursor.” *Journal of Catalysis*, 334, 749-756 (2016). **IF: 7.723, Citations: 8.**
2. **E.A. Kyriakidou**, K. Khivantsev, T.M. Gostanian, O.S. Alexeev<sup>†</sup>, M.D. Amiridis<sup>†</sup>, “Silica-Supported Gold/Dendrimer Nanocomposites with Controlled Sizes of Gold Particles.” *Applied Catalysis A: General* 504, 482-492 (2015). **IF: 4.630, Citations: 5.**
1. Z. Nazarpour, K. Khivantsev, **Eleni A. Kyriakidou**, C. Kubicki, S. Ma, P.T. Fanson, O.S. Alexeev<sup>†</sup>, M.D. Amiridis<sup>†</sup>, “Dendrimer-Mediated Synthesis of Supported Rhodium Nanoparticles with Controlled Size: Effect of pH and Dialysis.” *Journal Colloid & Interface Science* 398, 22-32 (2013). **IF: 6.361, Citations: 12.**

## TEACHING ACTIVITIES

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### *Formal courses taught at UB*

**CE 509, Transport Phenomena I** (graduate core course; 3 credit hours)

Fall 2017; enrollment: 16 students

Fall 2018; enrollment: 29 students

**CE 400/500, Principles and Practice of Environmental Catalysis** (graduate/undergraduate elective; 3 credit hours)

Spring 2018; enrollment: 14 students – 11 graduate and 3 undergraduate students

Spring 2019; enrollment: 18 students – 13 graduate and 5 undergraduate students

Spring 2020; enrollment: 23 students – 19 graduate and 4 undergraduate students

### *Other courses taught at UB*

**CE498, Undergraduate Research**

**CE502, Individual Problems (MS level)**

**CE503 & CE504, Engineering Projects (MEng level)**

**CE506, Master’s Research**

**CE559 & CE560, Thesis (MS level)**

**CE601 & CE602, Individual Problems (PhD level)**

**CE659 & CE660, Dissertation (PhD level)**

For the above courses, the semester offered and enrollment details are not listed here. These courses comprise several additional credit hours per semester as reflected in the number of students advised who have registered for these courses: 4 PhD; 5 Masters’; 1 undergraduate.

## DEPARTMENT SERVICE

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- Participated in Science Teachers Association of New York State (STANYS) Science Fair hosted by CBE (June 2018).
- Judge for CE 408 presentations (May 2018).
- Participated in CBE’s Open House for future undergraduate students (Apr. 15<sup>th</sup>, 2018, Apr. 20<sup>th</sup>, 2019).
- Graduate Student Recruitment Event, AIChE Annual Meeting (San Francisco, CA 11/2016, Minneapolis, MN 11/2017).
- Graduate Recruitment Committee Member (Jan. 2017-Apr. 2018).
- Undergraduate Committee Member (Apr. 2018 – present).

- Serving as a co-organizer for annual Graduate Research Symposium in Department of Chemical and Biological Engineering at UB, 2017-present.
- Member of PhD Dissertation and MS Thesis Committees of:

<i>Student Name</i>	<i>Degree</i>	<i>Department</i>	<i>Major Advisor</i>
Ms. Nadia Mohd Adli	PhD candidate	CBE	G. Wu
Ms. Shreya Mukherjee	PhD candidate	CBE	G. Wu
Mr. Qing Lan	MS (2018)	CBE	G. Wu

## SERVICE

### *Conference Session Chair/Co-Chair*

Session Chair, Catalysis and Reaction Engineering Division: Sessions: 1) Environmental and Automotive Catalysis (AIChE Annual Meeting, San Francisco, CA (11/2020), 2) Environmental and Automotive Catalysis I (AIChE Annual Meeting, Orlando, FL, 11/2019), 3) Fundamentals of Catalysis V (AIChE Annual Meeting, Pittsburgh, PA, 11/2018), 4) Applied Environmental Catalysis I & II, 5) Future Automotive Catalysis, 6) Fundamentals of Supported Catalysis I: Hydrocarbon Reactions (AIChE Annual Meeting, Minneapolis, MN, 10/2017), 7) Environmental Catalysis II: Gas Emission Control (AIChE Annual Meeting, Salt Lake City, UT, 11/2015).

