Curriculum Vitae

Jinshan Gao

Department of Chemistry and Biochemistry, Montclair State University
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EDUCATION

Doctorate of Philosophy, Analytical and Organic Chemistry *2008 – 2012*
***Purdue University**, West Lafayette, IN*
Research Advisor: Hilkka I. Kenttämma

Bachelor of Science, Chemistry *2001 – 2005*
***China Agricultural University**, Beijing, China*

PROFESSIONAL EXPERIENCE

Professor *2022 –*
***Montclair State University**, Montclair, NJ*

Associate Professor *2019 – 2022*
***Montclair State University**, Montclair, NJ*

Assistant Professor *2014 – 2019*
***Montclair State University**, Montclair, NJ*

Postdoctoral Scholar, Proteomics and Glycomics *2012 – 2014*
***California Institute of Technology**, Pasadena, CA*
Research Advisor: J. L. Beauchamp
Design and synthesize biomimetic reagents for protein, glycan, and glycoprotein structure analysis.

Research Associate, polymer-supported chiral catalysts *2005 – 2008*
***Institute of Applied Chemistry for Agriculture**, Beijing, China*
Research Advisor: Min Wang
Designed, synthesized and charaterized chiral polymer-supported catalysts for asymmetric organic synthesis.

RESEARCH INTERESTS

Glycan structure determination by utilizing biomimetic reagents and high-throughput mass spectrometry

Identification and discovery of potential cancer biomarkers and study of the molecular mechanism of cancer diseases by combining biomimetic reagents and high-throughput mass spectrometry.

Development of new biomimetic reagents for glycoprotein structural analysis.

Hydrocarbon and biofuel analysis.

HONORS AND AWARDS

CSAM Faculty Research Award 2018
Sokol Student Faculty Fellowship *2017-2018*
Montclair State University Student Faculty Fellowship *2015-2016*
Sokol Student Faculty Fellowship *2016-2017*
Chinese Government Fellowship *2008-2012*
Beijing Excellent Graduate *2005*
President's Scholarship (Top Honor Scholarship) *2004*
Excellent Student Leader Scholarship *2004*

GRANTS

- **NSF**, MRI: Acquisition of a High-Resolution Accurate-Mass Orbitrap LC-MS System at Montclair State University, $449,969, 09/01/2021 – 08/31/2024. (PI) Co-PIs: David Rotella, Nina Goodey, Yang Deng, Meiyin Wu.
- **NSF**, Development of Fluorescent Free-Radical Tags for N-Glycan Quantitation and Characterization using UPLC-MS/MS, $315,000, 06/01/2021 – 05/31/2024 (PI)
- **NSF**, Glycan Characterization and Quantitative Analysis via Free Radical Induced Dissociation, $279,000, 06/01/2017 – 5/31/2021, Jinshan Gao (PI)
- **NIH,** Characterization and Enrichment of Glycoprotein/Glycan via Multi-Functional Free Radical Reagents, $356,609, 09/01/2017 – 08/31/2021, Jinshan Gao (PI)
- **Sokol Student Faculty Grant**, Investigation of mechanisms for free radical induced glycan dissociation, 06/2017 – 05/2018, $2,000, Jinshan Gao (PI)
- **PSEG ISS Faculty Research Grant**, Closing the Urban Water Cycle: Sewage Sludge-Derived Biochar (SSDB) for Urban Stormwater Management, 07/2017 – 06/2018, $30,000, Yang Deng (PI), Pankaj Lal (PI), Jinshan Gao (PI).
- **Montclair State University Separately Budgeted Research Funding**, Application of Free Radical Reagent for Characterization of Sialylated Glycans, the Potential Biomarker for Early Cancer Detection, 06/2017 – 05/2018, $5,000, Jinshan Gao (PI)
- **Montclair State University Start-up**, 09/2014 – 08/2017, $200,000, Jinshan Gao (PI)
- **Sokol Student Faculty Grant**, Development of Free Radical Initiated Peptide/Protein Sequencing Regents, 06/2015 – 05/2016, $2,000, Jinshan Gao (PI)
- **Montclair State University Student Faculty Fellowship**, Developing Free Radical Isobaric Aldehyde-Reactive Tags for Glycan Quantitation and Characterization, 06/2016 – 05/2017, $2,000, Jinshan Gao (PI)
- **Montclair State University Summer Grant Proposal Development Funding**, Development of Magnetic Nanoparticle-based Free Radical Activated Glycan Sequencing Regent (MN-FRAGS), 06/2015 – 05/2016, $5,000, Jinshan Gao (PI)

