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Research Website: www.nd.edu/~sst
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HIGHLIGHTS

- Published over 60 articles (*h*-index: 20-Google Scholar, 15-ResearcherID) including five invited review or perspective articles and one book
- Funding by nearly every major federal agency (NSF, NIH, NASA, DOE, AFOSR, ARO, DARPA) totaling over \$7M as PI or Co-PI
- Graduated eight Ph.D. students as sole advisor (6) or co-advisor (2)
- ASME Fellow, Associate Editor for *Frontiers in Mechanical Engineering*, Editorial Board of *Plasma Sources Science and Technology* (considered top journal in field) and *Journal of Electrostatics*
- Taught eight different undergraduate and graduate courses, both required and elective

EDUCATION

2008 Ph.D., Mechanical Engineering, Purdue University
Ion Generation and Ionic Wind Heat Transfer at Millimeter and Micrometer Scales
Advisors: Prof. Timothy S. Fisher, Prof. Suresh V. Garimella

2004 M.S., Aerospace Engineering, University of Cincinnati

2001 B.S., Mechanical Engineering, University of Notre Dame

PROFESSIONAL EXPERIENCE

2015 – pres. Rooney Family Associate Professor of Engineering
University of Notre Dame

2015 – pres. Concurrent Associate Professor, Chemical and Biomolecular Engineering,
University of Notre Dame

2015 – pres. Associate Professor, Aerospace and Mechanical Engineering, University of Notre Dame

2013 – 2015 Concurrent Assistant Professor, Chemical and Biomolecular Engineering,
University of Notre Dame

2009 – 2015 Assistant Professor, Aerospace and Mechanical Engineering, University of Notre Dame

2008 – 2009 Instructor, Aerospace and Mechanical Engineering, University of Notre Dame

2004 – 2008 Graduate Research Assistant, School of Mechanical Engineering, Purdue University

2007 Research Intern, Mobile Platforms Group, Intel Corporation

2001 – 2004 Engineer, Edison Engineering Development Program, General Electric Aircraft Engines

AWARDS AND HONORS

Personal

- Institute of Electrical and Electronics Engineers (IEEE) Nuclear & Plasma Sciences Society (NPSS) Early Achievement Award, 2018
- Fellow, American Society of Mechanical Engineers (ASME), 2016
- Electrochemical Society Toyota Young Investigator Fellowship, 2015
- National Science Foundation CAREER Award, 2013
- Air Force Office of Scientific Research Young Investigator Research Award, 2010
- James W. and Carolyn L. Taylor MUACC Travel Award, 2009, 2010

- University of Notre Dame Faculty Scholarship Award, 2010

Advisees

- International Conference on Plasma Science (ICOPS), Student Paper Award – 1st Runner Up, awarded to graduate student Xi Tan, 2017
- International Conference on Plasma Science (ICOPS), Student Paper Award – 1st Runner Up, awarded to graduate student Xi Tan, 2016
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 3rd Place, awarded to graduate student Zeinab Ramshani, 2016
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 1st Place, awarded to graduate students Michael Johnson and Paul Rumbach, 2015
- American Vacuum Society John Coburn and Harold Winters Student Award in Plasma Science and Technology, awarded to graduate student Paul Rumbach, 2014
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 1st Place, awarded to graduate students Michael Johnson and Paul Rumbach, 2014
- International Conference on Plasma Science (ICOPS), Student Paper Award – Honorable Mention, awarded to graduate student Michael Johnson, 2014
- NASA Space Technology Research Fellowship, awarded to graduate student John Haase, 2013
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 1st Place, awarded to graduate student Paul Rumbach, 2013
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 2nd Place, awarded to graduate student Sajjanish Balagopal, 2011
- Annual Meeting of the Electrostatics Society of America, Best Student Paper – 2nd Place, awarded to graduate student Rakshit Tirumala, 2010

PUBLICATIONS (* indicates Notre Dame graduate student; # indicates undergraduate student)

Journal Articles (refereed)

1. H. Peng, M. Ghasri-Khouzani, S. Gong, R. Attardo, P. Ostiguy, B. A. Gatrell, J. Budzinski, C. Tomonto, J. Neidig, M. Ravi Shankar, R. Billo, D. B. Go, D. Hoelzle, “Fast prediction of thermal distortion in metal powder bed fusion additive manufacturing: Part 1, a thermal circuit network model,” – submitted to *Additive Manufacturing*
2. H. Peng, M. Ghasri-Khouzani, S. Gong, R. Attardo, P. Ostiguy, B. A. Gatrell, J. Budzinski, C. Tomonto, J. Neidig, M. Ravi Shankar, R. Billo, D. B. Go, D. Hoelzle, “Fast prediction of thermal distortion in metal powder bed fusion additive manufacturing: Part 2, a quasi-static thermo-mechanical model,” – submitted to *Additive Manufacturing*
3. S. Marczak, K. Richards, Z. Ramshani, E. Smith, S. Senapati, R. Hill, D. B. Go, H.-C. Chang, “Simultaneous isolation and preconcentration of exosomes by ion concentration polarization,” *Electrophoresis* – in press
4. P. Mehta, P. Barboun, F. A. Herrera*, J. Kim, P. Rumbach, D. B. Go, J. C. Hicks, W. F. Schneider, “Overcoming ammonia synthesis scaling relations with plasma-enabled catalysis,” *Nature Catalysis* – in press
5. X. Tan*, D. B. Go, “Understanding the scaling of electron kinetics in the transition from collisional to collisionless conditions in microscale gas discharges,” *Journal of Applied Physics*, vol. 123, art. no. 063303, 2018.
6. H. E. Delgado*, P. Rumbach, D. M. Bartels, D. B. Go, “Total internal reflection absorption spectroscopy (TIRAS) for the detection of solvated electrons at a plasma-liquid interface,” *Journal of Visualized Experiments*, vol. 131, art. no. e56833, 2018.
7. D. B. Go, J. R. Haase*, J. George, J. Mannert, A. Nojeh, R. Nemenich, “Thermionic energy conversion in the 21st century: Advances and opportunities for space and terrestrial applications,” *Frontiers in Mechanical Engineering*, vol. 3, art. no. 13, 2017.

8. S. Ghosh, R. Hawtof, P. Rumbach, D. B. Go, R. Akolkar, R. M. Sankaran, "Quantitative study of electrochemical reduction of Ag^+ to Ag nanoparticles in aqueous solutions by a plasma cathode," *Journal of the Electrochemical Society*, vol. 64, pp. D818-D824, 2017.
9. M. J. Johnson, D. B. Go, "Recent advances in electrohydrodynamic pumps operated by ionic winds: A review," *Plasma Sources Science and Technology*, vol. 26, art. no 103002, 2017. **(invited review)**
10. K. Yoshida, M. J. Johnson*, D. B. Go, "Thin air jet synthesized with ring-shaped DBD and sliding discharge: Measurement of flow velocities, flow rates, and stream diameters," *Journal of Electrostatics*, vol. 87, pp. 293-301, 2017.
11. P. Rumbach, D.B. Go, "Perspectives on plasmas in contact with liquids and its relationship to electrocatalysis for chemical processing and materials synthesis," *Topics in Catalysis*, vol. 60, pp. 799-811, 2017. **(invited)**
12. D. B. Go, M. Z. Atashbar, Z. Ramshani, H.-C. Chang, "Surface acoustic wave devices for chemical sensing and microfluidics: a review and perspective," *Analytical Methods*, vol. 9, pp. 4112-4134, 2017. **(invited review)**
13. P. Rumbach, J.-P. Clarke[#], D. B. Go, "Electrostatic Debye layer formed at a plasma-liquid interface," *Physical Review E*, vol. 95, art. no. 053203, 2017.
14. G. M. Crouch*, D. Han, S. K. Fullerton-Shirey, D. B. Go, P. W. Bohn, "Addressable direct-write nanoscale filament formation and dissolution by nanoparticle-mediated bipolar electrochemistry," *ACS Nano*, vol. 11, pp. 4976-4984, 2017.
15. J. Kim, D. B. Go, J. C. Hicks, "Synergistic effects of plasma-catalyst interactions for CH_4 activation," *Physical Chemistry Chemical Physics*, vol. 19, pp. 13010-13021, 2017.
16. F. Herrera*, T. Luo, D. B. Go, "Thermal rectification under transient conditions: The role of thermal capacitance and thermal conductivity," *Journal of Heat Transfer*, vol. 139, art. no. 091301, 2017.
17. R. J. Flaherty*, S. A. Sarver, L. Sun, G. Brownell, D. B. Go, N. J. Dovichi, "A high voltage power supply that mitigates current reversals in capillary zone electrophoresis-electrospray mass spectrometry," *Journal of American Society of Mass Spectrometry*, vol. 28, pp. 247-252, 2017.
18. X. Tan*, N. Griggs[#], K. L. Jensen, D. B. Go, "Theoretical analysis of 1D resonant tunneling behavior in ion-enhanced cold field and thermo-field emission," *Journal of Applied Physics*, vol. 120, art. no. 213301, 2016.
19. M. J. Johnson*, D. B. Go, "Impingement cooling using the ionic wind generated by a low-voltage piezoelectric transformer," *Frontiers in Mechanical Engineering*, vol. 2, art. no. 7, 2016.
20. P. Rumbach*, R. Xu, D. B. Go, "Electrochemical production of oxalate and formate from CO_2 by solvated electrons produced using an atmospheric-pressure plasma," *Journal of the Electrochemical Society*, vol. 163, pp. F1157-F1161, 2016.
21. Z. Ramshani*, M. J. Johnson*, M. Atashbar, D. B. Go, "A broad area electrospray actuated by a piezoelectric transformer," *Applied Physics Letters*, vol. 109, art. no. 044103, 2016.
22. X. Mu*, Z. Song, Y. Wang, Z. Xu, D. B. Go, T. Luo, "Thermal transport in oxidized polycrystalline graphene," *Carbon*, vol. 108, pp. 318-326, 2016.
23. M. A. Bilici, J. R. Haase*, C. Boyle, D. B. Go, R. M. Sankaran, "Experimental evidence for the transition from a field emission-driven Townsend discharge to a self-sustained microplasma," *Journal of Applied Physics*, vol. 119, art. no. 223301, 2016.
24. J. Kim, M. S. Abbott, D. B. Go, J. C. Hicks, "Enhancing C-H bond activation of methane via temperature-controlled, catalyst-plasma interactions," *ACS Energy Letters*, vol. 1, pp. 94-99, 2016.
25. T. Jiang, X. Zhang, S. Vishwanath, X. Mu*, V. Kanzyuba, D. Sokolov, S. Ptasinka, D. B. Go, H. Xing, T. Luo, "Covalent bonding modulated graphene-metal interfacial thermal transport," *Nanoscale*, vol. 8, pp. 10993-11001, 2016.
26. J. R. Haase*, D. B. Go, "Analysis of thermionic and thermo-field emission in microscale gas discharges," *Journal of Physics D: Applied Physics*, vol. 49, art. no. 055206, 2016.
27. M. J. Johnson*, D. B. Go, "Piezoelectric transformers for low-voltage generation of gas discharges and ionic winds in atmospheric air," *Journal of Applied Physics*, vol. 118, art. no. 2343304, 2015.