Session Co-Chair, Catalysis and Reaction Engineering Division: Sessions: 1) Future Automotive Catalysis I, 2) Fundamentals of Supported Catalysis III (AIChE Annual Meeting, Pittsburgh, PA, 11/2018), 1) Future Automotive Catalysis: Automotive Emissions Control, 2) Catalytic Processing of Fossil and Biorenewable Feedstocks V: Acids and Polyols (AIChE Annual Meeting, San Francisco, CA, 11/2016), 3) Environmental Catalysis I: Gas Emission Control (AIChE Annual Meeting, Salt Lake City, UT, 11/2015).

### *Sessions Organized*

1) Abstract reviewer for the 17<sup>th</sup> International Congress on Catalysis (ICC), San Diego, CA (06/2020), 2) NAM26 North American Catalysis Society Meeting technical program committee, Environmental Catalysis session, Chicago, IL (06/2019), 3) 254<sup>th</sup> ACS National Meeting, Division of Catalysis Science and Technology, Nanoporous Materials for Catalysis session (15 invited speakers), Washington, DC, 08/2017.

### *Reviewer for scientific journals*

Applied Catalysis A: General, Applied Catalysis B: Environmental, Catalysis Today, Catalysis Communications, Catalysis Science & Technology, SAE International Journal of Fuels and Lubricants, Emission Control Science & Technology, Journal of Molecular Catalysis A: Chemical, ACS Catalysis, Industrial & Engineering Chemistry Research (ACS publications), Chemical Engineering Journal, Catalysis Letters, ChemCatChem, New Journal of Chemistry, Energy Technology

### *Proposal Reviewer*

NSF CBET, Washington, DC (2017, 2018, 2019), ACS Petroleum Research Fund (2019)

### *Poster Judge*

SEAS Graduate Poster Competition, Buffalo, NY, 04/2017

Catalysis Society of Metro New York (NYCS), Clinton, MJ, 03/2017

AIChE Annual Meeting, Chemical Reaction Engineering poster session, San Francisco, CA, 11/2016

15<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Asheville, NC, 09/2016

19<sup>th</sup> Annual Chemical & Biological Engineering Graduate Student Research Symposium, Buffalo, NY, 09/2016

*Outreach Activities*

Western New York Regional Science and Engineering Fair (WNYRSEF) poster judge (March 2019), Volunteer with “Science is Elementary” (Kindergarten, 1<sup>st</sup> - 3<sup>rd</sup> grades) through the School of Engineering and Applied Sciences at Westminster Charter School in Buffalo, NY (Feb. 2019, Apr. 2018) and at Highgate Heights Elementary School in Buffalo, NY (Oct. 2019), TINKER Program (9<sup>th</sup>-12<sup>th</sup> grade) through CBE Society of Women Engineers (Aug. 2017)

*Memberships*

American Chemical Society (ACS) member since 2017, Catalysis Society of Metropolitan New York (NYCS) member since 2017, Catalysis and Reaction Engineering Division (CRE) in AIChE member since 2016, Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) member since 2015, Southeastern Catalysis Society member since 2010, North American Catalysis Society (NACS) member since 2009, American Institute of Chemical Engineers (AIChE), member since 2008

**INVITED PRESENTATIONS**

(\* indicates the presenter)

- E.A. Kyriakidou\*, “Rational Design of Catalytic Materials to Meet Automotive Emissions Regulations”, West Virginia University - Department of Chemical and Biomedical Engineering, Morgantown, WV (01/2018).
- E.A. Kyriakidou\*, J.-S. Choi, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and BEA-Zeolites for Low Temperature Passive Adsorption”, 254<sup>th</sup> ACS National Meeting - Advanced Nanomaterials Catalysts for Sustainable Energy & Fuel, Washington, DC (08/2017).
- E.A. Kyriakidou\*, “Minimizing low temperature emissions through advances in metal oxide catalysts, supports and traps”, University at Buffalo, The State University of New York - Department of Civil, Structural and Environmental Engineering, Buffalo, NY (03/2017).
- E.A. Kyriakidou\*, J.-S. Choi, T.J. Toops, J.E. Parks II, “Minimizing low temperature emissions through advances in metal oxide catalysts, supports and traps”, Catalysis Society of Metro New York (NYCS), Clinton, NJ (03/2017).

