Curriculum Vita

Promotion CPE ('20-'23)

Candice Bridge, Ph.D.

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PROFILE

- Skilled research chemist with doctorate in analytical analysis.
- Strong background in developing innovative methods of analysis.
- Certified Project Management Professional
- Selected as a 2016 UCF Woman Making History by the UCF CSWF

EDUCATION

Post-Doctoral Research

2008

University of Central Florida, Orlando, FL

Center for Research and Education of Optics and Lasers

Research Field: Capabilities of Nano- and Micro-Second Laser Induced Breakdown Spectroscopy (LIBS) Advisor: Dr. Martin Richardson

Doctorate of Philosophy in Chemistry

2007

University of Central Florida, Orlando, FL

Dissertation: Discrimination of Forensic Trace Evidence using LIBS

Advisor: Dr. Michael Sigman

Bachelor of Science in Chemistry (ACS Certified)

2004

Howard University, Washington, DC

Area of Concentration: Analytical Chemistry and Mathematics

Honors Thesis: Determination of Folic Acid and Caffeine using Matrix Assisted Laser Desorption Timeof-Flight Mass Spectrometry

Advisor: Dr. Folahan Ayorinde

PUBLICATION/PRESENTATION SUMMARY

Journal Publications: 38 total; 2 Invited, 11 For. Sci. Intl., 8 For. Chem

Invited Peer-Reviewed Magazine Articles: 5

Book Chapters: 4

Presentations & Seminars: 150 total, 16 Invited Presentations | Keynote Speeches: 6

PROPOSAL SUMMARY

Externally Funded Grants Awarded: 14 total; **6** NIJ, **2** PD9 \$1,512,397 **Internally Funded Grants Awarded: 5** total \$ 15,100

TEACHING SUMMARY

Total Courses Taught: 5 (Created 3 new courses)
Total Research Hours: 735 SCH (Since 2020: 222)

Post-Doctoral Associates: 2

Graduate Research Assistants: 16 (7 graduated, 3 left)
Graduate Non-Thesis Research Students: 12 (9 graduated)

Undergraduate Research Students: 45
Non-Research Student Mentees: 3

SERVICE & OUTREACH SUMMARY

5 Presentations to local legal and law enforcement communities about forensic lubricants (Public Defender Office, Sexual Assault Response Team, and Forensic Laboratories)

18 Presentations to local community (middle schools, programs for underrepresented communities, and the elder community).

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HONORS AND AWARDS

Mar 2020: 2020 UCF LIFE@UCF Women Faculty Recognition Award NOMINEE

- Celebrate successful initiatives spearheaded by women faculty.
- Award based on Commitment to do Extraordinary Things.

Feb 2020: 2020 AIM High Awardee

 Rewards the commitment to making learning affordable in the area of Affordability Counts.

Apr 2019: 2019 UCF Teaching Incentive Award Winner

- Rewards teaching, productivity and excellence.
- Award recognizes faculty offering the best undergraduate education available in Florida.

Apr 2019: 2019 UCF Research Incentive Award Winner

- Supports outstanding research, scholarly and creative activity that advances the body of knowledge in a particular field.
- Award recognizes faculty contributions to UCF's key goal of achieving international prominence in research and creative activities.

Apr 2019: 2019 UCF College of Science Excellence in Research Award Winner

- Award is presented to the PI demonstrating high value and impact of research efforts within the discipline and to society.
- Only 1 awardee per college is selected each year.
- I am the 1st Assistant Professor to win this award in the College of Science.

Oct 2017: 2017 UCF Luminary Award Winner

- Inaugural Award presented to faculty making an impact on the world
- 1 of 45 awardees out of nearly 2,486 UCF faculty

Feb 2017: 2017 Young Phenom, Essence Magazine

 Highlighted nationally for my research advancing sexual assault investigations in America

Mar 2016: 2016 UCF Woman Making History, UCF Center for Success of Women Faculty

• 1 of 32 selectees highlighted for their commitment to humanity and the planet and have proved to be invaluable for society.

Jul 2014: Commanders Award for Civilian Service, Defense Forensic Science Center

- Given to employees of the U.S. Army that have established a pattern of excellence, usually recognized through the previous receipt of one or more honorary or monetary performance awards.
- Presented to those who set an example of achievement for others

Feb 2013: Modern Day Technology Leader, Black Engineer of the Year Award Conference

 These awardees are bright women and men who are shaping the future of engineering, science and technology.

May 2009: Professor of the Year, Howard University Chemistry Department

• Selected by the students of the Chemistry Department as to which professor has shaped their future in chemistry.

SIGNIFICANT NOMINATIONS

2018-2019 Undergraduate Research Mentor of the Year Nominee

Award honors outstanding faculty who have made an impact on their undergraduate mentees. This award is only nominated by undergraduate students.

Received 8 nominations out of 45 nominations submitted.

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Professional Experience

EXPERIENCE

Associate Professor of Chemistry Assistant Professor of Chemistry

August 2020 - Present August 2014 - August 2020

University of Central Florida, Orlando, FL

Department of Chemistry and the National Center for Forensic Science (JOINT Appointment)
Create and manage a new trace evidence research laboratory

Manage research grants: ~ \$1,400,000

Provide mentorship and guidance for

- 2 post-doctoral associates
- 28 graduate students
- 44 undergraduate students

Developed new online graduate courses

- Forensic Analysis of Explosive
- Forensic Analysis of Ignitable Liquids
- Quality Assurance for Forensic Scientists

Program Director of the UCF Forensic Science MS Program

- Chair the Admission Committee
- Advise all students in the Professional Track

Research Physical Scientist

May 2011 – July 2014

Defense Forensic Science Center, Forest Park, GA

As the dean and single point of contact for the Defense Forensic Science Center (DFSC) year-round Educational Partnerships and Programs

- Developed, implemented, and manage the on-going year-round USACIL Research Internship Program
- Engaged with Military Academies to communicate awareness of the Summer Research Program
- Managed the Military Academy Summer Research program
- Lead point of contact for the Department of Defense (DoD) Smart Program
- Manage all aspects of the year-long Masters of Forensic Science Program for Military
 Forensic Science Officers/Consultants from enrollment, research and through graduation
- Developed, implemented, and manage the Visiting Scientist Program to collaborate with DoD Scientists in research
- Actively research, communicate, and engage with new Institutions to conduct joint research with the USACIL