TEACHING EXPERIENCE

Department of Chemistry and Biochemistry, Montclair State University, Montclair, NJ 2014-

- CHEM 534, Separation and Analysis
- CHEM 499, Undergraduate Research
- CHEM 311 Lab, Instrumental Analysis
- CHEM 310, Analytical Chemistry
- CHEM 310 Lab, Analytical Chemistry
- CHEM 121, General Chemistry II
- CHEM 121 Lab, General Chemistry II
- CHEM 120, General Chemistry I

Chemistry Department, Purdue University, West Lafayette, IN *2009 - 2012*

- CHM 257 Lab Teaching Assistant (2009-2010)
- CHM 257 Lecture Teaching Assistant (2011-2012)

PUBLICATIONS, MANUSCRIPTS ACCEPTED OR IN PREPARATION

1. Chunfen Jin, Erlu Feng, Xin Ma, Weijuan Tang, Huaming Sheng, Ashley Wittrig, Jinshan Gao, Hilkka I Kenttämaa, Reactivity of para-benzynes in solution and in the gas phase, *Tetrahedron Lett.* **2021**, *74*, 153161. https://doi.org/10.1016/j.tetlet.2021.153161
2. Xin Ma, Erlu Feng, Hanning Jiang, Victoria M Boulos, Jinshan Gao, John J Nash, Hilkka I Kenttämaa*, Protonated Ground-State Singlet meta-Pyridynes React from an Excited Triplet State, *J. Org. Chem.* **2021**, *86*, 3249-3260. https://doi.org/10.1021/acs.joc.0c02594
3. Huaming Sheng, Weijuan Tang, Jinshan Gao, James Riedeman, Matthew Hurt, Linan Yang, Hilkka Kenttämaa*, Characterization of Ionized Lignin Model Compounds with α-O-4 Linkages by Positive and Negative Ion Mode ESI/Tandem Mass Spectrometry Based on CAD, *Rapid Commun. Mass Spectrom.* **2021**, 35, e9057. https://doi.org/10.1002/rcm.9057
4. Lei Zheng, Huan Feng, Yueqiang Liu, Jinshan Gao, Dibyendu Sarkar, Yang Deng, Chemically Enhanced Primary Treatment of Municipal Wastewater with Ferrate(VI), *Water Environment Research* **2021**, 93, 817-825 https://doi.org/10.1002/wer.1473
5. Rayan Murtada, Kimberly C Fabijanczuk, Kaylee Gaspar, Xueming Dong, Kawthar Z Alzarieni, Kimberly Calix, Edgar Manriquez, Rose Mery Bakestani, Hilkka I Kenttämaa, Jinshan Gao*, Free Radical Mediated Glycan Isomer Differentiation. *Ana. Chem.* **2020**, 92, 13794–13802. https://doi.org/10.1021/acs.analchem.0c02213
6. Kimberly Fabijanczuk, Kaylee Gaspar, Nikunj Desai, Jungeun Lee, Daniel A Thomas, Jesse Lee Beauchamp*, Jinshan Gao*, Resin and Magnetic Nanoparticle-Based Free Radical Probes for Glycan Capture, Isolation, and Structural Characterization, *Ana. Chem.* **2019**, 91, 15387-15396. https://doi.org/10.1021/acs.analchem.9b01303