Prior to UB:

- E.A. Kyriakidou\*, “Rational Design of Catalytic Materials to Meet Automotive Emissions Regulations”, University at Buffalo, The State University of New York - Chemical & Biological Engineering Department, Buffalo, NY (09/2016).
- E.A. Kyriakidou\*, “Synthesis of Rh and Au Catalysts with Controlled Sizes of Metal Particles”, Oak Ridge National Laboratory - National Transportation Research Center, Knoxville, TN (04/2014).

**CONFERENCE PRESENTATIONS***Oral Presentations*

(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively, and (\*) indicates the presenter)

17. J. Chen<sup>G,\*</sup>, B.D. Carlson<sup>UG</sup>, J.-S. Choi, Z. Li, T.J. Toops, E.A. Kyriakidou, “A Detailed Kinetics Study for Complete Methane Combustion over Ni/Ce<sub>x</sub>Zr<sub>1-x</sub>O<sub>2</sub> Catalysts”, AIChE Annual Conference, Orlando, FL (11/2019).
16. J. Chen<sup>G,\*</sup>, B.D. Carlson<sup>UG</sup>, J.-S. Choi, T.J. Toops, E.A. Kyriakidou, “Complete Methane Oxidation over Ni/Ce<sub>x</sub>Zr<sub>1-x</sub>O<sub>2</sub> Catalysts”, AIChE Annual Conference, Orlando, FL (11/2019).
15. E. Walker\*, C. Horvath<sup>G</sup>, D. Li, M. Dupuis, E.A. Kyriakidou, “Trapping Properties of Ag/SSZ-13 Zeolite: Modeling Adsorption Capacity”, AIChE Annual Conference, Orlando, FL (11/2019).

14. C.-H. Liu<sup>G,\*</sup>, J. Chen<sup>G</sup>, T.J. Toops, E.A. Kyriakidou, “Controlled Synthesis of High Surface Area Pd and Pt/SiO<sub>2</sub>(core)@ZrO<sub>2</sub>(shell) Catalysts for Low Temperature Oxidation Applications”, AIChE Annual Conference, Orlando, FL (11/2019).
13. J. Lee<sup>G</sup>, E.A. Kyriakidou<sup>\*</sup>, “Ion-Exchanged Zeolites for Hydrocarbon Traps and Passive NO<sub>x</sub> Adsorption Applications”, AIChE Annual Conference, Pittsburgh, PA (11/2018).

Prior to UB:

12. E.A. Kyriakidou<sup>\*</sup>, J.-S. Choi, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and BEA-Zeolites for Low Temperature Passive Adsorption”, AIChE Annual Conference, Minneapolis, MN (11/2017).
11. E.A. Kyriakidou<sup>\*</sup>, J.-S. Choi, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and BEA Zeolites for Low Temperature Passive Adsorption”, 25<sup>th</sup> North American Catalysis Society Meeting (NAM), Denver, CO (06/2017).
10. E.A. Kyriakidou<sup>\*</sup>, T.J. Toops, M.J. Lance, A.J. Binder, J.E. Parks II, “Impact of Mixed Oxides Supports, on the Durability and Low-Temperature Performance of Pd-Based Diesel Oxidation Catalysts”, AIChE Annual Conference, San Francisco, CA (11/2016).
9. E.A. Kyriakidou<sup>\*</sup>, J.-S. Choi, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and BEA-Zeolites for Hydrocarbon Trap Applications under “Cold-Start” Conditions”, AIChE Annual Conference, San Francisco, CA (11/2016).
8. E.A. Kyriakidou<sup>\*</sup>, T.J. Toops, M.J. Lance, J.-S. Choi, J.E. Parks II, “Impact of Mixed Oxides Supports on the Durability and Low-Temperature Performance of Pd-based Diesel Oxidation Catalysts”, 15<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Asheville, NC (09/2016).
7. E.A. Kyriakidou<sup>\*</sup>, J.-S. Choi, M.-Y. Kim, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and Beta-Zeolites for Hydrocarbon Trap Applications under “Cold-Start” Conditions”, AIChE Annual Conference, Salt Lake City, UT (11/2015).
6. M.-Y. Kim, E.A. Kyriakidou<sup>\*</sup>, J.-S. Choi, T.J. Toops, C. Thomas, A. Binder, J.E. Parks II, V. Schwartz, J. Chen, “Impact of ZrO<sub>2</sub> Supports on the Durability and Low-Temperature Performance of Pd-Based Diesel Oxidation Catalysts”, 24<sup>th</sup> North American Catalysis Society Meeting (NAM), Pittsburgh, PA (06/2015).
5. E.A. Kyriakidou<sup>\*</sup>, K. Khivantsev, T.M. Gostanian, O.S. Alexeev, M.D. Amiridis, “Silica-Supported Gold/Dendrimer Nanocomposites with Controlled Sizes of Gold Particles”, 13<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Asheville, NC (09/2014).
4. E.A. Kyriakidou<sup>\*</sup>, C. Papadimitriou, O.S. Alexeev, J.R. Regalbuto, M.D. Amiridis, “Ag Diammine Impregnation on Oxides/Oxidized Carbon Using Strong Electrostatic Adsorption”, 23<sup>rd</sup> North American Catalysis Society Meeting (NAM), Louisville, KY (06/2013).
3. E.A. Kyriakidou<sup>\*</sup>, K.V. Khivantsev, C. Papadimitriou, T.M. Gostanian, P.T. Fanson, O.S. Alexeev, M.D. Amiridis, “Preparation and quantitative analysis of PAMAM-stabilized metal ions in aqueous solutions: Effect of pH and dialysis”, AIChE Annual Conference, Pittsburgh, PA (11/2012).
2. E.A. Kyriakidou<sup>\*</sup>, C. Papadimitriou, O.S. Alexeev, M.D. Amiridis, “Synthesis of Dendrimer-Derived Fe Nanocomposites in Aqueous Solution: Effect of pH and Dialysis”, Graduate Student Day – University of South Carolina, Columbia, SC (03/2012).
1. E.A. Kyriakidou<sup>\*</sup>, T.M. Gostanian, K.V. Khivantsev, O.S. Alexeev, M.D. Amiridis, “Preparation and Quantitative Analysis of PAMAM-Stabilized Cu/Au Nanoparticles”, 10<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Asheville, NC (09/2011).

*Poster Presentations*

*(presentations at the CBE Annual Graduate Research Symposium are not included)*

*(UG and G superscripts indicate UB undergraduate and graduate students advised by E.A. Kyriakidou, respectively, and (\*) indicates the presenter)*