As a research scientist for the DFSC

- Developed and implemented the USACIL research process and capabilities
- Develop and conduct research projects with USACIL interns to expand forensic science capabilities for the USACIL
- Mentored and managed ten (10) interns to conduct forensic science research
- Perform statistical data analysis for USACIL research projects
- Assist other USACIL personnel to develop and submit research proposals

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As a certified Project Management Professional (PMP), manage external research and development programs to advance forensic science capabilities with the DoD

- · Managed external vendors to ensure that agreed upon DoD deliverables were met
- Served as a liaison to the Military Criminal Investigation Organizations

Developed, implemented, and manage the Human Right Protection Program for the Office of the Provost Marshall General (OPMG)

- Serve as the Human Protections Administrator (HPA)
- Determine if OPMG research projects are exempt from Institutional Review Board (IRB) reviews
- Serve as the liaison between the OPMG and the IRBs

Forensic Chemist

August 2009 – May 2011

United States Army Criminal Investigations Laboratory, Forest Park, GA

Perform forensic analysis to assist CID investigation

- Examine fire debris trace evidence and make determinations as to the presence of ignitable liquids
- · Begin training in explosive analysis
- Perform numerous studies to validate current analytical procedures

Conducted research in the area of fire debris analysis

- Mentored a summer intern to understand fire debris analysis, gas chromatograph interpretation and statistical analysis
- Presented research findings to the leadership of the laboratory

Adjunct Professor of Chemistry

January 2010 - August 2011

Atlanta Metropolitan College, Atlanta, GA

Lecture general chemistry courses

Provide mentorship and guidance to students

Chemistry Lecturer

August 2008 - May 2009

Howard University, Washington, DC

Lectured general chemistry and analytical Laboratory courses including:

- Constructed chemistry laboratory courses and taught students general chemistry, analytical laboratory procedures and techniques to support lecture courses
- Initiated development of a forensic science sub-discipline for the chemistry department
- · Voted "Professor of the Year"

Senior Research Scientist (Post-Doctoral)

January 2008 - June 2008

Center for Research and Education of Optics and Lasers, Orlando, FL

Managed projects for federally sponsored multi-state research grants for the Laser Spectroscopy Laboratory including:

- Managed projects from conception through development, planning, budgeting, and scheduling and handled all purchases
- Conducted numerous meetings, conference calls and initiated report updates about current project status
- Mentored and supervised graduate students research

Conducted post-doctorate research on LIBS's applications for the qualitative analysis of various organic materials including:

Developed analytical methods and data processing techniques for LIBS spectral comparison

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Research Assistant/Teaching Assistant

January 2005 – December 2007

University of Central Florida & National Center for Forensic Science, Orlando, FL

Developed analytical methods for Laser Induced Breakdown Spectroscopy including:

- Determined LIBS's ability to discriminate by comparing it's analysis to currently used instrumentation
- Evaluated LIBS's application for the qualitative and quantitative analysis of various organic materials
- Developed statistical computer programs for data processing of LIBS spectral comparison.

Taught General Chemistry Recitation 160 student during the first year of graduate school.

Research Scientist Summers 2005 - 07

South Carolina State Law Enforcement Division, Columbia, SC

Developed analytical methods for the forensic analysis of trace evidence:

- Analyzed the comparison of trace automobile float glass and paint samples.
- Developed analysis procedures for the following instrumentation: XRF, LA-ICP-MS, SEM-EDX and GRIM3.

Research Scientist Spring 2004

National Research Center for Alcohol, Tobacco, Firearms & Arson, Beltsville, MD

Conducted research in the following areas:

- Investigated the effects of cyanoacrylate ("krazy glue") on the residue of high explosive evidence
- Performed research in Latent Prints, Firearms, Trace Evidence, Arson and Explosives.

Research Scientist Summer 2003

National Center for Forensic Science, Orlando, FL

Conducted research to determine the efficiency of using paint cans for the collection of arson evidence including:

- Examined and refined the methodology used in collecting and analyzing arson evidence in paint cans
- Analyzed the maximum concentration allowed in the paint cans before the information gathered from the analytical method used becomes skewed.

CERTIFICATIONS

Mar 2012 - Project Management Professional Certification

Nov 2011 - Contractor Officer Representative

TRAININGS

May 2019 - Writing Across the Curriculum, University of Central Florida

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Research Experience

PROPOSAL SUMMARY

Externally Funded Grants Awarded: 14 total; **6** NIJ, **2** PD9 \$1,512,397 **Internally Funded Grants Awarded: 5** total; \$ 15,100

RESEARCH INTERESTS

Main Goal: Develop analytical methods for forensic evidence that can be transferred to operational forensic casework.

- Sexual Lubricants: Develop a classification scheme to analyze and interpret unknown lubricants used in sexual assaults.
- Gunshot Residue: Analyzing organic gunshot residue as a complementary technique to inorganic gunshot residue.
- Drug and Metabolite: Identifying drugs and metabolites in the presence of adulterants.
- Other Trace Evidence: Determining the evidentiary value of other types of trace evidence, i.e., glitter, shimmer, and hair.
- Ambient Ionization (AI) Mechanism: Understanding and harnessing AI mechanisms to develop selection ionization procedures.

PUBLICATION/PRESENTATION SUMMARY

Refereed Publications: 38 total; 2 Invited, 11 For. Sci. Intl., 8 For. Chem. (Since 2020: 14 total)
Invited Refereed Journal Articles: 2 (Since 2020: 0 total)

Presentations & Seminars: 150 (Since 2020: 20 total)

Invited Presentations: 16 (Since 2020: 3 total)

Invited Peer-Reviewed Magazine Articles: 5

Book Chapters: 4 (Since 2020: 2 total)

Keynote Speech: 6 (since 2019: 2 total)

NOTE: The impact factor for forensic science journals are lower than the average journal primarily due to the narrow field of interests. The average impact factor of forensic science journals is 2 and the average impact factor of the journals I publish in is 1.941

PUBLICATIONS (* UNDERGRADUATE RESEARCHER, GRADUATE RESEARCHER, § CORRESPONDING AUTHOR)

Invited Refereed Journal Articles

- C. Bridge[§], M. Maric, "Temperature Dependent DART-MS Analysis of Sexual Lubricants to Increase Accurate Associations". *Journal of the American Society for Mass Spectrometry*. 2019. 30(8), 1343-1358. DOI: 10.1007/s13361-019-02158-x
- S. L. N. H. Rhoden[§], C. Bridge. "Forensic Techniques and Chemical Sniffers for Standardized Use at Ports and Other Border Crossings". *International Journal of Maritime Themes*, 1(1), 94-124. 2018.