28. P. Rumbach*, D. M. Bartels, R. M. Sankaran, D. B. Go, “The effect of air on solvated electron chemistry at a plasma/liquid interface,” *Journal of Physics D: Applied Physics*, vol. 48, art. no. 424001, 2015. **(invited)**
29. P. Rumbach*, D. M. Bartels, R. M. Sankaran, D. B. Go, “The solvation of electrons by an atmospheric pressure plasma,” *Nature Communications*, vol. 6, art. no. 7248, 2015.
30. D. Taller*, K. Richards*, Z. Slouka, S. Senapati, R. Hill, D. B. Go, H.-C. Chang, “On-chip surface acoustic wave lysis and ion-exchange nanomembrane detection of exosomal RNA for pancreatic cancer study and diagnosis,” *Lab on a Chip*, vol. 15, pp. 1656-1666, 2015. **(cover article)**
31. M. J. Johnson*, R. Tirumala*, D. B. Go, “Analysis of geometric scaling of miniature multi-electrode assisted corona discharges for ionic wind generation,” *Journal of Electrostatics*, vol. 74, pp. 8-14, 2015.
32. M. J. Johnson*, D. B. Go, “Ferroelectric crystals for the low-voltage operation of surface dielectric barrier discharges,” *Applied Physics Letters*, vol. 105, art. no. 264102, 2014.
33. X. Mu*, T. Zhang*, D. B. Go, T. Luo, “Coherent and incoherent phonon thermal transport in isotopically modified graphene superlattices,” *Carbon*, vol. 83, pp. 208-216, 2014.
34. D. B. Go, A. Venkatraman, “Microscale gas breakdown: ion-enhanced field emission and the modified Paschen’s curve,” *Journal of Physics D: Applied Physics*, vol. 47, art. no. 503001, 2014. **(invited review)**
35. P. Rumbach*, N. Griggs[#], R. M. Sankaran, D. B. Go, “Visualization of electrolytic reactions at a plasma-liquid interface,” *IEEE Transactions on Plasma Science*, vol. 42, pp. 2610-2611, 2014.
36. P. Rumbach*, Y. Li*, S. Martinez[#], T. J. Twahirwa[#], D. B. Go, “Experimental study of electron impact ionization in field emission-driven microdischarges” *Plasma Sources Science and Technology*, vol. 23, art. no. 065026, 2014.
37. Y. Li*, D. B. Go, “The quantum mechanics of ion-enhanced field emission and how it influences microscale gas breakdown,” *Journal of Applied Physics*, vol. 116, art. no. 103306, 2014.
38. M. J. Johnson*, J. Linczer[#], D. B. Go, “Thermally induced atmospheric pressure gas discharges using pyroelectric crystals,” *Plasma Sources Science and Technology*, vol. 23, art. no. 065018, 2014.
39. S. A. Sarver*, N. Chetwani, N. J. Dovichi, D. B. Go, C. A. Gartner, “A comparison of AC and DC electrospray ionization for mass spectrometry,” *The Journal of the American Society of Mass Spectrometry*, vol. 25, pp. 524-529, 2014.
40. X. Mu*, X. Wu*, T. Zhang*, D. B. Go, T. Luo, “Thermal transport in graphene oxide – From ballistic extreme to amorphous limit,” *Scientific Reports*, vol. 4, art. no. 3909, 2014.
41. R. Tirumala*, D. B. Go, “Comparative study of corona discharge simulation techniques for electrode configurations inducing non-uniform electric fields,” *Journal of Electrostatics*, vol. 72, pp. 99-106, 2014.
42. Y. Li*, D. B. Go, “Using field emission to control the electron energy distribution in high-pressure microdischarges at microscale dimensions,” *Applied Physics Letters*, vol. 103, art. no. 234104, 2013.
43. J. Z. Woodruff[#], A. P. C. Buccellato, P. Brenner, D. B. Go, “Environmentally Opportunistic Computing: A distributed waste heat reutilization approach to energy-efficient buildings and data centers,” *Energy and Buildings*, vol. 69, pp. 41-50, 2013.
44. P. Rumbach*, M. Witzke, R. M. Sankaran, D. B. Go, “Decoupling interfacial reactions between plasmas and liquids: Charge transfer vs. plasma neutral reactions,” *Journal of the American Chemical Society*, vol. 135, pp. 16264-16267, 2013.
45. D. Taller*, D. B. Go, H.-C. Chang, “Modulated exponential films generated by surface acoustic waves and their role in liquid wicking and aerosolization at a pinned drop,” *Physical Review E*, vol. 87, art. no. 053004, 2013.
46. Y. Li*, R. Tirumala*, P. Rumbach*, D. B. Go, “The coupling of ion-enhanced field emission and the discharge during microscale breakdown at moderately high pressures,” *IEEE Transactions on Plasma Science*, vol. 41, pp. 24-35, 2013.
47. D. B. Go, “Theoretical analysis of ion-enhanced thermionic emission for low-temperature, non-equilibrium gas discharges,” *Journal of Physics D: Applied Physics*, vol. 46, art. no. 035202, 2013.

48. D. Taller*, D. B. Go, H.-C. Chang, "Self-similar micro and nanodrops generated by acoustic and Maxwell pressures of scattered and transmitted surface acoustic waves," *Physical Review Letters*, vol. 109, art. no. 224301, 2012.
49. P. Rumbach*, D. B. Go, "Fundamental properties of field emission-driven DC microdischarges," *Journal of Applied Physics*, vol. 112, art. no. 103302, 2012.
50. M. Witzke, P. Rumbach*, D. B. Go, R. M. Sankaran, "Evidence for the electrolysis of water by plasmas formed at the surface of aqueous solutions," *Journal of Physics D: Applied Physics*, vol. 45, art. no. 442001, 2012.
51. Y. Wang*, M. K. Tan, D. B. Go, H.-C. Chang, "Electrospray cone-jet breakup and droplet production for electrolyte solutions," *Europhysics Letters*, vol. 99, art. no. 64003, 2012. **Editor's Choice**
52. R. Tirumala*, D. B. Go, "The multi-electrode assisted corona discharge for electrohydrodynamic flow generation in narrow channels," *IEEE Transactions on Dielectrics and Electrical Insulation*, vol. 18, pp. 1854-1863, 2011.
53. J. Ho, M. K. Tan, D. B. Go, L. Y. Yeo, J. R. Friend, H.-C. Chang, "A paper-based microfluidic surface acoustic wave sample delivery and ionization source for rapid and sensitive ambient mass spectrometry," *Analytical Chemistry*, vol. 83, pp. 3260-3266, 2011. (Accelerated Article)
54. N. Chetwani*, C. A. Cassou[#], D. B. Go, H.-C. Chang, "Frequency dependence of AC electrospray ionization mass spectrometry," *Analytical Chemistry*, vol. 83, pp. 3017-3023, 2011.
55. R. Tirumala*, Y. Li*, D. A. Pohlman[#], D. B. Go "Corona discharges in sub-millimeter electrode gaps," *Journal of Electrostatics*, vol. 69, pp. 36-42, 2011.
56. R. Tirumala*, D. B. Go, "An analytical formulation for the modified Paschen's curve," *Applied Physics Letters*, vol. 97, art. no. 151502, 2010.
57. N. Chetwani*, C. A. Cassou[#], D. B. Go, H.-C. Chang, "High-frequency AC electrospray ionization source for mass spectrometry," *Journal of the American Society of Mass Spectrometry*, vol. 21, pp. 1852-1856, 2010.
58. D. B. Go, M. Sen, "Thermal rectification using bulk materials," *Journal of Heat Transfer*, vol. 132, art. no. 124502, 2010.
59. D. B. Go, D. A. Pohlman[#], "A mathematical model of the modified Paschen's curve for breakdown in microscale gaps," *Journal of Applied Physics*, vol. 107, art. no. 103303, 2010.
60. A. Guajardo-Cuellar*, D. B. Go, M. Sen, "Evaluation of heat current formulations for equilibrium molecular dynamics calculations of thermal conductivity," *Journal of Chemical Physics*, vol. 132, art. no. 104111, 2010.
61. D. B. Go, T. S. Fisher, S. V. Garimella, V. B. Bahadur, "Planar microscale ion generation devices in atmospheric air with diamond-based electrodes," *Plasma Sources Science and Technology*, vol. 18, art. no. 035004, 2009.
62. D. B. Go, T. S. Fisher, S. V. Garimella, "Direct simulation of ionization and ion transport for planar microscale ion generation devices," *Journal of Physics D: Applied Physics*, vol. 42, art. no. 055203, 2009.
63. D. B. Go, R. A. Maturana, T. S. Fisher, S. V. Garimella, "Enhancement of external forced convection by ionic wind," *International Journal of Heat Mass and Transfer*, vol. 51, pp. 6047-6053, 2008.
64. D. B. Go, S. V. Garimella, T. S. Fisher, R. K. Mongia, "Ionic winds for locally enhanced cooling," *Journal of Applied Physics*, vol. 102, art. no. 053302, 2007.
 - also in *Virtual Journal of Nanoscale Science and Technology*, vol. 16, no. 14, 2007.