7. Kaylee Gaspar, Kimberly Fabijanczuk, Tara Otegui, Jose Acosta, Jinshan Gao*, Development of Novel Free Radical Initiated Peptide Sequencing Reagent: Application to Identification and Characterization of Peptides and Proteins by Mass Spectrometry, *J. Am. Soc. Mass Spectrom*. **2019**, *30*, 548-556. https://doi.org/10.1007/s13361-018-2114-8
8. Jinshan Gao, Bartłomiej J. Jankiewicz, Huaming Sheng, Lindsey Kirkpatrick, Xin Ma, John J. Nash*, Hilkka I. Kenttämaa*, Substituent Effects on the Reactivity of the 2,4,6-Tridehydropyridinium Cation, an Aromatic σ,σ,σ-Triradical, *Eur. J. Org. Chem.*, **2018**, 46, 6582-6589. http://dx.doi.org/10.1002/ejoc.201801249
9. Huaming Sheng, Xin Ma, Haoran Lei, Jacob Milton, Weijuan Tang, Chunfen Jin, Jinshan Gao, Ashley M. Wittrig, Enada F. Archibold, John J. Nash, Hilkka I. Kenttämaa*, Polar Effects Control the Gas-Phase Reactivity of *para*-Benzyne Analogs, *ChemPhysChem*, **2018**, 19, 2839-2842. https://dx.doi.org/10.1002/cphc.201800646
10. Yang Tang, Yi Pu, Jinshan Gao, Pengyu Hong, Catherine E. Costello, Cheng Lin*, De Novo Glycan Sequencing by Electronic Excitation Dissociation and Fixed-Charge Derivatization, *Ana. Chem.*, **2018**, *90*, 3793–3801. http://dx.doi.org/10.1021/acs.analchem.7b04077
11. Huaming Sheng, Weijuan Tang, Jinshan Gao, James S. Riedeman, Guannan Li, Tiffany M. Jarrell, Matthew R. Hurt, Linan Yang, Priya Murria, Xin Ma, John J. Nash*, and Hilkka I. Kenttämaa*, (−)ESI/CAD MSn Procedure for Sequencing Lignin Oligomers Based on a Study of Synthetic Model Compounds with β-O-4 and 5-5 Linkages, *Ana. Chem.*, **2017**, 89, 13089-13096. http://dx.doi.org/10.1021/acs.analchem.7b01911
12. Nikunj Desai, Daniel A. Thomas, Jungeun Lee, Jinshan Gao* and J. L. Beauchamp*, Eradicating Mass Spectrometric Glycan Rearrangement by Utilizing Free Radicals, *Chemical Science* (Royal Society of Chemistry Flagship Journal), **2016**, 7, 5390-5397. http://dx.doi.org/10.1039/c6sc01371f
13. Emil Tykesson, Yang Mao, Marco Maccarana, Yi Pu, Jinshan Gao, Cheng Lin, Joseph Zaia, Gunilla Westergren-Thorsson, Ulf Ellervik, Lars Malmström and Anders Malmström, Deciphering the mode of action of the