Contributed Refereed Journal Articles

- 36. J. Kindell, C. **Bridge**§. "Error Rate and Similarity Determination of Latent Print Chemistry via 1D and 2D-GC-MS". Forensic Chemistry. **2023**. Under Review
- 35. J. Kindell, C. Bridge[§]. "Comparative Analysis of Substrate and Derivatization Methods for Groomed Latent Print Residues via Gas Chromatography". *Forensic Sciences.* 3(2), 302-315, 2023. DOI: 10.3390/forensicsci3020023

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- 34. D. Funes, K. Bonilla, M. Baudelet[§], C. **Bridge**[§]. Morphological and Chemical Profiling for Forensic Hair Examination: A Review of Quantitative Methods. *Forensic Science International*, 346, 111622, **2023**. DOI: 10.1016/j.forsciint.2023.111622
- 33. C. **Bridge**§, B. Baumgarten, L. Tang, N.-T. Nguyen. Determining the Apriori Information for Forensic Lubricant Analysis in Sexual Assault Cases. *Forensic Science International*, **2022**. *Under Revision*.
- 32. J.M. Duarte, N.G.S. Sales, J.W. B Braga, C. **Bridge**, M. Maric, M.H. Sousa, J. A. Gomes[§]. Discrimination of 143 white automotive paint samples with ATR-FTIR PCA and PLS-DA for forensic purposes. *Talanta*. 240, 123154, **2022**. DOI: 10.1016/j.talanta.2021.123154.
- 31. S Thomas, B. Baumgarten, D. Green, C. Bridge[§]. A brief study on the effects of storage conditions on sexual lubricant components in the presence of a biological fluid. *Forensic Science International*. 111273, 2022. DOI: 10.1016/j.forsciint.2022.111273
- 30. B. Baumgarten, S. Thomas, N. Flynn, M. Maric, N.-T. Nguyen, L. Tang, C. Bridge[§].

 Developing a comprehensive analytical protocol for forensic sexual lubricant analysis Part 1: Implementing a Sexual Lubricant Database for Forensic Casework. Forensic Chemistry. 27, 100403, 2022. DOI: 10.1016/j.forc.2022.100403.
- 29. B. Baumgarten, S. Thomas, N. Flynn, M. Maric, C. **Bridge**§. A longevity study to determine appropriate storage conditions for sexual lubricants using spectroscopic and spectrometric techniques. *Forensic Science International*. 328, 111036. Oct **2021**. 10.1016/j.forsciint.2021.111036.
- 28. D. Green, C. Bridge§. "Breakdown of Polyethylene Glycol Lubricant post interactions with *Pseudomonas putida*". Forensic Science International. **2020**. Under Revision
- 27. S. A. L. Thomas, N. Andersen, M. Maric, C. **Bridge**§. "Implementing Raman Spectroscopy as a Tool to Characterize Sexual Assault Lubricants". *Forensic Chemistry*. 24, 100329. June **2021**. DOI: 10.1016/j.forc.2021.100329.
- 26. E. Lennert, C. Bridge[§]. "Correlation and analysis of smokeless powder, smokeless powder residues, and lab generated pyrolysis products via GC-MS". Forensic Chemistry. 23, 100316. May 2021. DOI: 10.1016/j.forc.2021.100316.
- 25. D. S. H. Funes, C. **Bridge**§. "Analysis of Hair Color and Texture for Forensic Examinations". Journal of Forensic Sciences. 66(2), 520-533. Mar **2021**. DOI: 10.1111/1556-4029.14640.
- 24. K. Najjar, C. **Bridge**§. "SEM-EDS Analysis and Characterization of Glitter and Shimmer Cosmetic Particles". *Forensic Science International*. 317, 110527. Dec **2020**. DOI: 10.1016/j.forsciint.2020.110527.
- 23. J. Melo Duarte, N. G. Silva Sales, M. Henrique Sousa, C. **Bridge**§, M. Maric, J. de Andrade Gomes. "Automotive Paint Analysis: How far has the science advanced in the last ten years?". *Trends in Analytical Chemistry*. 132, 116061. Nov 2020. DOI: 10.1016/j.trac.2020.116061.
- 22. C. **Bridge**[§], M. Giardina, "More Accurate Associations of Oil-Based Sexual Lubricants and Hygiene Products using GC×GC-MS". *Forensic Chemistry*. 17, 100207. Mar 2020. DOI: 10.1016/j.forc.2019.100207.
- 21. C. **Bridge**§, T. B. Freeman, "Appropriate Education Alters Perceptions of Forensic Science and Guides Career Selection." *Journal of Forensic Science Education*. 1, 1-24, 2019.
- 20. E. Lennert, C. **Bridge**§. "Rapid Screening for Smokeless Powders using DART-HRMS and Thermal Desorption DART-HRMS". *Forensic Chemistry*. 13, 100148. May **2019**. DOI: 10.1016/j.forc.2019.100148.
- 19. E. Lennert, C. Bridge[§], "Analysis and classification of smokeless powders by GC-MS and DART-TOFMS". Forensic Science International, 292, 11-22. Nov **2018.** DOI: 10.1016/j.forsciint.2019.09.003.