Book

1. D. B. Go, *Ionization and Ion Transport: A primer for the study of non-equilibrium, low-temperature gas discharges and plasmas*, Morgan & Claypool Publishers: San Rafael, CA, 2018. (ISBN 978-1-6817-4601-2)

Book Chapters (invited)

1. K. E. Richards, D. B. Go, R. Hill, "Surface Acoustic Wave Lysis and Ion-Exchange Membrane Quantification of Exosomal MicroRNA," in *MicroRNA Detection and Target Identification: Methods and Protocols* (ed. T. Dalmay), Methods in Molecular Biology (vol. 1580), pp. 59-70, Springer: New York, 2017.
2. P. Brenner, D. Thain, A. P. C. Buccellato, D. B. Go "Environmentally Opportunistic Computing," in *Handbook of Energy-Aware and Green Computing* (ed. I. Ahmad, S. Ranka), CRC Press: New York, NY, 2012.

Magazine Articles (invited)

1. R. Tirumala*, D. B. Go, "Ionic Winds: A New Frontier for Air Cooling," *Electronics Cooling*, pp. 8-11, March 2012.

Intellectual Property

1. H.-C. Chang, D. B. Go, Z. Slouka, S. Senapati, Y. Men "AC Electro sprayed Droplets for Digital and Emulsion PCR," PCT Application No. PCT/US2017/031715, filed 05/09/2017. (U.S. Provisional Application No. 62/342,219, filed 05/28/2016)
2. D. B. Go, Z. Ramshani*, M. J. Johnson*, M. Z. Atashbar "Piezoelectric Transformer-Driven Electro spray Device," PCT Application No. PCT/US2017/26639, filed 04/07/2017. (U.S. Provisional Patent 62/319,775, filed 04/07/2016)
3. N. Chetwani, C. A. Cassou[#], D. B. Go, H.-C. Chang, "Methods and Apparatus for Mass Spectrometry Utilizing an AC Electro spray Device," U.S. Patent 8,716,675, filed 04/27/2011 (application 13/095,288), issued 05/06/2014.
4. M. MacDonald, R. K. Mongia, D. B. Go "Flow Tube Apparatus," U.S. Patent 8,274,228, filed 12/24/2009 (application 12/647,331), issued 09/25/2012.
5. T. S. Fisher, S. V. Garimella, D. B. Go, R. K. Mongia "Various Methods, Apparatuses, and Systems that Use Ionic Wind to Affect Heat Transfer," U.S. Patent 7,545,640, filed 02/16/2007 (application 11/676,194), issued 06/09/2009.

Invited/Keynote Conference and Workshop Presentations

1. D. B. Go, "Field Emission and its Effect on Microdischarge Formation," Gaseous Electronics Conference, Pittsburgh, PA, 2017.
2. D. B. Go, "The Role of Field Emission on Plasma Formation at Microscale Dimensions," International Vacuum Nanoelectronics Conference, Regensburg, Germany, 2017.
3. D. B. Go "The Plasma-Catalyst Interaction: Exploring Synergistic Effects at High Temperature," International Symposium on Plasma Nanoscience, Antwerp, Belgium, 2017.
4. D. B. Go, "Electrolysis with Plasma Cathodes: Modeling and Experiments to Understand the Electrochemical Interface", ECS Meeting, New Orleans, LA, 2017.
5. D. B. Go, "Plasma Electrochemistry: Experiments and Modelling of the Plasma/Liquid Interface," International Conference on Plasmas with Liquids, Prague, Czech Republic, 2017.
6. D. B. Go, "On the Role of Field Emission in Atmospheric-Pressure Microscale Plasmas," International Vacuum Nanoelectronics Conference, Vancouver, Canada, 2016.
7. D. B. Go, "Solvated Electron Chemistry at the Plasma-Liquid Interface: Detection and Application to Chemical Processing", International Symposium on Plasmas for Catalysis and Energy Materials, Tianjin, China, 2016.
8. P. Rumbach, R. Xu, D. B. Go, "Electrochemical Reduction of CO_{2(aq)} By Solvated Electrons at a Plasma-Liquid Interface," ECS Meeting, San Diego, CA, 2016.
9. D. B. Go, "Plasmas with Liquid Electrodes: Fundamental Processes and Applications to Chemical Processing", International Conference on Plasma-Nano Technology and Science, Nagoya, Japan, 2016.

10. D. B. Go, "Understanding Charge Transfer Reactions at the Interface of Plasmas in Contact with Liquids," International Conference on Reactive Plasmas/Gaseous Electronics Conference, Honolulu, HI, 2015.
11. D. B. Go, "A Microfluidic Approach to Exosomal RNA Analysis Using Surface Acoustic Wave Lysing and Ion-Exchange Membrane Sensing," Advances in Microfluidics and Nanofluidics, Beijing, China, 2015.
12. D. B. Go, "Atmospheric-Pressure Plasmas: a Radiation-Free Approach to Solvated Electrons," International Workshop on Microplasmas, Newark, NJ, 2015.
13. D. B. Go, "Atmospheric-Pressure Ionization Processes: New Approaches and Applications," International Conference on Electrostatics, Southampton, England, 2015.
14. D. B. Go, P. Rumbach*, D. M. Bartels, R. M. Sankaran, "Detection of Solvated Electrons at a Plasma-Liquid Interface," Gaseous Electronics Conference, Raleigh, NC, 2014.
15. D. B. Go, "Surface Acoustic Wave Microfluidics for Chemical Analysis," Advanced Diagnostics and Therapeutics Annual Symposium, Notre Dame, IN, 2014.
16. D. B. Go, "Microplasmas for Enhanced Thermionic Emission," NASA Workshop on Thermionic Energy Conversion for Space and Earth, Houston, TX, 2014.
17. D. B. Go, "Electron-Initiated Reactions at the Interface of Plasmas and Liquids," International Symposium on Plasma Nanoscience, Málaga, Spain, 2014.
18. D. B. Go "Generating Dielectric Barrier-like Discharges using Polar, Non-Centrosymmetric Crystals," Gordon Research Conference on Plasma Processing Science, Smithfield, RI, 2014.
19. D. B. Go, "Ion-Enhanced Field Emission for Control of Atmospheric Pressure Discharges" AFOSR Young Investigator Research Program, Arlington, VA, 2014.
20. Y. Li, P. Rumbach, D. B. Go, "Field Emission in Microscale Dimensions: A New Approach to Atmospheric Pressure Gas Discharges," AVS International Symposium and Exhibition, Long Beach, CA, 2013.
21. D. B. Go, "Using Surface Processes to Control Electron Energies in Discharges," International Symposium on Plasma Nanoscience, Asilomar, CA, 2013.
22. D. B. Go, "Microplasmas: A New Tool for Nanomaterial Synthesis and New Application for Nanomaterials," CMOS Emerging Technologies Research Symposium, Whistler, BC Canada, 2013.
23. D. B. Go, "Controlling Microdischarge Electron Energy Distributions with Surface Emission Processes," Workshop on Optical Properties of Plasma, University of Notre Dame, IN, 2013.
24. D. B. Go, "Paper-SAW Mass Spectrometry: The Fundamentals of Surface Acoustic Wave Nebulization using Paper Sample Delivery for Ambient Mass Spectrometry" SCIX Conference (The Federation of Analytical Chemistry and Spectroscopy Societies), Kansas City, MO, 2012.
25. D. B. Go, "Direct Current and Alternating Current Electrosprays: The Application of Electrostatics to Chemical Analysis," Annual Meeting of the Electrostatics Society of America, Cambridge, Canada, 2012.
26. D. B. Go, "Breakdown in Microscale Electrode Gaps: The Role of Ion-Enhanced Field Emission in the Modified Paschen's Curve," International Workshop on the Physics of Complex Plasmas, Potsdam, Germany, 2011.
27. D. B. Go, "Low-Temperature Plasma Research in the Small Scale Transport Research Lab", United States Microplasma Research Community Meeting, Jersey City, NJ, 2011.

Contributed Conference Papers and Extended Abstracts (refereed)

1. D. B. Go, "Atmospheric-pressure ionization: New approaches and applications for plasmas in contact with liquids," *Journal of Physics: Conference Series*, vol. 646, art. no. 012052, 2015.
2. D. Taller*, H.-C. Chang, D. B. Go, "Surface Acoustic Wave MEMS devices for Aerosolization of Liquid Films," ASME International Mechanical Engineering Congress and Exposition, IMECE2012-87249, Houston, TX, 2012. (presented by D. Taller)

3. M. L. Goedke[#], P. Raycroft[#], P. Brenner, D. B. Go, “A Model to Predict Building Waste Heat Utilization from Computer Data Centers,” ASME International Mechanical Engineering Congress and Exposition, IMECE2012-86370, Houston, TX, 2012. (presented by M. L. Goedke)
4. E. M. Ward[#], M. L. Goedke[#], P. Brenner, D. B. Go, “A Simplified Thermodynamic Model for Waste Heat Utilization from a Containerized Data Center Experimental Platform,” Thirteenth Intersociety Conference on Thermal and Thermomechanical Phenomena in Electrical Systems (ITherm2012), San Diego, CA, 2012. **(presented by D.B. Go)**
5. A. P. C. Buccellato, P. Brenner, D. B. Go, “Computation as a Catalyst for Sustainability: Environmental Stewardship through Interdisciplinary Research and Design,” Building Technology Educators’ Society Conference, Toronto, Canada, 2011. (presented by A. Buccellato)
6. A. P. C. Buccellato, P. Brenner, D. B. Go, R. Jansen[#], E. M. Ward[#] “Environmentally Opportunistic Computing: Computation as Catalyst for Sustainable Design,” ASHRAE Winter Conference, ASHRAE2011-86119, Las Vegas, NV, 2011. (presented by P. Brenner)
7. M. Witkowski, P. Brenner, R. Jansen[#], D. B. Go, E. M. Ward[#] “Enabling Sustainable Clouds via Environmentally Opportunistic Computing,” IEEE International Conference on Cloud Computing Technology and Science, Indianapolis, IN, 2010. (presented by P. Brenner)
8. A. Guajardo-Cuellar*, D. B. Go, M. Sen “Equilibrium Molecular Dynamics and the Thermal Behavior of Small Systems,” ASME International Mechanical Engineering Congress and Exposition, IMECE2010-37563, Vancouver, CA, 2010. (presented by A. Guajardo-Cuellar)
9. D. B. Go, R. A. Maturana, R. K. Mongia, S. V. Garimella, T. S. Fisher “Ionic Winds for Enhanced Cooling in Portable Platforms,” Electronics Packaging Technology Conference (EPTC), Singapore, 2008. (presented by R. K. Mongia)
10. D. B. Go, R. K. Mongia “Experimental Studies on Synthetic Jet Cooling Enhancement for Portable Platforms,” Intersociety Conference on Thermal and Thermomechanical Phenomena in Electrical Systems (ITherm), Orlando, FL, 2008. **(presented by D. B. Go)** – *prior to Notre Dame*
11. D. B. Go, R. A. Maturana, T. S. Fisher, S. V. Garimella “External Forced Convection Enhancement using a Corona Discharge,” ASME-JSME Thermal Engineering Summer Heat Transfer Conference, HT2007-32379, Vancouver, Canada, 2007. **(presented by D. B. Go)** – *prior to Notre Dame*
12. D. B. Go, S. V. Garimella, T. S. Fisher “Numerical Simulation of Microscale Ionic Wind for Local Cooling Enhancement,” Intersociety Conference on Thermal and Thermomechanical Phenomena in Electrical Systems (ITherm), San Diego, CA, 2006. **(presented by D. B. Go)** – *prior to Notre Dame*