processive polysaccharide modifying enzyme dermatan sulfate epimerase 1 by hydrogen–deuterium exchange mass spectrometry, *Chemical Science* (Royal Society of Chemistry Flagship Journal), **2016**, *7*, 1447-1456. http://dx.doi.org/10.1039/c5sc03798k

14. Chang Ho Sohn, Jinshan Gao, Daniel A Thomas, Tae-Young Kim, William A. Goddard, Jesse Beauchamp,* Mechanisms and Energetics of Free Radical Initiated Disulfide Bond Cleavage in Model Peptides and Insulin by Mass Spectrometry, *Chemical Science* (Royal Society of Chemistry Flagship Journal), **2015**, *6*, 4550-4560. http://dx.doi.org/10.1039/c5sc01305d
15. John C Degenstein, Priya Murria, Mckay Easton, Huaming Sheng, Matt Hurt, Alex R Dow, Jinshan Gao, John Joseph Nash, Rakesh Agrawal, W Nicholas Delgass, Fabio H Ribeiro, Hilkka I. Kenttamaa,* Fast Pyrolysis of 13C-Labeled Cellobioses: Gaining Insights Into the Mechanisms of Fast Pyrolysis of Carbohydrates, *J. Org. Chem.*, **2015**, *80*, 1909–1914. http://dx.doi.org/10.1021/jo5025255
16. Jinshan Gao, Bartłomiej J. Jankiewicz, Jennifer Reece, Huaming Sheng, Christopher J. Cramer, John J. Nash,* Hilkka I. Kenttämaa,* On the Factors That Control the Reactivity of *meta*–Benzynes, *Chemical Science* (Royal Society of Chemistry Flagship Journal), **2014**, *5*, 2205-2215. http://dx.doi.org/10.1039/c4sc00194j
17. Daniel A. Thomas, Chang Ho Sohn, Jinshan Gao, and J. L. Beauchamp,* Hydrogen Bonding Constraints Lead to Unusual Reactions of Free Radicals with Serine and Threonine Residues in Peptides, *J. Phys. Chem. A.* **2014**, *118*, 8380–8392. http://dx.doi.org/10.1021/jp501367w
18. Jinshan Gao, Daniel Thomas, Chang Ho Sohn, J. L. Beauchamp,* Biomimetic Reagents for Selective Free Radical and Acid-Base Chemistry of Glycans: Application to Glycan Structure Determination by Mass Spectrometry, *J. Am. Chem. Soc.* **2013**, *135*, 10684-10692. (flagship journal of the American Chemical Society and the world's preeminent journal in all of chemistry and interfacing areas of science) http://dx.doi.org/10.1021/ja402810t
19. Jinshan Gao, Benjamin C. Owen, David J. Borton II, Zhicheng Jin, Hilkka I. Kenttämaa,* HPLC/APCI Mass Spectrometry of Saturated and Unsaturated Hydrocarbons by Using Hydrocarbon Solvents as the APCI Reagent and HPLC Mobile Phase, *J. Am. Soc. Mass Spectrom*. **2012**, *23*, 816-822. http://dx.doi.org/10.1007/s13361-012-0347-5
20. Bartłomiej J. Jankiewicz, Jinshan Gao, Jennifer N. Reece, Nelson R. Vinueza, Padmaja Narra, John J. Nash,* Hilkka I. Kenttämaa,* Substituent Effects on the Non-radical Reactivity of 4-Dehydropyridinium Cation, *J. Phys. Chem. A* **2012**, *116*, 3089-3093. http://dx.doi.org/10.1021/jp2101557
21. Mingkun Fu, Penggao Duan, Jinshan Gao, Hilkka I. Kenttämaa,* Ion–molecule Reactions for the Differentiation of Primary, Secondary and Tertiary Hydroxyl Functionalities in Protonated Analytes in a Tandem Mass Spectrometer, *Analyst* **2012**, *137*, 5720-5722. http://dx.doi.org/10.1039/C2AN35986C
22. Jinshan Gao, David J. Borton II, Benjamin C. Owen, Zhicheng Jin, Matt Hurt, Lucas M. Amundson, Jeremy T. Madden, Kuangnan Qian, Hilkka I. Kenttämaa,* Laser-Induced Acoustic Desorption/Atmospheric Pressure Chemical Ionization Mass Spectrometry, *J. Am. Soc. Mass Spectrom*. **2011**, *22*, 531-538. http://dx.doi.org/10.1007/s13361-010-0048-x
23. Benjamin C. Owen, Jinshan Gao, David J. Borton II, Lucas M. Amundson, Enada F. Archibold, Xiaoli Tan, Khalid Azyat, Rik Tykwinski, Murray Gray, Hilkka I. Kenttämaa,* Carbon Disulfide Reagent Allows the Characterization of Nonpolar Analytes by Atmospheric Pressure Chemical Ionization Mass Spectrometry, *Rapid Commun. Mass Spectrom.* **2011**, *5*, 1924-1928. http://dx.doi.org/10.1002/rcm.5063
24. Jinshan Gao, Qinghua Bian, Hongchao Guo, Min Wang,* New Advances of Asymmetric Cyclopropanation Reactions Using Chiral Metal Catalysts, *Chinese J. Org. Chem.***2007**, 27, 438-448. http://sioc-journal.cn/Jwk_yjhx/EN/abstract/abstract336275.shtml
25. Jinshan Gao, Hongchao Guo, Shangzhong Liu, Min Wang,* Efficient Soluble Polymer-Supported Tartrate/Ti Catalyst for Asymmetric Oxidation of Prochiral Sulfides, *Tetrahedron Lett.* **2007**, 48, 8453-8455. http://dx.doi.org/10.1016/j.tetlet.2007.09.169
26. Jinshan Gao, Qinghua Bian, Yongzhong Zhang, Min Wang*. Research progress on the cytokinin, CPPU.