• Impact Factor: 2.140

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- 18. M. Marić, J. Marano, R. B. Cody, C. **Bridge**§. "DART-MS: A New Analytical Technique for Forensic Paint Analysis?". *Analytical Chemistry*, 90(11), 6877-6884. **2018**. DOI: 10.1021/acs.analchem.8b01067.
 - Impact Factor: 1.998
 - Cited by: 1
- 17. B. Olivieri*, M. Marić, C. **Bridge**§. "Determining the Effects of Adulterants on Drug Detection via ELISA and Adulterant Tests Strips". *Drug Testing and Analysis*. 10(9), 1383-1393, **2018**. DOI: 10.1002/dta.2404.
 - Impact Factor: 2.993
- 16. L. Gandy*, K. Najjar, M. Terry, C. **Bridge**§. "A Novel Protocol for the Combined Detection of Organic and Inorganic Gunshot Residue". *Forensic Chemistry*, 8, 1-10, **2018**. DOI: 10.1016/j.forc.2017.12.009.
 - New forensic science journal for chemistry based research
 - Impact Factor: 1.20
 - Cited by: 1
- 15. B. Baumgarten, M. Marić, L. Harvey, C. **Bridge**§. "Preliminary Characterization Scheme of Silicone Based Lubricants using DART-TOFMS". *Forensic Chemistry*, 8, 28-39, **2018**. DOI: 10.1016/j.forc.2017.12.005.
 - Impact Factor: 1.20
 - Cited by: 1
- 14. Y. Moustafa, C. Bridge[§]. "Distinguishing Sexual Lubricants from Personal Hygiene Products for Sexual Assaults Cases". *Forensic Chemistry*, 5, 58-71, **2017**. DOI: 10.1016/j.forc.2017.06.004.
 - Impact Factor: 1.20
 - Cited by: 2
- M. Marić, L. Harvey, M. Tomcsak*, A. Solano*, C. Bridge[§]. "Chemical Discrimination of Lubricant Marketing Types using Direct Analysis in Real Time Time-of-Flight Mass Spectrometry". Rapid Communications in Mass Spectrometry, 31(12), 1014-1022, 2017. DOI: 10.1002/rcm.7876.
 - Impact Factor: 1.97
 - Cited by: 7
- 12. M. Terry, B. Fookes, C. **Bridge**§. "Determining the effect of cartridge case coatings on GSR using post-fire priming cup residue". *Forensic Science International*, 276, 51-63, **2017**. DOI: 10.1016/j.forsciint.2017.04.015
 - Impact Factor: 2.307
 - Cited by: 2
- 11. M. Marić, C. **Bridge**§. "Characterizing and Classifying Water-Based Lubricants using Direct Analysis in Real Time® Time of Flight Mass Spectrometry". *Forensic Science International*, 266, 73-79, **2016**. DOI: 10.1016/j.forsciint.2016.04.036.
 - Impact Factor: 2.345
 - Cited by: 9
- 10. E. Sisco[§], M. Najarro, C. **Bridge**, R. Aranda. "Quantifying the Degradation of TNT and RDX in a Saline Environment with and without UV-Exposure". *Forensic Science International*, 251, 124-131, **2015**. DOI: 10.1016/j.forsciint.2015.04.002.
 - Impact Factor: 1.81
 - Cited by: 8

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- E. Sisco[§], J. Dake, C. Bridge. "Screening for trace explosives by AccuTOF[™]-DART": An indepth validation study". Forensic Science International, 232, 160-180, 2013. DOI: 10.1016/j.forsciint.2013.07.006.
 - Impact Factor: 2.17
 - Cited by: 48
- 8. H. Swofford[§], S. Steffan, G. Warner, C. **Bridge**, M. Salyards. "Impact of Minutiae Quantity on the Behavior and Performance of Latent Print Examiners". *J. Forensic Identification*, 63 (5), 571-591, **2013**
 - Cited by: 4
- 7. H. Swofford[§], S. Steffan, G. Warner, C. **Bridge**, M. Salyards. "Inter- and Intra-Examiner Variation in the Detection of Friction Ridge Skin Minutiae". *J. Forensic Identification*, 63 (5), 553-570, **2013**
 - Cited by: 10
- 6. J. Martin, M. Baudelet, M. Weidman, M. Fisher, C. **Bridge**, C. Brown, M. Sigman, P.J. Dadigian, M. Richardson[§]. "Stand-off detection of organic samples using filament-induced breakdown spectroscopy," in *Proc. of SPIE Int. Soc. Opt. Eng.*, **2009**, Vol 7306, 73060Z1-7
 - Cited by: 2
- M. Weidman, M. Baudelet, M. Fisher, C. Bridge, C. Brown, M. Sigman, P.J. Dadigian, M. Richardson[§]. "Molecular signal as a signature for detection of energetic materials in filament-induced breakdown spectroscopy," in *Proc. of SPIE Int. Soc. Opt. Eng.*, 2009, Vol 7304, 73041G1-7
 - Cited By: 11
- 4. C. G. Brown, M. Baudelet, C. **Bridge**, M. K. Fisher, M. Sigman, P.J. Dadigian, M. Richardson. "Atmosphere Issues in Detection of Explosives and Organic Residues," in *Proc. of SPIE Int. Soc. Opt. Eng.*, **2009**, Vol. 7304, 73041D1-12
 - Cited by: 7
- 3. C. **Bridge**, J. Powell, K. Steele and M. Sigman[§]. "Laser Induced Breakdown Spectroscopy (LIBS) Applications in Forensic Science: Comparative Glass Analysis". *Spectrochimica Acta* Part B, 62(12), 1419-1425, **2007**. DOI: 10.1016/j.sab.2007.10.015.
 - Impact Factor: 2.76
 - Cited by: 66
- C. Bridge, J. Powell, K. Steele, J. MacInnins and M. Sigman[§]. "Characterization of Automobile Float Glass with Laser Induced Breakdown Spectroscopy (LIBS) and Laser-Ablation Inductively Coupled Mass Spectrometry (LA-ICP-MS)". Applied Spectroscopy, 60(10), 1181-1187, 2006
 - Impact Factor: 1.83
 - Cited by: 57
- M. Williams, D. Fernandes*, C. Bridge*, D. Dorrien, S. Elliot and M. Sigman[§]. "Adsorption Saturation and Chromatographic Distortion Effects on Passive Headspace Sampling with Activated Charcoal in Fire Debris Analysis". *Journal of Forensic Sciences*, 50(2), 316-325, 2005
 - Impact Factor: 1.244
 - Cited by: 21
 - Premier journal for forensic science research articles.

Invited Peer-Reviewed Magazine Articles

5. C. **Bridge**§, M. Marić, K. Jones. "GC×GC-MS for Forensic Analysis". *Advances in Chromatography for Macromolecule Analysis*, 37(3), 22-25. **2019**.