Other Contributed Conference Papers, Posters, and Abstracts

1. P. Barboun, P. Mehta, F. Herrera*, D. B. Go, W.F. Schneider, J. C. Hicks, “Advancing Ammonia Synthesis through Plasma-Assisted Catalysis,” ECS Meeting, Seattle, WA, 2018.
2. J. R. Haase*, D. B. Go, “Designing Microscale Gas Discharges to Enhance Thermionic Energy Conversion,” Gaseous Electronics Conference, Pittsburgh, PA, 2017. (poster by J. R. Haase)
3. H. E. Delgado*, P. Rumbach, D. M. Bartels, D. B. Go, “The Impact of Solution Chemistry on the Absorption Spectra of Plasma-Generated Solvated Electrons in Aqueous Solutions,” Gaseous Electronics Conference, Pittsburgh, PA, 2017. (poster by H. E. Delgado)
4. P. Rumbach, J. P. Clarke[#], D. B. Go, “Electrostatic Debye Layer Formed at a Plasma-Liquid Interface,” Gaseous Electronics Conference, Pittsburgh, PA, 2017. **(presented by D. B. Go)**
5. X. Tan*, D. B. Go, “Theoretical Study of Scaling Law for Electron Kinetics in Field Emission-Driven Microplasmas in the Pre-Breakdown Regime,” Gaseous Electronics Conference, Pittsburgh, PA, 2017. (presentation by X. Tan)
6. F. A. Herrera*, P. Rumbach, P. M. Barboun, J. Kim, J. C. Hicks, D. B. Go, “The Role of Vibration Energy Behind of Production of Ammonia in Non-Equilibrium Atmospheric-Pressure Plasma Catalysis,” Gaseous Electronics Conference, Pittsburgh, PA, 2017. (poster by F. A. Herrera)
7. J. Kim, P. Mehta, P. Barboun, W.F. Schneider, D. B. Go, J. C. Hicks, “Factors Affecting Catalytic Performance in the Presence of Non-Thermal Plasmas,” AIChE Annual Meeting, Minneapolis, MN, 2017. (presented by J. C. Hicks)

8. P. Mehta, J. Kim, D. B. Go, J. C. Hicks, W. F. Schneider, "Ammonia Synthesis Using Plasma Assisted Catalysis: Understanding Rate Enhancements By Excited Species," AIChE Annual Meeting, Minneapolis, MN, 2017. (presented by P. Mehta)
9. R. Hawtof, P. Rumbach, D. B. Go, R. Alkolkar, R. M. Sankaran, "Efficiency of Electrolytic Reduction of Aqueous Metal Salts to Metal Nanoparticles at a Plasma-Liquid Interface," AVS International Symposium and Exhibition, Tampa, FL, 2017. (presented by R. Hawtof)
10. D. Hoelzle, H. Peng, M. G. Khouzani, S. Gong, R. Attardo, P. Ostiguy, B. Aboud, J. Budzinski, C. Tomonto, J. Neidig, R. Shankar, R. Billo, D. B. Go "Expert Survey to Understand and Optimize Workpiece Orientation in Direct Metal Laser Sintering," International Solid Freeform Fabrication Symposium, Austin, TX, 2017. (presented by D. Hoelzle)
11. H. Peng, M. G. Khouzani, S. Gong, R. Attardo, P. Ostiguy, B. Aboud, J. Budzinski, C. Tomonto, J. Neidig, R. Shankar, R. Billo, D. B. Go, D. Hoelzle, "Optimization of Build Orientation for Minimum Thermal Distortion in DMLS Metallic Additive Manufacturing," International Solid Freeform Fabrication Symposium, Austin, TX, 2017. (presented by H. Peng)
12. J. R. Haase*, D. B. Go, "Designing Microscale Gas Discharges to Enhance Thermionic Energy Conversion," International Vacuum Nanoelectronics Conference, Regensburg, Germany, 2017. (poster by J. R. Haase)
13. J. O. Morales, F. Herrera*, D. E. Diaz-Droguett, D. Celentano, D. B. Go, T. Luo, "Phase-Influenced Thermal Conductivity of Bulk VO₂ from First-Principles Lattice Dynamics Calculations," Electronic Materials Conference, Notre Dame, IN, 2017. (presented by J. O. Morales)
14. J. Kim, M. Abbott, D. B. Go, J. C. Hicks, "C-H Activation Promoted By Catalyst-Plasma Interactions at Elevated Temperatures," North American Catalysis Society Meeting, Denver, CO, 2017. (poster by J. C. Hicks)
15. P. Rumbach, J. P. Clarke, D. B. Go, "The Electrostatic Debye Layer of the Plasma-Liquid Interface," International Conference on Plasma Science, Atlantic City, NJ, 2017. (presented by P. Rumbach)
16. X. Tan*, D. B. Go, "Electron Energy Distribution Function and Rate Coefficients in Field Emission-Driven Townsend Discharge Regime," International Conference on Plasma Science, Atlantic City, NJ, 2017. (presented by X. Tan)
17. J. Kim, M. S. Abbott, D. B. Go, J. C. Hicks, "Exploring the Kinetic Contribution of Catalyst-Plasma Interactions to Activate C-H Bonds," International Conference on Plasma Science, Atlantic City, NJ, 2017. **(presented by D. B. Go)**
18. G. Crouch. D. Han, S. Fullerton, D. B. Go, P. W. Bohn, "Electrodeposition with Nanoparticles as Nano-Bioplax Electrodes," ECS Meeting, New Orleans, LA, 2017. (presented by G. Crouch)
19. Z. Chao, G. Crouch. D. Han, P. W. Bohn, D. B. Go, S. Fullerton, "Formation/Dissolution of Conductive Silver Filaments through an Ionic Liquid/Polymer Electrolyte Thin Film," ECS Meeting, New Orleans, LA, 2017. (presented by Z. Chao)
20. P. Mehta, J. Kim, D. B. Go, J. C. Hicks, W. F. Schneider, "Ammonia Synthesis Using Plasma Assisted Catalysis: Understanding Rate Enhancements by Excited Species," Catalysis Club of Chicago Spring Symposium, Chicago, IL, 2017. (poster by P. Mehta)
21. J. Kim, P. M. Barboun, D. B. Go, J. C. Hicks, "Interplay between the Catalyst Surface and Plasma for Activating C-H or N-N Bonds," Catalysis Club of Chicago Spring Symposium, Chicago, IL, 2017. (poster by P. Barboun)
22. Z. Ramshani, M. Z. Atashbar, P. Gai, W. Phillip, D. B. Go, "Piezoelectric Transformer-Driven Spray Coating for Membrane Sensor Fabrication," IEEE Sensors, Orlando, FL, 2016. (poster by Z. Ramshani)
23. H. Peng, D. B. Go, R. Billo, S. Gong, R. Shankar, B. Aboud Gatrell, J. Budzinski, P. Ostiguy, R. Attardo, C. Tomonto, J. Neidig, D. Hoelzle, "Efficient Quasi-Static Thermomechanical (QTM) Model to Predict Part Distortion in Direct Metal Laser Sintering (DMLS)" International Solid Freeform Fabrication Symposium, Austin, TX, 2016. (presented by H. Peng)
24. H. Peng, D. B. Go, R. Billo, S. Gong, R. Shankar, B. Aboud Gatrell, J. Budzinski, P. Ostiguy, R. Attardo, C. Tomonto, J. Neidig, D. Hoelzle, "Efficient Thermal Circuit Network (TCN) Model to