Agrochemicals **2006**, 45(3), 151-153.
http://en.cnki.com.cn/Article_en/CJFDTOTAL-NYZZ200603002.htm

27. Weiguo Zhang, Jinshan Gao, Shangshang Chen, Chongjiu Li,* Determination of Residual Triadimefon, Triadimenol2a, and Triadimenol2b in Corn by Gel Permeation Chromatography and Gas Chromatography/Mass Spectrometry, *Chinese J. Anal. Chem.***2005**, 33, 1442-1444.
http://ce.sysu.edu.cn/Echemi/ac151/resource/datas/thesis/%C4%FD%BD%BA%C9%F8%CD%B8%C9%AB%C6%D7_%C6%F8%CF%E0%C9%AB%C6%D7_%D6%CA%C6%D7%B2%E2%B6%A8%D3%F1%C3%D7%D6%D03%D6%D6%C5%A9%D2%A9%B5%C4%B2%D0%C1%F4.pdf

PATENTS

1. Jinshan Gao, Zhicheng Jin, David J. Borton II, Benjamin C. Owen, Hilkka I. Kenttämaa. *US PATENT*, Patent No.: US8344319 B2, Laser-Induced Acoustic Desorption/Atmospheric Pressure Chemical Ionization Mass Spectrometry.
http://www.google.com/patents/US8344319
2. Jinshan Gao, Jesse Lee Beauchamp. *US PATENT*, Application No. 14/181,622, Compositions and Methods for Glycan Sequencing.
http://www.google.com/patents/US20140227793

ORAL PRESENTATIONS

- Kimberly Fabijanczuk, Kaylee Gaspar, Tara Otegui, and Jinshan Gao*, "HCD Study of Free Radical Induced Glycan Dissociation", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 18, **2019**
- Kaylee Gaspar, Kimberly Fabianczuk, and Jinshan Gao*, "Free Radical Isotopic Tags for Glycan Characterization and Quantitation", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 19, **2019**
- Jinshan Gao, "Glycan characterization and quantitation via free radical chemistry and mass spectrometry", invited to give a presentation in Department of Chemistry and Environmental Science at New Jersey Institute of Technology, November 30, **2018**
- Kimberly Fabijanczuk, Kaylee Gaspar, Nathaniel Adomako, Jose Acosta, and Jinshan Gao*, "Mechanistic Study of Free Radical Activated Glycan Dissociation by ^{13}C Labeled Cellobiose", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 14, **2018**
- Jinshan Gao, "Development of Free Radical Isobaric Aldehyde-Reactive Tags for Glycan Quantitation and Characterization", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 14, **2017**
- Jinshan Gao, "Resin-Based and Magnetic Nanoparticle-Based Biomimetic Reagents for Glycan Structure Determination by Mass Spectrometry", *63rd American Society of Mass Spectrometry Conference*, St. Louis, MO, June 3, **2015**
- Jinshan Gao, "Free Radical Activated Glycan Sequencing and Proton Tag Mass Spectrometry for Identification of Glycan Structure", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 18, **2014**
- Jinshan Gao, "Programming Glycans for Controlled Self Destruction using Acid-Base and Radical Chemistry ", *61st American Society of Mass Spectrometry Conference*, Minneapolis, MN, June 12, **2013**
- Jinshan Gao, "Free Radical Activated Glycan Sequencing and Proton Tag Mass Spectrometry for Identification of Glycan Structure", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 20, **2013**
- Jinshan Gao, "Gas-Phase Reactivity Studies of Pyridine Based Mono- and Polyradicals by Using FT-ICR Mass Spectrometry", *Organic Seminar at the Department of Chemistry*, Purdue University, IN, November 1, **2011**

POSTER PRESENTATIONS

- Rayan Murtada, Shane Finn, Ray Stanton, Jinshan Gao, Glycan Characterization via Free Radical-Activation on Sodium Adduct of Reductive Amination Conjugates with FRAGS, *69th American Society of Mass Spectrometry Conference*, Philadelphia, PA, October **2021**