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- 4. C. **Bridge**§, M. Marić, K. Jones. "GC×GC-MS for Forensic Analysis". *Current Trends in Mass Spectrometry*, 17(1), 22-25. **2019**.
- 3. C. Bridge[§], M. Marić, K. Jones. "GC×GC-MS for Forensic Analysis". *LCGC*, 14(12), 25-30. **2018**.
- 2. C. Bridge[§], M. Marić, K. Jones. "GC×GC-MS for Forensic Analysis". *The Column*, 14(12), 25-30. **2018**.
- 1. K. Najjar, C. Bridge[§]. "Characterization of Glitter Cosmetic Particles Using FTIR Spectroscopy". Spectroscopy, 33(11), 30-37. **2018**. [COVER]

Conference Proceedings

- 13. B. Baumgarten, M. Marić, C. Bridge. "A Characterization of Sexual Assault Lubricants: Lubricant Database Use in an Operational Setting". PITTCON. Philadelphia, PA. Mar 18, 2019.
- 12. K. Najjar, C. **Bridge**. "Identification of glitter and shimmer cosmetic particles using SEM-EDX". PITTCON. Philadelphia, PA. Mar 18, **2019**.
- 11. C. **Bridge**, B. Baumgarten, M. Marić, C. Vadell-Orsini*. Preliminary Characterization of Sexual Assault Lubricants: Comparison between DART-TOFMS, GC-MS, and FT-IR," in 2018 PITTCON Forensic Science Symposium Proceedings. **2018**.
- 10. D. Green, M. Beazley, C. **Bridge.** "Identification and Quantification of Sexual Lubricant Degradation Pathways from Exposure to the Vaginal Bacterial Environment," in 2018 PITTCON Forensic Science Symposium Proceedings. 2018.
- 9. Y. Moustafa, C. Bridge. "The Evaluation of Sexual Assault Evidence Using DART-TOFMS and GC-MS," in 2018 PITTCON Forensic Science Symposium Proceedings. 2018.
- 8. D. Green*, C. Bridge, S. Lenhard, M.J. Salyards. "Synthetic Cannabinoid Colorimetric Detection," in *Proc., American Academy of Forensic Sciences,* Atlanta, GA, February 20-25, 2012, American Academy of Forensic Sciences, 18, **2012**, 132
- 7. T. Green*, C. Bridge, J. Brown, M.J. Salyards. "Detection of Ammonium Nitrate and Ammonium Nitrate Mixtures in Soil," in *Proc., American Academy of Forensic Sciences,* Atlanta, GA, February 20-25, 2012, American Academy of Forensic Sciences, 18, 2012, 88
- D. Shadoin*, A. Robinson*, C. Bridge, M.J. Salyards. "The Impact of Gunshot Residue in Military Investigations and Legal Proceedings," in *Proc., American Academy of Forensic Sciences*, Atlanta, GA, February 20-25, 2012, American Academy of Forensic Sciences, 18, 2012, 249
- J. Drewicz*, C. Bridge, C. Clemmons, M.J. Salyards. "The Effect of Carbon Disulfide on the Elution and Solvation Phases of Light and Medium Range Ignitable Liquids," in *Proc.*, *American Academy of Forensic Sciences*, Chicago, IL, February 21-25, 2011, American Academy of Forensic Sciences, 17, 2011, 101
- C. Bridge* and M.E. Sigman. "Glass Sample Discrimination by Laser Induced Breakdown Spectroscopy (LIBS)," in *Proc., American Academy of Forensic Sciences*, San Antonio, TX, February 19-24, 2007, American Academy of Forensic Sciences, 13, 2007
- C. Bridge*, J. Powell, K. Vomvoris*, J. MacInnis, M.E. Sigman. "Characterization of Automobile Float Glass with Laser Induced Breakdown Spectroscopy (LIBS) and Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)," in *Proc.*, American Academy of Forensic Sciences, Seattle, WA, February 20-25, 2006, American Academy of Forensic Sciences, 12, 2006, 125.
- 2. K. Vomvoris*, C. Bridge*, Z. Parker*, J. MacInnis, M.E. Sigman. "Analysis of Commercial Blasting Agents by Laser Induced Breakdown Spectroscopy (LIBS), with the Emphasis on Methods for Heterogeneous Samples," in *Proc., American Academy of Forensic Sciences*,

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Seattle, WA, February 20-25, 2006, American Academy of Forensic Sciences, 12, **2006**, 59.

 M. Sigman, C. Bridge*, K. Vomvoris*, J.M. MacInnis. "LIBS: A New Tool for Forensic Analyses," in Laser Applications to Chemical, Security, and Environmental Analysis, Incline Village, NV, February 2, 2006.

Doctoral Dissertation

- C. Bridge, "Discrimination of Forensic Trace Evidence using Laser Induced Breakdown Spectroscopy (LIBS)", 2007
 - Cited by: 4

Other Publications

- D. Green. "Perspectives from Bridge Group@NCFS: Glitter and Shimmer as Forensic Tools". Forensic Magazine. Mar 19, 2021. Perspectives from Bridge Group@NCFS: Glitter and Shimmer as Forensic Tools (forensicmag.com)
- 1. D. Eckre, L. Fadness, G. Rankin, C. **Bridge**. "Thermal Degradation of Synthetic Cannabinoids Containing a Cyclopropyl Group." (http://www.marshall.edu/forensics/files/Eckre-David-Paper.pdf)

BOOK CHAPTERS

Cognitive Biases Research

1. C. **Bridge**§, M. Marić. Chapter 5: Cognitive Biases in Forensic Science Training and Education. In *Misinformation, 'Quackery', and 'Fake News' in Education;* P. Kendeou, D. Robinson, Eds.; **2019**.

Firearms Analysis

1. C. **Bridge**§, M. Joshi. Chapter 1: Emerging Research Addressing Current Needs in Gunshot Residue Analysis. In *Chemical, Physical, and Biological Analysis of Firearm Trace Evidence:*Current Research and Future Perspectives; J. Cizdziel, M. Godfrey, Eds.; **2019**

Glitter/Shimmer Analysis

 K. Najjar, C. Bridge[§], R. Blackledge. Chapter 1: Forensic Analysis of Shimmer Particles in Cosmetic Samples. In *Forensic Analysis on the Cutting Edge: More Trace Analysis Methods*, 2nd edition; R. Blackledge, Ed.; 2021.