- Predict Temperature History in Direct Metal Laser Sintering (DMLS)” International Solid Freeform Fabrication Symposium, Austin, TX, 2016. (presented by H. Peng)
25. Xin Mu*, D. B. Go, T. Luo, “Thermal Transport in Monocrystalline and Polycrystalline Graphene Oxide,” ASME Heat Transfer, Fluids Engineering, & Nanochannels, Microchannels, and Minichannels Conferences, Washington, D.C., 2016. (presented by X. Mu)
 26. F. Herrera*, T. Luo, D. B. Go, “Analysis of the Role of Thermal Capacitance and Thermal Conductivity on Thermal Transient Rectification,” ASME Heat Transfer, Fluids Engineering, & Nanochannels, Microchannels, and Minichannels Conferences, Washington, D.C., 2016. (presented by F. Herrera)
 27. J. R. Haase*, D. B. Go, “Effect of Microscale Gas Discharges on Thermo-Field Emission Current,” International Vacuum Nanoelectronics Conference, Vancouver, Canada, 2016. (poster by J. Haase)
 28. X. Tan*, N. Griggs[#], P. Rumbach, K. L. Jensen, D. B. Go, “Resonant Tunneling Behavior in Ion-enhanced Field and Thermo-Field Emission,” International Vacuum Nanoelectronics Conference, Vancouver, Canada, 2016. (poster by X. Tan)
 29. X. Tan*, N. Griggs[#], P. Rumbach, K. L. Jensen, D. B. Go, “Theoretical Analysis of Resonant Effect in Ion-Enhanced Field Emission on Microplasma Cathode Surface,” International Conference on Plasma Science, Banff, Canada, 2016. (presented by X. Tan)
 30. Z. Ramshani, M. J. Johnson*, M. Z. Atashbar, D. B. Go, “A Self-Pumping, Low-Voltage Piezoelectrically-Driven Electrospray,” Annual Meeting of the Electrostatics Society of America, West Lafayette, IN, 2016. (presented by Z. Ramshani)
 31. P. Rumbach, R. Xu*, D. B. Go, “Electroreduction of CO_{2(aq)} with an Atmospheric-Pressure Plasma Cathode,” Annual Meeting of the Electrostatics Society of America, West Lafayette, IN, 2016. (presented by P. Rumbach)
 32. J. Kim, M. S. Abbott, D. B. Go, J. C. Hicks, “Metal-Plasma Interaction-Modulated C-H Bond Activation at Elevated Temperatures,” Catalysis Club of Chicago Spring Symposium, Chicago, IL, 2016. (poster by J. Kim)
 33. P. Rumbach, D. M. Bartels, R. Xu*, R. M. Sankaran, D. B. Go, “Measurements of Solvated Electrons Produced by Low Temperature Plasma,” International Workshop on Plasma For Cancer Treatment, Washington, D.C., 2016. (presented by P. Rumbach)
 34. M. J. Johnson*, M. MacDonald, D. B. Go, “Low Voltage Ionic Wind Generation using Piezoelectric Transformers,” Gaseous Electronics Conference, Honolulu, HI, 2015. **(presented by D. B. Go)**
 35. X. Mu*, S. Vishwanath*, V. Kanzyuba *, T. Jiang, X. Zhang*, D. Sokolov, S. Ptasinska, D. B. Go, H. Xing, T. Luo, “Fine-Tuning of Thermal Transport across Graphene-Metal Interfaces through Controlled Functionalization,” IEEE/NDnano University of Notre Dame Symposium on Electronics and Photonics, Notre Dame, IN 2015. (presented by X. Mu)
 36. P. Rumbach*, R. Mohan Sankaran, D. M. Bartels, D. B. Go, “Measurements of Solvated Electrons at a Plasma-Liquid Interface via Optical Absorption Spectroscopy,” SCIX Conference (The Federation of Analytical Chemistry and Spectroscopy Societies), Providence, Rhode Island, 2015. (presented by P. Rumbach)
 37. P. Rumbach*, R. Mohan Sankaran, D. M. Bartels, D. B. Go, “Optical Measurements of Solvated Electrons at a Plasma-Liquid Interface,” American Vacuum Society Prairie Chapter Symposium, Notre Dame, IN, 2015. (presented by P. Rumbach)
 38. P. Rumbach*, R. Mohan Sankaran, D. M. Bartels, D. B. Go, “Direct Optical Measurements of Solvated Electrons at a Plasma-Liquid Interface,” Annual Meeting of the Electrostatics Society of America, Pomona, CA, 2015. (presented by P. Rumbach)
 39. M. J. Johnson*, D. B. Go, “Low Voltage Ionic Wind Generation using Piezoelectric Transformers,” Annual Meeting of the Electrostatics Society of America, Pomona, CA, 2015. (presented by M. Johnson)
 40. M. K. Mandal, M. Lieberman, M. M. Champion, D. B. Go, “Surface Acoustic Wave Nebulization Mass Spectrometry for Quantitative Analysis and Extraction of Analytes from Complex Matrices,” ASMS Conference on Mass Spectrometry and Allied Topics, St. Louis, MO, 2015. (poster)

41. M. K. Mandal, D. Taller*, M. Lieberman, M. M. Champion, D. B. Go, "Quantitative Analysis from a Novel Surface Acoustic Wave Nebulization Interface Coupled To a (QqQ-LIT) Mass Spectrometer," Turkey Run Analytical Chemistry Conference, Marshall, IN, 2014. (presented by M. K. Mandal)
42. P. Rumbach*, R. M. Sankaran, D. M. Bartels, D. B. Go, "Understanding Charge Transfer Reactions at a Plasma-Liquid Interface," AVS International Symposium and Exhibition, Baltimore, MD, 2014. (presented by P. Rumbach)
43. Y. Li*, D. B. Go, "Quantum Simulation of Field Emission in Microscale Gas Discharges," Gaseous Electronics Conference, Raleigh, NC, 2014. **(presented by D. B. Go)**
44. J. R. Haase*, D. B. Go, "Study of the Effect of Pressure on Thermionic Emission Current," Gaseous Electronics Conference, Raleigh, NC, 2014. (presented by J. Haase)
45. M. J. Johnson*, D. B. Go, "Ferroelectric-Driven Atmospheric Pressure Discharges," Gaseous Electronics Conference, Raleigh, NC, 2014. (presented by M. Johnson)
46. X. Mu*, T. Zhang*, X. Wu*, D. B. Go, T. Luo, "Thermal Transport in Graphene Oxide and Isotopically Modified Graphene Superlattices," IEEE/NDnano Photonics Symposium, Notre Dame, IN 2014. (presented by X. Mu)
47. P. Rumbach*, Y Li*, D. B. Go, "Field emission-driven microdischarges," Society of Engineering Science Annual Technical Meeting, West Lafayette, IN, 2014. (presented by P. Rumbach)
48. D. B. Go, "An Overview of Electrical Breakdown in Microscale Air Gaps," SAE Aerospace Systems and Technology Conference, Cincinnati, OH, 2014. **(presented by D. B. Go)**
49. P. Rumbach*, Y. Li*, S. Martinez[#], T. J. Twahirwa[#], D. B. Go, "Gas Discharge Processes at Micrometer Scales," Annual Meeting of the Electrostatics Society of America, Notre Dame, IN, 2014. (presented by P. Rumbach)
50. M. J. Johnson*, D. B. Go, "Polar, non-centrosymmetric crystals for the generation of atmospheric pressure gas discharges," Annual Meeting of the Electrostatics Society of America, Notre Dame, IN, 2014. (presented by M. Johnson)
51. M. J. Johnson*, D. B. Go, "Polar, non-centrosymmetric crystals for the generation of atmospheric pressure gas discharges," International Conference on Plasma Science, Washington, D.C., 2014. (presented by M. Johnson)
52. J. Campbell[#], M. O'Ciarain[#], P. Rumbach*, D. B. Go, "Field Emission-driven Townsend Discharges for Silver Nanoparticle Synthesis," Annual Biomedical Research Conference for Minority Students, Nashville, TN, 2013. (poster presented by J. Campbell)
53. P. Rumbach*, R. M. Sankaran, D. B. Go, "Deciphering Gas-Phase and Solution-Phase Reactions initiated by Plasmas at the Surface of Aqueous Solutions," AVS International Symposium and Exhibition, Long Beach, CA, 2013. (presented by P. Rumbach)
54. D. Taller*, R. Hill, H.-C. Chang, D. B. Go, "Rapid Separation of Exosomes by a Microfluidic Chip for Early Detection of Pancreatic Cancer," Midwest Universities Analytical Chemistry Conference, Notre Dame, IN, 2013. (poster presented by D. Taller)
55. Y. Li*, D. B. Go, "The Electron Energy Distribution of Microscale Field Emission-Driven Townsend Discharges," Gaseous Electronics Conference, Princeton, NJ, 2013. (presented by Y. Li)
56. S. Dale[#], M. Lieberman, D. B. Go, "Paper-surface acoustic wave nebulization mass spectrometry analysis of analytes stored on paper substrates," American Chemical Society Fall National Meeting, Indianapolis, IN, 2013. (poster presented by S. Dale)
57. R. Tirumala*, D. B. Go, "Corona Discharge Simulations in Asymmetric Electric Fields," Annual Meeting of the Electrostatics Society of America, Cocoa Beach, FL, 2013. **(presented by D. B. Go)**
58. P. Rumbach*, M. Witzke, R. M. Sankaran, D. B. Go, "Plasma-Liquid Interactions: Isolating Electrolytic Reactions from Plasma/Gas Phase Reactions," Annual Meeting of the Electrostatics Society of America, Cocoa Beach, FL, 2013. (presented by P. Rumbach)
59. D. Taller*, D. B. Go, H.-C. Chang, "Patterning of Micro and Nanodroplets by Surface Acoustic Waves," Advances in Microfluidics and Nanofluidics," Notre Dame, IN, 2013. (presented by D. Taller)