- Rose Mery Bakestani, Hendrik Eshuis, Jinshan Gao, Free Radical Activated Glycan Dissociation through 13C-Labeled Cellobioses Study using Quantum Chemical Calculations, *69th American Society of Mass Spectrometry Conference*, Philadelphia, PA, October **2021**
- Rayan Murtada, Jinshan Gao, Quantitation and Characterization of Glycns via Free Radical Isotopic/Isobaric Tags, *68th American Society of Mass Spectrometry Conference*, Huston, TX, June **2020**
- Rose Mery Bakestani, Hendrik Eshuis, Jinshan Gao, Quantum Chemical Calculations for Mechanistic Study of Free Radical Activated Glycan Dissociation through ^{13}C-Labeled Cellobioses, *68th American Society of Mass Spectrometry Conference*, Huston, TX, June **2020**
- Kimberly Fabijanczuk, Kaylee Gaspar, Jose Acosta, Tara Otegui, Jinshan Gao*, "Discrimination of Glycan Isomers via Generation of Unique Parent-Structure-Dependent Product Ions by Free Radical Chemistry and Mass Spectrometry", *67th American Society of Mass Spectrometry Conference*, Atlanta, GA, June **2019**
- Kimberly Fabijanczuk, Kaylee Gaspar, Jose Acosta, Nathaniel Adomako, Tara Otegui, Dr. Jinshan Gao*, "Mechanistic Study of Free Radical Activated Glycan Dissociation by 13C Labeled Cellobiose", *66th American Society of Mass Spectrometry Conference*, San Diego, CA, June **2018**
- Kaylee Gaspar, Kimberly Fabijanczuk, Tara Otegui, Trang Do, Leah Wis, Jinshan Gao*, "Study of Hydrophobic Peptides and Peptides without Basic Amino Acid Residues (BAARs) by Free Radical Approach", *66th American Society of Mass Spectrometry Conference*, San Diego, CA, June **2018**
- Kaylee Gaspar, Kimberly Fabijanczuk, and Jinshan Gao*, "Study of Hydrophobic Peptides and Peptides without Basic Amino Acid Residues (BAARs) by Free Radical Approach", *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January 12, **2018**
- Kimberly Fabijanczuk, Jose Acosta, Trang Do, Jinshan Gao*, High Mannose Glycan Characterization and Quantitation by Free Radical Reagents, *65th American Society of Mass Spectrometry Conference*, Indianapolis, IN, June **2017**
- Jinshan Gao, Kaylee Gaspar, Trang Do, Nathaniel Adomako, Kimberly Fabijanczuk, Jose Acosta, Glycan Characterization and Quantitation by Free Radical Reagents; *65th American Society of Mass Spectrometry Conference*, Indianapolis, IN, June **2017**
- Kaylee Gaspar, Trang Do, Nathaniel Adomako, Jinshan Gao,* Sialyl Glycan Characterization by Free Radical Activated Glycan Structure Elucidation Reagent, *65th American Society of Mass Spectrometry Conference*, Indianapolis, IN, June **2017**
- Nikunh Desai, Kaylee Gaspar, Sumeet Singn, Rosa Jajar, and Jinshan Gao*, Developmnet of Magnetic Nanoparticle-Supported Free Radical Activated Glycan Structure Elucidation Reagent, *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January **2017**.
- Nikunj Desai, Jungeun Lee, Jinshan Gao*, Development of Negative Mode Free Radical Activated Glycan Structure Elucidation Reagents, *64th American Society of Mass Spectrometry Conference*, San Antonio, TX, June **2016**
- Eric Joyce, Jinshan Gao*, A New Tool for Glycan Structure Elucidation and Characterization, *64th American Society of Mass Spectrometry Conference*, San Antonio, TX, June **2016**
- Priya Murria, Jinshan Gao, John C. Degenstein, Huaming Sheng, Matthew R. Hurt, John J. Nash, Hilkka I. Kenttämaa, Exploring Mechanisms of Fast Pyrolysis of Lignin via Tandem Mass Spectrometry and Quantum Chemical Calculations: A Synthetic Model Compound Study, *63rd American Society of Mass Spectrometry Conference*, St. Louis, MO, June **2015**
- Daniel A. Thomas, Keziah Kim, Jinshan Gao, and J. L. Beauchamp*, Achieving Glycopeptide Dissociation by Proton Sequestration and Free Radical-Induced Cleavage, *Ion Chemistry and Mass Spectrometry Conference*, Lake Arrowhead, CA, January **2014**.
- Jinshan Gao, Daniel A. Thomas, Chang Ho Sohn, J. L. Beauchamp, "Biomimetic Reagents for Selective Free Radical and Acid-Base Chemistry of Glycans: Application to Glycan Structure Determination by Mass Spectrometry", *61st American Society of Mass Spectrometry Conference*, Minneapolis, MI, June **2013**.