Lubricant Analysis

1. C. Bridge[§], M. Marić, S. Thomas. Chapter 15: Chemical Databases. In *Encyclopedia of Forensic Sciences*, 3rd edition; S. Lewis, Ed.; **2023.**

CONFERENCE PRESENTATIONS (* UNDERGRADUATE RESEARCHER AND GRADUATE RESEARCHER)

Keynote Speeches

- 6. C. **Bridge**. "Strengthening Forensic Science: Moving from the Bench to the Scientist." Midwest Association of Forensic Science Conference. Poconos, PA. Sep 23, **2021**.
- 5. C. **Bridge**. "Analytical Chemistry in Forensic Science." National Association of Science Materials Managers <u>2021 Virtual Conference & Trade Show</u>. Jul 20, **2021**.
- 4. C. **Bridge**. "Developing Your Personal Board of Executives." EstablisHER Summit. UCF, Orlando, FL. Feb 9, **2019**.
- 3. C. **Bridge.** "Actionable Intelligence: Forensic Science in Sexual Assault Investigations". Johns Hopkins University College of Medicine, Baltimore, MD. Dec 4, **2018**.
- 2. C. **Bridge**. "Preparing for Your College Career." National Organization of Black Chemists and Chemical Engineers, STEM Festival, Orlando, FL, Sep 17, **2018**.

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 C. Bridge. "In Pursuit of a Scientific Career." STEM Career Academy, Orlando, FL, May 3, 2018

Invited Conference Presentations

- 16. C. **Bridge**. "Forensic Lubricant Analysis and Sexual Lubricant Database". ANZPAA NIFS Groups Lubricant Workshop. Virtual. Nov 10, **2022**.
- 15. C. **Bridge**, S. Best. "Raman Screening of Lubricants and Lubricant Residues". FACSS SciX 2022. Covington, KY, Oct 2-7, **2022**.
- 14. C. **Bridge**, S. Thomas, N. Flynn. "Induced Degradation Method of Sexual Lubricants for Comparison Purposes". PITTCON. Online. Mar. 7, **2021**.
- 13. S. Thomas, B. Baumgarten, C. **Bridge**. "Validating the Sexual Lubricant Database using True Known and Unknown Samples for Forensic Analysis". American Academy of Forensic Sciences 73rd Annual Meeting. Online [Poster]. Feb 16, **2021**.
- 12. S. Thomas, B. Baumgarten, C. **Bridge**. "Validating the Sexual Lubricant Database using True Known and Unknown Samples for Forensic Analysis. American Academy of Forensic Sciences 73rd Annual Meeting. Online. Feb 15-19, **2021**.
- 11. C. **Bridge**, C. Vadell-Orsini, A. Fergus, S. Best. "Raman Spectroscopy Screening for the Presence of Sexual Lubricants". Centre for Forensic Science 1st Annual Forensic Chemistry Symposium, Online, Oct 8, **2020**.
- 10. M. Maric, K. Jones, C. **Bridge**. "Rapid Automotive Paint Analysis via Direct Analysis in Real Time-Mass Spectrometry". 2020 Online Forensic Symposium Current Trends in Forensic Trace Analysis, Online, July 29, 2020.
- 9. B. Baumgarten, N. Flynn, M. Maric, C. **Bridge**. "NIJ A Longevity Study on the Analysis of Sexual Lubricants When Stored in Different Environmental Conditions". PITTCON. Chicago, IL. Mar 2, 2020.
- 8. C. **Bridge**. "Determining the Strength of Forensic Lubricant Evidence from DART-MS and GC-MS Data". PITTCON. Chicago, IL. Mar 2, 2020.
- 7. C. **Bridge**, Jessica Sprague, D. S. H. Funes, K. Foon. "Targeted DART Ionization for Rapid Analytical Screening." 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, **2019**.
- 6. C. **Bridge**, M. Marić. "Temperature Controlled Ambient Ionization of Lubricants for Increased Match Determination." 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, **2019**.
- 5. C. **Bridge**, M. Marić. "Forensic Chemistry: Providing Actionable Intelligence in Criminal Investigations". 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, **2019**.
- 4. M. Marić, Robert Cody, C. **Bridge.** "DART-MS: A New Tool for the Forensic Paint Examiner". 255th ACS National Meeting. New Orleans, LA. March 21, **2018.**
- 3. E. Lennert, C. Bridge. "Linking smokeless powder residues to pre-burn smokeless powders using DART-TOFMS and GC-MS". SciX Conference, Reno, NV. Oct 8-13, 2017.
- 2. M. Marić, C. **Bridge.** "DART-MS: A New Tool for the Forensic Paint Examiner". SciX Conference, Reno, NV. Oct 8-13, **2017**
- 1. M. Marić, C. **Bridge.** "DART-TOF-MS Analysis of Personal Lubricants." 2016 Middle Atlantic Regional (ACS) Meeting, Riverdale, NY. June 9-12, **2016**.

Contributed Conference Presentations

111. S. Best, C. Bridge. "The Chemical Analysis of Sexual Lubricant Residue: A Comparison of Swabs Used to Perform Medical Examinations Analyzed by Spectroscopic Techniques". American Academy of Forensic Sciences 75th Annual Meeting. Orlando, FL. Feb 17, 2023 [Poster]

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- 110. D. Funes, C. Bridge. "Analysis and Neural Networks Techniques for Hair Examinations".