60. M. Witzke, P. Rumbach*, D. B. Go, R. M. Sankaran, "Reactions at the Interface of Plasmas and Aqueous Electrodes: Identifying the Role of Electrons," AVS International Symposium and Exhibition, Tampa Bay, FL, 2012. (presented by P. Rumbach)
61. D. Taller*, D. B. Go, H.-C. Chang, "Sculpting and Atomizing Pinned Drops with Localized Acoustic Pressures of Surface Acoustic Waves: Exponentially Small Contact Angles," AIChE Annual Meeting, Pittsburgh, PA, 2012. (presented by D. Taller)
62. P. Rumbach*, D. B. Go, "Properties of a Field Emission-Driven Townsend Discharge" Gaseous Electronics Conference, Austin, TX, 2011. (presented by P. Rumbach)
63. P. Rumbach*, Y. Li*, R. Tirumala*, D. B. Go, "The Influence of Field Emission on Breakdown and Townsend Discharges in Microscale Gaps," International Workshop on Mechanisms of Vacuum Arcs, Albuquerque, NM, 2012. (presented by P. Rumbach)
64. D. B. Go "Paper-SAW: Paper Devices and Surface Acoustic Wave Nebulization for Rapid Chemical Analysis," Midwest Universities Analytical Chemistry Conference, Madison, WI, 2012. **(presented by D. B. Go)**
65. R. Wojcik, M. Giardina, R. B. Keithley, N. Chetwani, D. B. Go, N. Dovichi, "High-Resolution Time-of-Flight Mass Spectrometry with High-Speed Data Acquisition for Sampling Sub-second Peak Widths Generated by Capillary Electrophoresis," ASMS Conference on Mass Spectrometry and Allied Topics, Vancouver, Canada, 2012. (poster by R. Wojcik)
66. Y. Wang*, M.-K. Tan, D. B. Go, H.-C. Chang, "Emission and Charging of Nanoaerosol Plumes from a Taylor Cone-Jet," Annual Meeting of the APS Division of Fluid Dynamics, Baltimore, MD, 2011. (presented by Y. Wang)
67. P. Rumbach*, D. B. Go, "Current-Voltage Measurements for DC Microplasmas with Gap Sizes Less than 10 μm ," Gaseous Electronics Conference, Salt Lake City, UT, 2011. (poster presented by P. Rumbach)
68. Y. Wang*, M.-K. Tan, D. B. Go, H.-C. Chang, "Jet Breakup and Conic Plumes of the DC Taylor Cone Due to Induced Space Charge," AIChE Annual Meeting, Minneapolis, MN, 2011. (presented by Y. Wang)
69. Y. Li*, D. B. Go, "Particle-in-Cell Simulations of Microdischarges with Extremely Small Characteristic Sizes," International Conference on Plasma Science, Chicago, IL, 2011. (poster presented by Y. Li)
70. S. Balagopal*, D. B. Go, "Counter-flow Ionic Winds for Localized Hot Spot Cooling," Annual Meeting of the Electrostatics Society of America, Cleveland, OH, 2011. (presented by S. Balagopal)
71. K. Isbell*, M. K. Tan, D. B. Go "Alternating Current (AC) Electrospray Study of Labile Post Translational Modifications," ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, 2011. (poster by K. Isbell)
72. D. B. Go, J. Ho, M.K. Tan, H.-C. Chang, L. Yeo, J. Friend "Ambient Ionization of Unprepared Samples Using Surface Acoustic Waves," ASMS Conference on Mass Spectrometry and Allied Topics, Denver, CO, 2011. **(presented by D. B. Go)**
73. Y. Li*, D. B. Go "The Role of Field Emission in Small Gap Microdischarges," International Workshop on Microplasmas, Paris, France, 2011. **(presented by D. B. Go)**
74. J. Ho, D. B. Go, J. Friend, L. Yeo, H.-C. Chang "Interfacing a Surface Acoustic Waves Microfluidic Platform with Mass Spectrometry for Point-of-Care Biomolecular Sensing and Drug Screening," Advances in Microfluidics and Nanofluidics and Asian-Pacific International Symposium on Lab on Chip, Singapore, Singapore, 2011. (presented by J. Ho)
75. A. Guajardo-Cuellar*, M. Sen, D. B. Go "Dynamical Behavior and Energy Transport of Atomic Systems," ASME International Mechanical Engineering Congress and Exposition, Orlando, FL, 2010. (presented by A. Guajardo-Cuellar)
76. Y. Li*, D. B. Go "Simulation Studies on the Role of Ion-Enhanced Field Emission in Microdischarges," Annual Meeting of the APS Division of Plasma Physics, Chicago, IL, 2010. (poster by Y. Li)

77. K. Isbell*, D. B. Go “Preservation of a Phosphorylated Threonine Residue using Alternating Current (AC) Electrospray,” Turkey Run Analytical Chemistry Conference, Marshall, IN, 2010. (poster by K. Isbell)
78. D. B. Go “Microdischarges for Gas Sensing: Taking Advantage of New Physics in Micro-microdischarges,” Midwest Universities Analytical Chemistry Conference, West Lafayette, IN, 2010. **(presented by D. B. Go)**
79. P. Brenner, R. Jansen[#], D. B. Go, D. Thain “Environmentally Opportunistic Computing: Transforming the Data Center for Economic and Environmental Sustainability,” International Green Computing Conference, Chicago, IL, 2010. (presented by P. Brenner)
80. R. Tirumala*, D. B. Go “The Assisted Corona Discharge: Multiple-Electrode Configurations and the Effects on EHD Flows,” Annual Meeting of the Electrostatics Society of America, Charlotte, NC, 2010. (presented by R. Tirumala)
81. R. Tirumala*, D. B. Go “The Assisted Corona Discharge: The Effect of Using Multiple-Electrode Configurations,” International Conference on Plasma Science, Norfolk, VA, 2010. (presented by R. Tirumala)
82. D. B. Go, R. Tirumala* “An *Ab Initio* Approximation for the Modified Paschen’s Curve for Breakdown in Microscale Electrode Gaps,” International Conference on Plasma Science, Norfolk, VA, 2010. **(presented by D. B. Go)**
83. A. Guajardo-Cuellar*, D. B. Go, M. Sen “Equilibrium Molecular Dynamics and Thermal Transport in Graphene,” Midwest Thermodynamics and Statistical Mechanics Conference, Notre Dame, IN, 2010. (presented by A. Guajardo-Cuellar)
84. N. Chetwani*, C. A. Cassou[#], D. B. Go, H.-C. Chang “Qualitative and Quantitative Behavior of AC Electrospray Ionization in Mass Spectrometry of Biomolecules,” ASMS Conference on Mass Spectrometry and Allied Topics, Salt Lake City, UT, 2010. **(presented by D. B. Go)**
85. C. A. Cassou[#], C. Williams[#], D. B. Go “Comparison of AC and DC Electrospray Ionization for Mass Spectrometry,” American Chemical Society Spring National Meeting, San Francisco, CA, 2010. (poster by C. A. Cassou)
86. D. B. Go “AC Electrospray Mass Spectrometry,” Midwest Universities Analytical Chemistry Conference, East Lansing, MI, 2009. **(presented by D. B. Go)**
87. A. Guajardo-Cuellar*, M. Sen, D. B. Go “Evaluation of heat current formulations for equilibrium molecular dynamics calculations of thermal conductivity,” ASME International Mechanical Engineering Congress and Exposition, Orlando, FL, 2009. (poster by A. Guajardo-Cuellar)
88. N. Chetwani*, H.-C. Chang, D. B. Go “Mass Spectrometry of Biomolecules using AC Electrospray Ionization,” AIChE Annual Meeting, Nashville, TN, 2009. (presented by N. Chetwani)
89. N. Chetwani*, D. B. Go, H.-C. Chang “AC Electrospray: A New Soft Ionization Technique for Mass Spectrometry,” ASMS Conference on Mass Spectrometry and Allied Topics, Philadelphia, PA, 2009. (presented by N. Chetwani)
90. D. B. Go, “Electrohydrodynamics and Ion Transport in Mass Spectrometers,” Midwest Universities Analytical Chemistry Conference, Bloomington, IN, 2008. **(presented by D. B. Go)**
91. D. B. Go, “Microscale Ionization and Ion Transport in Atmospheric Air,” Turkey Run Analytical Chemistry Conference, Marshall, IN, 2008. **(poster by D. B. Go)**
92. D. B. Go, T. S. Fisher, S. V. Garimella “Direct Simulation Monte Carlo Analysis of Microscale Field Emission and Ionization of Atmospheric Air,” ASME International Mechanical Engineering Congress and Exposition, IMECE2006-14476, Chicago, IL, 2006. **(poster by D. B. Go)**
93. R. C. Rands, D. B. Go, T. S. Fisher “High Altitude Airship: Thermal Modeling and Analysis,” 31st Dayton-Cincinnati Aerospace Science Symposium, Dayton, OH, 2006. (presented by R. C. Rands)

RESEARCH SUPPORT (~\$7.2M total as PI and Co-PI)

Active External Grants

1. "Plasma-Enhanced Catalysis: A Detailed Study of Surface Interactions Between Low- Temperature Plasma and Catalytic Materials," FA9550-18-1-0157, AFOSR BAA, PI (w/ Prof. Jason Hicks, Prof William Schneider, University of Notre Dame), \$622,205, 3 years, 02/15/2018-02/14/2021
2. "High Temperature Gas Pressure Forming and Simulation (TMP R3-3)," LIFT (ALMMII), Co-PI (w/ Martin Philo, GKN Aerospace (PI) + 8 others from GKN Aerospace, Interlaken, American Axle, University of Michigan), \$1,671,000 (Notre Dame: \$284,000), 1.5 years, 08/07/2017-01/20/2019
3. "Fourier Transform Infrared Spectroscopy System for the in situ Measurement of Plasma-Catalyst Interactions for Enhanced Reaction Control" DoD DURIP, Co-PI (w/ Prof. Jason Hicks, University of Notre Dame), \$131,753, 1 year, submitted summer 2016
4. "A Tunable Laser System for Interfacial Electron Transfer Measurements in Reactive Gas/Liquid Systems" W911NF-17-1-0206, DoD DURIP, PI (w/ Prof. David Bartels, University of Notre Dame), \$277,075, 1 year, 07/15/2017-07/14/2018
5. "Plasma-Induced Electrochemistry: Understanding the Behavior of Electrons at a Plasma-Liquid Interface," W911NF-17-1-0119, ARO BAA, PI (w/ Dr. Paul Rumbach, Prof. David Bartels, University of Notre Dame, Prof. R. Mohan Sankaran, Case Western Reserve University), \$450,572, 3 years, 05/01/2017-04/30/2020
6. "An Integrated Microfluidics Platform for Rapid and Sensitive Detection Exosome RNA Analysis," HG009010-01, NIH Parent R21, Co-I (w/ Prof. Hsueh-Chia Chang, Prof. Reginald Hill, Dr. Satyajyoti Senapati, University of Notre Dame), \$414,960, 2 years, 09/14/2016-07/31/2018
7. "Holographic Assembly of Reconfigurable Nanoscale Plasmonic and Photonic Elements," DARPA A2P, Co-PI (w/ Prof. Paul Bohn (PI) and 4 colleagues, University of Notre Dame), \$900,000, 3 years, 05/01/2015-04/30/2018
8. "CAREER: Low Temperature Microplasmas For Thermal Energy Conversion, Education, and Outreach," PHY-1254273, NSF/DOE Partnership in Basic Plasma Science and Engineering and CBET Combustion, Fire, and Plasma Processes, PI, \$400,000, 5 years, 05/01/2013-04/31/2018