- Jinshan Gao, Bartłomiej J. Jankiewicz, Jennifer Reece, Michael J. Yurkovich, John Nash, Hilkka I. Kenttämaa, "Substituent Effect on the *meta*-Benzynes' Reactivity", *60th American Society of Mass Spectrometry Conference*, Vancouver, Canada, May **2012**.
- Jinshan Gao, David J. Borton II, Benjamin C. Owen, Zhicheng Jin, Hilkka I. Kenttämaa, "Simultaneous Analysis of Saturated and Unsaturated, Non-polar and Polar Hydrocarbons by Using Saturated Hydrocarbon Solvents in HPLC/APCI Mass Spectrometry", *59th American Society of Mass Spectrometry Conference*, Denver, CO, June **2011**.
- Benjamin C. Owen, Jinshan Gao, David J. Borton II, Lucas M. Amundson, Enada F. Archibold, Xiaoli Tan, Khalid Azyat, Rik Tykwinski, Murray Gray, Hilkka I. Kenttämaa, "Carbon Disulfide Reagent Allows the Characterization of Nonpolar Analytes by Atmospheric Pressure Chemical Ionization (APCI) Mass Spectrometry", *59th American Society of Mass Spectrometry Conference*, Denver, CO, June **2011**.
- Jinshan Gao, Anyin Li, Bartłomiej J. Jankiewicz, Nelson R. Vinueza, Lindsey Kirpatrick, John J. Nash and Hilkka I. Kenttämaa, "Substituent Effects on the Reactivity of 3-X-2,4,6-Tridehydropyridinium and 3-X-2,4-Didehydropyridinium Ions (X = Substituent)", *58th American Society of Mass Spectrometry Conference*, Salt Lake City, UT, May **2010**.
- Anyin Li, Jinshan Gao, Mingkun Fu, Bartłomiej J. Jankiewicz, John J. Nash and Hilkka I. Kenttämaa, "Measurement of the Proton Affinities of Dehydroand Didehydropyridines by Using Gas-Phase Ion-Molecule Reactions", *58th American Society of Mass Spectrometry Conference*, Salt Lake City, UT, May **2010**.

PROFESSIONAL SOCIETIES

- American Society for Mass Spectrometry

PROFESSIONAL SERVICE

- 2013- **Reviewer** for internationally acclaimed scientific journals, including *Chemical Society Review*, *Chemical Communications*, *European Journal of Mass Spectrometry*, *Analytical Methods*, *Journal of materials chemistry B*, *Physical Chemistry Chemical Physics*, *Rapid Communications in Mass Spectrometry*, *Energy&Fuel*, *mSystemes*, *and RSC Advances*.
- 2017, **ASMS Program Committee**, serving on reviewing posters of carbohydrate, microorganisms, and systems biology areas for 65th Conference on Mass Spectrometry and Allied Topics.
- 2016- **Editorial Board for *Austin Biochemistry***, which is an open access, peer reviewed, scholarly journal dedicated to publishing articles covering all areas of Biochemistry.
- 2016- **Editorial Board for *Journal of Modern Chemical Sciences***, *which is a* herald scholarly open access journal.
- **Presider** of Ion Chemistry and Mass Spectrometry Conference 2017.
- **Presider** of Ion Chemistry and Mass Spectrometry Conference 2018.
- **Reviewer** of NSF proposals 2018.
- **Reviewer** of NASA DALI19 Panel (August 25-30, 2019).
- **Judge** for 3rd annual Union City Science Fair at Union High School, Union City, NJ, 2016.
- **Judge** for 60th STEM Showcase at Liberty Science Center, NJ, 2018.
- **Panelist** for NSF CMI Mass Spectrometry FY2022