 American Academy of Forensic Sciences 75th Annual Meeting. Orlando, FL. Feb 17, 2023.
- 109. E. Lennert, C. **Bridge**. "Association of smokeless powders and lab generated residues to OGSR using GC-MS and DART-HRMS analysis followed by chemometrics". American Academy of Forensic Sciences 74th Annual Meeting. Seattle, WA. Feb 21-25, **2022**.
- 108. J. Sprague, C. Bridge. "Variability in DART-HRMS Instrument Parameter Optimization due to Molecular Identity". 2020 Online Forensic Symposium Current Trends in Forensic Trace Analysis, Online, July 27-31, 2020.
- 107. E. Lennert, C. Bridge. "An Analysis of Smokeless Powders, Smokeless Powder Residues, and Pyrolysis Produces by GC-MS". 2020 Online Forensic Symposium Current Trends in Forensic Trace Analysis, Online, July 27-31, 2020.
- 106. J. Kindell, C. **Bridge**. "Analyzing Latent Print Chemistry using 2D Gas Chromatography". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 105. S. Thomas, N. Andersen, M. Maric, C. **Bridge**. "Implementing Raman Spectroscopy as a Tool to Characterize Sexual Assault Lubricants". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 104. E. Lennert, C. **Bridge**. "An Analysis of Smokeless Powders, Smokeless Powder Residues, and Pyrolysis Produces by GC-MS". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 103. K. Jones, M. Maric. C. **Bridge**. "A comparison of DART-HRMS and Py-GC-MS in Automotive Paint Analysis". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 102. D. S. H. Funes, J. Morgan, C. **Bridge**. "Advances in Color and Texture Analysis of Human Hair". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 101. B. Baumgarten, N. Flynn, M. Maric, S. Thomas, C. Bridge. "A Longevity Study on the Analysis of Sexual Lubricants when Stored in Different Environmental Conditions". American Academy of Forensic Sciences 72nd Annual Meeting. Anaheim, CA. Feb 17-22, 2020.
- 100. B. Baumgarten, N. Flynn, M. Maric, S. Thomas, C. Bridge. "A Longevity Study on the Analysis of Sexual Lubricants when Stored in Different Environmental Conditions". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 99. J. Sprague, C. **Bridge**. "Variability in DART-HRMS Instrument Parameter Optimization due to Molecular Identity". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 98. T. Rimpel, D. S. H. Funes, C. **Bridge**. "Determination of Formaldehyde Derivative in Embalming Fluid using Direct Analysis in Real Time-Mass Spectrometry and Solid Phase Microextraction". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 97. K. Najjar, C. **Bridge**. "Potential Transfer of Cosmetic Particles after Close Intimate Contact". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 96. J. Morgan, D. S. H. Funes, C. **Bridge**. "Determining the variance of human hair features for forensic examination". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 95. E. Lennert, C. **Bridge**. "Analysis of Smokeless Powders, Smokeless Powder Residues, and Pyrolysis Products by GC-MS". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.

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- 94. J. Kindell, C. Bridge. "Analyzing Latent Print Residues using 2D Gas Chromatography". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 93. K. Jones, M. Maric, C. **Bridge**. "Determination of Discriminatory Abilities of DART-HRMS versus Py-GC-MS in Automotive Paint Analysis". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 92. N. Flynn, B. Baumgarten, S. Thomas, C. **Bridge**. "Protocol Establishment of Temperature-Based Degradation of Lubricants". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 91. D. S. H. Funes, C. **Bridge**. "Evaluation of inter- and intra-person variability of hair features for forensic analysis of hair". 2020 Emerging Researchers National (ERN) Conference in STEM. Feb 6-8, 2020.
- 90. E. Lennert, C. Bridge. "Identification of Pyrolysis Products of Common Smokeless Powder Components via GC-MS". UCF Graduate Research Forum, Orlando, FL. April 5, 2019.
- 89. J. Kindell, C. Bridge. "Error Rate Determination of Latent Print Chemistry via 1D and 2D Gas Chromatography". UCF Graduate Research Forum, Orlando, FL. April 5, 2019.
- 88. D. S. H. Funes, C. **Bridge**. "A Quantitative Approach for Forensic Hair Examinations". UCF Graduate Research Forum, Orlando, FL. April 5, **2019**.
- 87. J. Sprague, C. **Bridge**. "Optimization of DART-HRMS Ionization Parameters for Targeted Analytical Screening". UCF Graduate Research Forum, Orlando, FL. April 5, **2019**.
- 86. J. Morgan*, C. **Bridge**. "Determining the Variance of Hair Features for Forensic Examination" UCF Graduate Research Forum, Orlando, FL. April 5, **2019**.
- 85. L. Iglesias*, B. Baumgarten, C. **Bridge**. "Characterization of Lubricants using Microscopy Techniques". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 4, **2019**.
- 84. S. Dale*, B. Baumgarten, C. **Bridge**. "Introducing the Lubricant Database for the Analysis of Sexual Assault Evidence". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 4, **2019**.
- 83. B. Olivieri*, M. Marić, C. **Bridge**. "Identification of Drug Metabolites in Urinalysis via Direct Analysis in Real Time/High Resolution Mass Spectrometry". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 4, **2019**.
- 82. A. Fergus*, M. Marić, C. Bridge. "Detection of Lubricants Using Raman Microspectroscopy and Ratio Comparisons". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 4, 2019.
- 81. K. Jones, M. Marić, C. **Bridge**. "Novel approach to automotive paint analysis using direct analysis in real time mass spectrometry". 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, **2019**.
- 80. B. Baumgarten, M. Marić, C. Bridge. "A Characterization of Sexual Assault Lubricants: Lubricant Database Use in an Operational Setting". 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, 2019.
- 79. A. Fergus*, B. Baumgarten, C. Bridge. "Detection of lubricants using Raman microspectroscopy and ratio comparisons". 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, 2019.
- 78. K. Najjar, C. Bridge. "Identification of glitter and shimmer cosmetic particles using SEM-EDX". 257th ACS National Meeting. Orlando, FL. Mar 31-Apr 4, **2019**.
- 77. A. Fergus*, M. Marić, C. **Bridge**. "Detection of Lubricants Using Raman Microspectroscopy and Ratio Comparisons". 17th Raymond Castle Conference, Tampa, FL. Mar 30, **2019**.