Completed External Grants

1. "Advancing Sustainable Ammonia Synthesis through Plasma-Assisted Catalysis," DE-SC0016543, Department of Energy DE-FOA-0001569, Co-PI (w/ Prof. Jason Hicks, Prof William Schneider, University of Notre Dame), \$195,000, 1 year, 09/15/2016-09/16/2017
2. "Parametric Design of Functional Support Structures for Metal Alloy Feedstocks," America Makes, Co-PI (University of Pittsburgh lead with Notre Dame sub-contract w/ Prof. David Hoelzle (PI), Prof. Richard Billo, Prof. Steven Schmid), \$805,966, 1.5 years, 07/01/2015-01/31/2017
3. "Coupling Non-Equilibrium, High-Pressure, Micron-Scale Discharges with Surface Reactions: Exploring Synergistic Effects Between Plasma Chemistry and Chemical Catalysis," AFOSR BRI, Co-PI (w/ Prof. R. Mohan Sankaran (PI), Prof. Daniel Lacks, Case Western Reserve University, Prof. Jason Hicks, University of Notre Dame), 3 years, \$1,481,558, 03/01/2014-02/28/2017
4. "Chemically Functionalized Graphene as High Performance Heat Spreader," Semiconductor Research Corporation Emerging Technologies in Materials, Processes, and Devices, Co-PI (w/ Prof. Tengfei Luo, Prof. Huili "Grace" Xing, University of Notre Dame), \$300,000, 3 years, 11/01/2014-10/31/2016
5. "Plasma Electrochemistry: A New Approach to Green Electrochemistry," ECS Toyota Young Investigator Fellowship, PI, \$50,000, 1 year, 08/01/2015-07/31/2016
6. "STIR: Probing Electrochemical Reactions at a Plasma-Liquid Interface," ARO BAA, PI (w/ Prof. R. Mohan Sankaran, Prof. Rohan Alkolkar, Case Western Reserve University, Prof. David Bartels, University of Notre Dame), \$48,107, 0.75 years, 05/01/2014-01/31/2015
7. "Pyroelectric and Ferroelectric-Driven Electrohydrodynamics for Low Input Voltage Cooling of Portable Computing," Intel Labs University Research Office, PI, \$299,097, 05/01/2013-04/31/2016

8. "Ion-Enhanced Field Emission for Control of Atmospheric Pressure Discharges," FA9550-11-1-0020, Air Force Office of Scientific Research Young Investigator Award, PI, \$360,000, 3 years, 04/01/2011-03/31/2014
9. "Electrohydrodynamic Flow Tube for Forced Air Cooling of Small-Form Factor Electronics," Intel Corporation Research Council, PI, \$225,000, 3 years, 12/9/2008-05/31/2012

Completed Internal Grants

1. "Paper-SAWN Mass Spectrometry Analysis for Rapid Analysis of Pharmaceuticals in Complex Biological Matrices" Advanced Diagnostics and Therapeutics Initiative, PI (w/ Prof. Marya Lieberman, Dr. Matthew Champion), \$54,320, 1 year, 08/01/2013-07/31/2014.
2. "Rapid Separation of Vesicles by Surface Acoustic Wave-inspired Microfluidics for Early Detection and Diagnosis of Pancreatic Cancer," Walther Cancer Foundation ENSCCII Training Project, Mentor (w/ Daniel Taller (applicant), Prof. Reginald Hill (Co-mentor), University of Notre Dame), \$30,309, 3 years, 06/01/2013-05/31/2016.
3. "AC Electrospray Ionization Mass Spectrometry: A New Technique for the Detection and Identification of Harmful Chemicals," University of Notre Dame Faculty Scholarship Award Program, PI, \$10,000, 1 year, 01/01/2010-12/31/2010

PROFESSIONAL ACTIVITIES

Invited Lectures and Seminars

- Functional Materials Division (Nanoelectronic Materials Branch) Technical Seminar, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH (fall 2017)
- Department of Chemical Engineering, University of Pittsburgh, Pittsburgh, PA (fall 2017)
- Department of Chemistry, University of Southampton, Southampton, England (fall 2016)
- York Plasma Institute, University of York, York, England (fall 2016)
- School of Electrical Engineering and Electronics, University of Liverpool, Liverpool, England (fall 2016)
- Engineering Research Institute, Ulster University, Belfast, Northern Ireland (fall 2016)
- Department of Electrical and Computer Engineering, Western Michigan University, Kalamazoo, MI (spring 2015)
- Electromagnetic Technology Branch Seminar, U.S. Naval Research Laboratory, Washington, D.C. (fall 2014)
- Functional Materials Division (Photonic Materials Branch) Technical Seminar, Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, OH (fall 2014)
- High Power Microwave Division Technical Seminar, Air Force Research Laboratory, Kirtland Air Force Base, Albuquerque, NM (spring 2014)
- Department of Mechanical Engineering, University of Minnesota, Minneapolis, MN (fall 2013)
- Department of Chemical and Biomolecular Engineering, University of Notre Dame, Notre Dame, IN (spring 2013)
- Department of Chemistry and Biochemistry, Ohio University, Athens, OH (fall 2012)
- Plasma Science Center, Department of Energy, Web Seminar (spring 2012)
- Department of Chemical Engineering, Case Western Reserve University, Cleveland, OH (spring 2012)
- Department of Physics, Andrews University, Berrien Springs, MI (fall 2010)
- Department of Mechanical Engineering, National University of Singapore, Singapore (spring 2010)
- Department of Mechanical and Industrial Engineering, University of Illinois-Chicago, Chicago, IL (fall 2008)

Journal Editorships and Society Leadership

- Associate Editor (Thermal and Mass Transport), *Frontiers in Mechanical Engineering*, 2015-present
 - Research Topic Editor: Direct Thermal Energy Conversion and Utilization

- Editorial Board, *Plasma Sources Science and Technology*, 2017-present
- Editorial Board, *Journal of Electrostatics*, 2015-present
- Executive Council, Electrostatics Society of America, 2015-present

Conference Organizing

Leadership Positions

- General Chair, 2018 International Symposium on Plasma Nanoscience (iPlasmaNano)
- Workshop Organizer, 2014 NASA Workshop on Thermionic Energy Conversion for Space and Earth
- General Chair, 2014 Annual Meeting of the Electrostatics Society of America
- Local Organizing Committee, 2013 Midwest Universities Analytical Chemistry Conference
- Local Organizing Committee, 2013 Notre Dame-DARPA Workshop on Optical Properties of Plasmas
- Technical Chair, 2013 Annual Meeting of the Electrostatics Society of America

Session/Symposium

- Session Chair, Gaseous Electronics Conference, 2014, 2015, 2017
- Session Chair, International Workshop on Microplasmas, 2015
- Session Chair, Annual Meeting of the Electrostatics Society of America, 2011, 2012
- Session Chair, Intersociety Conference on Thermal and Thermomechanical Phenomena in Electrical Systems (ITherm2012), 2012
- Symposium Organizer, Central Regional Meeting of the American Chemical Society, 2011

Miscellaneous Activities

- Rosenbluth Outstanding Doctoral Thesis in Plasma Physics Award Committee, American Physical Society, Division of Plasma Physics (2016-present)
- Webmaster, IEEE Components, Packaging, and Manufacturing Technology Society, Thermal Management and Thermo-Mechanical Design TC (2007-2015)
- *Proposal Reviewer*: ASEE NRL Postdoctoral Fellowship, Indiana Clinical and Translational Sciences Institute (ICTSI) CTR grant panel, NSF CBET Combustion, Fire and Plasma Systems, NSF/DOE Partnership in Basic Plasma Science and Engineering, NASA Science and Technology Research Fellowship, ARPA-E, ACS Petroleum Research Fund, Research Foundation - Flanders
- *Journal Referee (40 journals total)*: ACS Energy Letters, ACS Nano, Analyst, Analytical Chemistry, Applied Physics Letters, Applied Thermal Engineering, Biomicrofluidics, Chemical Communications, Chemical Engineering Journal, ChemSusChem, Contributions to Plasma Physics, Electrochemistry Communications, Encyclopedia of Plasma Technology, Energy and Buildings, Experimental Thermal and Fluid Science, Experiments in Fluids, IEEE Electron Device Letters, IEEE Transactions on Components, Packaging and Manufacturing Technology, IEEE Transactions on Plasma Science, International Journal of Heat and Mass Transfer, International Journal of Thermal Systems, Journal of Applied Physics, Journal of Electrochemical Society, Journal of Electronics Packaging, Journal of Electrostatics, Journal of Fluids Engineering, Journal of Physical Chemistry, Journal of Physics D: Applied Physics, Journal of the American Society of Mass Spectrometry, Journal of Vacuum Science and Technology A, Journal of Vacuum Science and Technology B, Journal of Visualization, Nanotechnology, Optical Materials Express, Physics Letters A, Physics of Plasmas, Plasma Science and Technology, Plasma Sources Science and Technology, PLOS ONE, Scientific Reports

Professional Memberships

- American Society of Mechanical Engineers
- Institute of Electrical and Electronics Engineers
- American Physical Society
- Electrostatics Society of America
- Electrochemical Society

- American Association for the Advancement of Science

TEACHING AND ADVISING

University of Notre Dame

- AME 20213/21213 Introduction to Measurements and Data Analysis with laboratory (undergraduate-required)
- AME 21268 Design Tools 2 (undergraduate-required)
- AME 30334 Heat Transfer (undergraduate-required)
- AME34314 Differential Equations, Vibrations, and Control I (undergraduate-required)
- AME 47431 Designing Energy-Efficient Buildings (undergraduate-elective) with ARCH 41121
- AME 54535 Energy Systems (undergraduate-elective)
- AME 60634 Intermediate Heat Transfer (graduate)
- AME 60637 Ionization and Ion Transport (graduate)

Post-Doctoral Scholars and Visiting Scientists

1. Dr. Paul Rumbach, Post-Doctoral Scholar and Research Scientist, 01/2016 – pres.
2. Dr. Zeinab Ramshani (with Prof. Hsueh-Chia Chang) 01/2017 – pres.
3. Dr. Donghoon Han (with Prof. Paul Bohn), 05/2015 – pres.
4. Dr. Michael Johnson, Post-Doctoral Scholar, 05/2016 – 07/2016
5. Dr. Ying Wang, Post-Doctoral Scholar, 01/2015 – 01/2016
6. Dr. Mridul Mandal (with Prof. Marya Lieberman), Post-Doctoral Scholar, 03/2014 – 02/2015
7. Dr. Nishant Chetwani, Edison Post-Doctoral Scholar, 10/2011 – 01/2012
8. Dr. Ming Tan, Post-Doctoral Scholar, 07/2010 – 05/2011
9. Dr. Jenny Ho, Visiting Scientist, 07/2010 – 11/2010

Graduate Students (followed by first position after graduation)

Ph.D.