19. J. Lee<sup>G,\*</sup>, E.A. Kyriakidou, “Bimetallic Pd-Co/BEA zeolites for passive NO<sub>x</sub> adsorption”, 22<sup>nd</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (09/2019).
18. J. Lee<sup>G,\*</sup>, E.A. Kyriakidou, “Ag ion-exchanged ZSM-5 zeolites for hydrocarbon trapping applications”, 22<sup>nd</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (09/2019).
17. C.-H. Liu<sup>G,\*</sup>, Y. Chen<sup>G</sup>, E.A. Kyriakidou, “Low temperature methane combustion over palladium ion-exchanged zeolites”, 22<sup>nd</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (09/2019).
16. C.-H. Liu<sup>G,\*</sup>, J. Chen<sup>G</sup>, T.J. Toops, E.A. Kyriakidou, “Controlled Synthesis of High Surface Area Pd and Pt/SiO<sub>2</sub>(core)@ZrO<sub>2</sub>(shell) Catalysts for Low Temperature Oxidation Applications”, 22<sup>nd</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (09/2019).
15. J. Chen<sup>G,\*</sup>, B.D. Carlson<sup>UG</sup>, J.-S. Choi, Z. Li, T.J. Toops, E.A. Kyriakidou, “Complete methane combustion over Ni/Ce<sub>x</sub>Zr<sub>1-x</sub>O<sub>2</sub> catalysts”, 26<sup>th</sup> North American Catalysis Society Meeting (NAM), Chicago, IL (06/2019).
14. J. Lee<sup>G</sup>, L. Chopra<sup>UG</sup>, E.A. Kyriakidou\*, “Ion-exchanged zeolites for hydrocarbon traps and passive NO<sub>x</sub> adsorption applications”, Catalysis Gordon Research Conference – Accelerating Catalytic Solutions to Global Grand Challenges, New London, NH (06/2018).

Prior to UB:

13. E.A. Kyriakidou\*, T.J. Toops, M.J. Lance, A. Binder, J.E. Parks II, “Impact of Mixed Oxide Supports on the Durability and Low-Temperature Performance of Pd-based Diesel Oxidation Catalysts”, 19th Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (04/2016).
12. E.A. Kyriakidou\*, J.-S. Choi, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and BEA-Zeolites for Hydrocarbon Trap Applications under “Cold-Start” Conditions”, 19th Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Ann Arbor, MI (04/2016).
11. E.A. Kyriakidou\*, “Rational Design of Catalytic and Hydrocarbon Trapping Materials to Meet Automotive Emissions Regulations”, AIChE Annual Conference, Salt Lake City, UT (11/2015).
10. E.A. Kyriakidou\*, J.-S. Choi, M.-Y. Kim, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and β-Zeolites for Hydrocarbon Trap Applications under “Cold-Start” Conditions, 14<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Clemson, SC (09/2015).
9. E.A. Kyriakidou\*, C. Papadimitriou, O.S. Alexeev, J.R. Regalbuto, M.D. Amiridis, “Synthesis of Ag Supported Catalysts on Oxides”, 14<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Clemson, SC (09/2015).
8. M.-Y. Kim, E.A. Kyriakidou\*, J.-S. Choi, T.J. Toops, C. Thomas, A. Binder, J.E. Parks II, V. Schwartz, J. Chen, “Impact of ZrO<sub>2</sub> Supports on the Durability and Low Temperature Performance of Pd-based Diesel Oxidation Catalysts”, 18<sup>th</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Dearborn, MI (04/2015).
7. E.A. Kyriakidou\*, J.-S. Choi, M.-Y. Kim, T.J. Toops, J.E. Parks II, “A Comparative Study of ZSM-5 and β-Zeolites for Hydrocarbon Trap Applications under “Cold-Start” Conditions”, 18<sup>th</sup> Cross-Cut Lean Exhaust Emissions Reduction Simulations (CLEERS) Workshop, Dearborn, MI (04/2015).
6. E.A. Kyriakidou\*, K.V. Khivantsev, T.M. Gostanian, O.S. Alexeev, M.D. Amiridis, “Preparation and Quantitative Analysis of Dendrimer-Stabilized Au Nanoparticles”, 23<sup>rd</sup> North American Catalysis Society Meeting (NAM), Louisville, KY (06/2013).
5. E.A. Kyriakidou\*, O.S. Alexeev, J.R. Regalbuto, M.D. Amiridis, “Investigation of Ag Diammine Impregnation on Low/High PZC Oxides and Carbon Using Strong Electrostatic Adsorption”, AIChE Annual Conference, Pittsburgh, PA (11/2012).
4. E.A. Kyriakidou\*, P.T. Fanson, O.S. Alexeev, M.D. Amiridis, “Preparation of M-G4OH Nanocomposites in Aqueous Solution: Effect of Dialysis and pH Adjustment”, 22<sup>nd</sup> North American Catalysis Society Meeting (NAM), Detroit, MI (06/2011).