1. Nazli Turin, 2021 - *anticipated*
2. Daniel Martin, 2021 - *anticipated*
3. Hernan Delgado de la Garza (Department of Chemical and Biomolecular Engineering), 2020 - *anticipated*
4. Francisco Herrera, 2019 - *anticipated*
5. Xi Tan, 2019 - *anticipated*
6. John Haase, 2018 – Raytheon, Tucson, AZ
7. Xin Mu (Co-advisor Prof. Tengfei Luo, Department of Aerospace and Mechanical Engineering), 2018 – BMO Harris Bank, Chicago, IL
8. Michael Johnson, 2016 – Post-Doctoral Scholar, Department of Aerospace and Mechanical Engineering, University of Notre Dame
9. Paul Rumbach, 2016 – Post-Doctoral Scholar and Instructor, Department of Aerospace and Mechanical Engineering, University of Notre Dame
10. Daniel Taller (Co-advisor Prof. Hsueh-Chia Chang, Department of Chemical and Biomolecular Engineering), 2015 – Space Exploration Technologies Corporation (SpaceX), Hawthorne, CA
11. Yingjie Li, 2014 – Prism Computational Sciences, Madison, WI
12. Rakshit Tirumala, 2013 – postdoctoral scholar, Institute Pprime, University of Poitiers, France
13. Alejandro Guajardo-Cuéllar (Co-advisor Prof. Mihir Sen, Department of Aerospace and Mechanical Engineering), 2011 – Philips Lighting, Eindhoven, The Netherlands

M.S.

1. Katherine Isbell, Chemistry and Biochemistry (Co-advisor Prof. Amanda Hummon, Department of Chemistry and Biochemistry), 2011 – Center for Disease Control, Atlanta, GA, United States.
2. Sajanish Balagopal, 2011 – Cummins Inc., Columbus, IN, United States.

ESTEEM Advisor

1. Flora Zieger, ESTEEM program, 2016 – Pazmany Peter Catholic University, Budapest, Hungary
2. Helga Feiszthuber, ESTEEM program, 2015 – UltraDerm Diagnostics, Budapest, Hungary
3. S. Kiel Hockett, ESTEEM program, 2011 – PTC, Minneapolis, MN, United States.

Undergraduate Students – Notre Dame

- Gabriel Brown, Aerospace and Mechanical Engineering (fall 2017, spring 2018)
- Anthony Tranquill, Aerospace and Mechanical Engineering (summer 2017, fall 2017)
- Maurico Segovia, Aerospace and Mechanical Engineering (summer 2017, Nanoelectronics Undergraduate Research Fellow, fall 2017)
- Gabriel Higuera, Aerospace and Mechanical Engineering (spring 2017)
- Michael Pettit, Aerospace and Mechanical Engineering (fall 2016, spring 2017)
- Amanda Peterson, Aerospace and Mechanical Engineering (summer 2016, fall 2016, spring 2017)
- Jean Pierre Clarke, Aerospace and Mechanical Engineering (summer 2016)
- John Kearns, Aerospace and Mechanical Engineering (summer 2014; fall 2014; spring 2015)
- Nathaniel Griggs, Physics (fall 2013; spring 2014; summer 2014, Nanoelectronics Undergraduate Research Fellow; fall 2014; spring 2015; summer 2015)
- Santiago Martinez, Aerospace and Mechanical Engineering (summer 2013, Nanoelectronics Undergraduate Research Fellow; fall 2013; spring 2014; summer 2014, Nanoelectronics Undergraduate Research Fellow; fall 2014; spring 2015)
- Clarissa Rogg, Civil & Environmental Engineering & Earth Sciences (summer 2013, Slatt Fellowship; fall 2013, spring 2014)
- Sara Dale, Chemical and Biomolecular Engineering (summer 2012, Nanoelectronics Undergraduate Research Fellow; fall 2012; spring 2013; fall 2013)
- J. Zack Woodruff, Aerospace and Mechanical Engineering (summer 2012, CRC REU; fall 2012; spring 2013)
- Matthew Goedke, Aerospace and Mechanical Engineering (fall 2011; fall 2012; spring 2013)
- Adam Talbot, Chemical and Biomolecular Engineering (summer 2012, Nanoelectronics Undergraduate Research Fellow)
- Ben Rollin, Aerospace and Mechanical Engineering (summer 2011, Nanoelectronics Undergraduate Research Fellow; fall 2011)
- Alex Calderon, Biological Sciences (summer 2011; fall 2011)
- Timothy Purcell, Aerospace and Mechanical Engineering (fall 2010; spring 2011)
- Eric Ward, Aerospace and Mechanical Engineering (summer 2010, Slatt Fellowship; fall 2010; spring 2011)
- Elizabeth Dubbs, Aerospace and Mechanical Engineering (summer 2010, Nanoelectronics Undergraduate Research Fellow; fall 2010; spring 2011)
- Amy Libardi, Aerospace and Mechanical Engineering (fall 2010)
- Conner Cox, Aerospace and Mechanical Engineering (spring 2010)
- Rachel Horning, Aerospace and Mechanical Engineering (spring 2010)
- John Glavin, Aerospace and Mechanical Engineering (fall 2009)
- Catherine Cassou, Chemistry and Biochemistry (summer 2009, Clare Booth Luce Fellow and Glynn Family Honors Program Fellow; fall 2009)
- Daniel Pohlman, Chemical and Biomolecular Engineering (summer 2009, Nanoelectronics Undergraduate Research Fellow; fall 2009)
- Thomas Furlong, Aerospace and Mechanical Engineering (fall 2008, spring 2009)
- Michael Croteau, Aerospace and Mechanical Engineering (fall 2008)

Undergraduate Students – External

- Jingxing Gao, Zhejiang University, Optical Science and Engineering (summer 2017, iSURE student)
- Shangkun Wang, Huazhong University of Science and Technology, Thermal Energy and Power Engineering (summer 2017, iSURE student)
- Bocheng Yu, Peking University, Microelectronics (summer 2015, iSURE student)
- Manuel Pena, Siena College, Chemistry (summer 2015, Anal. Chem. REU)
- Jorge Ramierez, University of Texas, El Paso, Mechanical Engineering (summer 2015, Nanoelectronics Undergraduate Research Fellow)
- Thibault Twahirwa, Morehouse College, Chemistry/Physics (summer 2013, AFOSR YIP)
- Jordan Campbell, Morehouse College, Chemistry (summer 2013, MARC USTAR scholar)
- Maitiu O’Ciarain, University College Cork, Energy Engineering (summer 2013, Nanoelectronics Undergraduate Research Fellow)
- Zhonghui Fu, Tsinghua University, Aerospace Engineering (summer 2012, iSURE student)
- Maddy Peterek, Saint Mary’s College, Chemistry and Education (summer 2011, Kerry Long Grant for Experiential Learning awardee; fall 2011)
- Alayne Lawrence, Xavier University of Louisiana, Chemistry (summer 2010)
- Cavanaugh Welch, Morehouse College, Applied Physics (summer 2010)
- Casandra Williams, Saint Mary’s College, Chemistry (summer 2009, Clare Booth Luce Fellow)

SERVICE AND OUTREACH

Outreach

- Exhibitor at St. Joseph County Public Library *Science Alive!* (South Bend, IN) (2014-pres.)
 - hosted table on plasma science and technology at local science and technology expo targeting K-8 students with more than 2000 visitors annually
- High School Research: Coordinate Research Trinity School at Greenlawn, South Bend and University of Notre Dame and mentor student research projects
 - Mary Sgroi and Victor Karwacinski (juniors), 2017-2018 – *1st place award in Northern Indiana Regional Science and Engineering Fair, 2018; 2nd place (11th grade) in Hoosier Science and Engineering Fair, 2018; participating in Intel International Science and Engineering Fair, 2018*
 - Richard Allen III (junior), 2014-2016 – *2nd place award in Northern Indiana Regional Science and Engineering Fair, 2015*
 - Nick Cramer (junior), 2014-2015 – *2nd place award in Northern Indiana Regional Science and Engineering Fair, 2015*
 - John Linczer (senior), 2013-2014 – *1st place award in Northern Indiana Regional Science and Engineering Fair, 2014*
 - *Co-author on M. J. Johnson, J. Linczer, D. B. Go, “Thermally induced atmospheric pressure gas discharges using pyroelectric crystals,” *Plasma Sources Science and Technology*, vol. 23, art. no. 065018, 2014*
 - Nathaniel Griggs (senior), 2012-2013 – *2nd place award in Northern Indiana Regional Science and Engineering Fair, 2013*
- Director, Water Impact Investigation (WII) Team outreach program for middle school students at Holy Cross Grade School (South Bend, IN) (2011-2012) and South Bend Career Academy (South Bend, IN) (2013)
 - combined presentations, bench top experiments, facility tours, and high-level chemical analysis at the Notre Dame Mass Spectrometry and Proteomics facility to introduce students to the importance of water, how it is contaminated, the tools we use to analyze it, and what they can do to improve water quality
- Lead Coordinator, MATHCOUNTS middle school mathematics competition (2009-2013)
- Faculty Lecture, Trinity School at Greenlawn, South Bend, IN (fall 2017)
- Student Body Lecture, Trinity School at Greenlawn, South Bend, IN (fall 2008)

Departmental Service

- Chair, Design Curricular Stem *ad hoc* Committee (2017-present)
- Member, Undergraduate Curriculum Committee, Mechanical Engineering Degree Program (2009-2012, 2016-present)
- Member, Graduate Studies Committee (2015-present)
- Chair, *ad hoc* General Search Committee (2015-2016)
- Member, Department Executive Committee (2013-2015)
- Member, Department Chair Search Committee (2011)
- Member, Dorini Family Endowed Chair in Energy Studies Search Committee (2009-2011)