3. E.A. Kyriakidou\*, P.T. Fanson, O.S. Alexeev, M.D. Amiridis, "Preparation of M-G4OH Nanocomposites in Aqueous Solution: Effect of Dialysis and pH adjustment", 7<sup>th</sup> International Dendrimer Symposium, Gaithersburg, MD (06/2011).
2. E.A. Kyriakidou\*, O.S. Alexeev, M.D. Amiridis, "Preparation and quantitative analysis of PAMAM-stabilized Metal Nanoparticles: Effect of Dialysis and pH Adjustment", Graduate Student Symposium – University of South Carolina, Columbia, SC (04/2011).
1. E.A. Kyriakidou\*, O.S. Alexeev, M.D. Amiridis, "Preparation and Quantitative Analysis of PAMAM-Stabilized Metal Nanoparticles: Effect of Dialysis and pH Adjustments", 9<sup>th</sup> Annual Symposium of the Southeastern Catalysis Society, Ashville, NC (09/2010).

## CONTRIBUTED PRESENTATIONS

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*(G superscript indicates UB graduate student advised by E.A. Kyriakidou and (\*) indicates the presenter)*

### *Oral Presentations*

6. P. Kunal\*, T.J. Toops, C.-H. Liu<sup>G</sup>, E.A. Kyriakidou, M. Kidder, "Design, synthesis, and applications of multifunctional catalytic beds for low-temperature emission control", WCX SAE World Congress Experience, Detroit, MI (04/2020).
5. T.J. Toops\*, M. Kidder, A. Binder, E.A. Kyriakidou, "Analysis of Ion-Exchanged Zeolite Trapping Materials Under Realistic Exhaust Conditions for Cold-Start Emissions Control", WCX SAE World Congress Experience, Detroit, MI (04/2019).
4. E.A. Kyriakidou, M.J. Lance, J.-S. Choi, T.J. Toops\*, "Advanced support modifications to improve the low-temperature activity and durability of Pd-based emissions control catalysts", 25<sup>th</sup> North American Catalysis Society Meeting (NAM), Denver, CO (06/2017).
3. S. Hoang\*, W. Tang, S. Wang, Y. Guo, A.J. Binder, E.A. Kyriakidou, T.J. Toops, J. Liu, T. Pauly, P.-X. Gao, "Exceptional Low Temperature Diesel Activity over Pt Supported TiO<sub>2</sub> Nano-Array Integrated Monolithic Catalysts", 25<sup>th</sup> North American Catalysis Society Meeting (NAM), Denver, CO (06/2017).
2. S. Hoang\*, Y. Guo, W. Tang, S. Wang, A.J. Binder, E.A. Kyriakidou, T.J. Toops, C.-Y. Nam, Y. Ding, P.-X. Gao, "Low Temperature Propane Oxidation over Atomic Layer Deposited Pt Supported TiO<sub>2</sub> Nano-Array Integrated Monolithic Catalysts", 25<sup>th</sup> North American Catalysis Society Meeting (NAM), Denver, CO (06/2017).
1. T.J. Toops\*, E.A. Kyriakidou, J.-S. Choi, J.E. Parks II, "A comparative study of ZSM-5 and BEA-Zeolites for hydrocarbon trap applications under "cold-start conditions", International Conference on Environmental Catalysis (ICEC), Newcastle, Australia (07/2016).

### *Poster Presentations*

2. E.A. Kyriakidou, J.-S. Choi\*, T.J. Toops, J.E. Parks II, "A comparative study of ZSM-5 and  $\beta$ -zeolites for hydrocarbon trap applications under "cold-start" conditions", International Congress on Catalysis (ICC), Beijing, China (07/2016).
1. E.A. Kyriakidou, M.J. Lance, J.-S. Choi, T.J. Toops\*, "Impact of ZrO<sub>2</sub>-based Supports on the Durability and Low-Temperature Performance of Pd-based Oxidation Catalysts", International Conference on Environmental Catalysis (ICEC), Newcastle, Australia (07/2016).