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- 76. B. Baumgarten, M. Marić, C. Bridge. "A Characterization of Sexual Assault Lubricants: Lubricant Database Use in an Operational Setting". PITTCON. Philadelphia, PA. Mar 18, 2019.
- 75. K. Najjar, C. **Bridge**. "Identification of glitter and shimmer cosmetic particles using SEM-EDX". PITTCON. Philadelphia, PA. Mar 18, **2019**.
- 74. B. Baumgarten, M. Marić, C. **Bridge**. "A Characterization of Sexual Assault Lubricants: Lubricant Database Use in an Operational Setting". American Academy of Forensic Sciences 71th Annual Meeting, Baltimore, MD. February 21, **2019**.
- 73. B. Olivieri*, M. Marić, C. **Bridge**. "The Identification of Drug Metabolites in Adulterated Urine Samples Using Direct Analysis of Real Time-Time of Flight/Mass Spectrometry". American Academy of Forensic Sciences 71th Annual Meeting, Baltimore, MD. February 22, **2019**.
- 72. M. Maric, C. **Bridge**. "Developing of a Sexual Assault Analytical Protocol using DART-HRMS". National Organization of Black Chemists and Chemical Engineers, Orlando, FL. September 17-20, **2018**.
- 71. M. Maric, James Marano, Robert C. Cody, C. **Bridge**. "DART-MS: A New Tool for Forensic Paint Analysis". The Australian and New Zealand Forensic Science Society 24th International Symposium on the Forensic Sciences, Perth, Australia. September 9-13, 2018.
- 70. M. Maric, D. Green, Y. Moustafa, C. Bridge. "Environmental and Microbial Degradation of Lubricants used in Sexual Assaults". The Australian and New Zealand Forensic Science Society 24th International Symposium on the Forensic Sciences, Perth, Australia. September 9-13, 2018.
- 69. M. Maric, B. Olivieri*, C. **Bridge**. "Identification of Adulterants in Preliminary Drug Analysis". The Australian and New Zealand Forensic Science Society 24th International Symposium on the Forensic Sciences, Perth, Australia. September 9-13, **2018**.
- 68. B. Olivieri*, M. Maric, C. **Bridge**. "Detection of Adulterants in Drug Screening Analysis". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 3-5, **2018**.
- 67. C. Vadell-Orsini*, B. Baumgarten, M. Maric, C. **Bridge**. "Preliminary Characterization of Sexual Assault Lubricants: Comparison Between DART-TOFMS, GC-MS, and FT-IR". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 3-5, **2018**.
- 66. C. Vadell-Orsini*, C. Bridge. "Preliminary Characterization and Classification of Sexual Lubricants and Condoms using Fourier Transform Infrared (FTIR) Spectroscopy". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 5, 2018.
- 65. D. Green, M. Beazley, C. **Bridge**. "Degradation of sexual lubricants from vaginal bacterial exposure". 255th ACS National Meeting. New Orleans, LA. March 21, **2018**.
- 64. M. Maric, C. **Bridge**. "Direct analysis in real time: A new technique for the forensic paint examiner". 255th ACS National Meeting. New Orleans, LA. March 21, **2018**.
- 63. D. Green, M. Beazley, C. **Bridge.** "Identification and Quantification of Sexual Lubricant Degradation Pathways from Exposure to the Vaginal Bacterial Environment". PITTCON. Orlando, FL. Feb 26-Mar 1, **2018.**
- 62. Y. Moustafa, C. Bridge. "The Evaluation of Sexual Assault Evidence using DART-TOFMS and GC-MS". PITTCON. Orlando, FL. Feb 26-Mar 1, 2018.
- 61. C. **Bridge**, M. Maric, B. Baumgarten, C., Vadell-Orsini*. "Preliminary Characterization of Sexual Assault Lubricants: Comparison Between DART-TOFMS, GC-MS, and FTIR". PITTCON. Orlando, FL. Feb 26-Mar 1, **2018**.
- 60. K. Najjar, C. Bridge. "Identification of Cosmetic Particles Transferred during Close Personal Attacks". PITTCON. Orlando, FL. Feb 26-Mar 1, 2018.

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- 59. E. Lennert, C. Bridge. "Analysis and classification of pre-and post-burn smokeless powders by thermal desorption DART-TOFMS: A Validation Study". PITTCON, Orlando, FL. Feb 26-Mar 1, 2018.
- 58. Y. Moustafa, C. Bridge. "The Persistence and Environmental Degradation Patterns of Sexual Lubricants and Personal Hygiene Products using DART-TOFMS and GC-MS". American Academy of Forensic Sciences 70th Annual Meeting, Seattle, WA. February 19-25, **2018**.
- 57. B. Baumgarten, C. Vadell-Orsini*, M. Marić, C. Bridge. "A Preliminary Characterization of Sexual Assault Lubricants: A Comparison between DART-TOFMS, GC-MS, and FTIR". American Academy of Forensic Sciences 70th Annual Meeting, Seattle, WA. February 19-25, **2018.**
- 56. B. Olivieri*, M. Marić, C. **Bridge**. "The Identification of Adulterants in Preliminary Drug Analysis." American Academy of Forensic Sciences 70th Annual Meeting, Seattle, WA. February 19-25, **2018**.
- 55. M. Marić, Robert B. Cody, C. **Bridge**. "A Forensic Analysis of Automotive Paint Evidence using DART-MS". American Academy of Forensic Sciences 70th Annual Meeting, Seattle, WA. February 19-25, **2018**.
- 54. Y. Moustafa, C. **Bridge.** "DART-TOMFS vs GC-MS in the Discrimination of Sexual Lubricants and Personal Hygiene Products." National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, Minneapolis, MN, Oct 30-Nov 1, **2017**.
- 53. B. Olivieri*, M. Marić, C. **Bridge.** "Detection of Adulterant Use in Pre-Screening Drug Analysis." National Organization for the Professional Advancement of Black Chemists and Chemical Engineers, Minneapolis, MN, Oct 30-Nov 1, **2017**.
- 52. C. Vadell-Orsisi*, B. Baumgarten, M. Marić, C. Bridge. "Characterization and Classification of Sexual Lubricants and Condoms using FTIR Spectroscopy." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, 2017.
- 51. B. Olivieri*, M. Marić, C. **Bridge**. "ELISA and Adulterated Drug Analysis." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, **2017**.
- 50. M. Marić, Robert B. Cody, C. **Bridge**. "DART-MS: A new tool for forensic paint examiner?" Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, **2017**.
- 49. K. Najjar, C. Bridge. "Identification of Cosmetic Particles Transferred During Close Personal Attacks." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, 2017.
- 48. D. Green, M. Beazley, C. **Bridge**. "Identification and Quantification of Sexual Lubricant Degradation Pathways from Exposure to the Vaginal Bacterial Environment." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, **2017**.
- 47. Y. Moustafa, C. **Bridge**. "Distinguishing Sexual Lubricants from Personal Hygiene Products for Sexual Assault Cases." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, **2017**.
- 46. B. Baumgarten, C. Bridge. "Characterization and Classification of Silicone Lubricants with Statistics." Florida Forensic Science Conference 1st Annual Meeting, Orlando, FL. Oct 17-18, 2017.
- 45. Y. Moustafa, C. Bridge. "Distinguishing condom lubricants from personal hygiene products (PHPs) using direct analysis in real time-time-of-flight mass spectrometry (DART-TOFMS)". UCF Graduate Research Forum. Orlando, FL. Apr 5, 2017.
- 44. E. Lennert, C. Bridge. "Characterization of pre- and post-burn smokeless powders by DART-TOMFS vs GC-MS". UCF Graduate Research Forum. Orlando, FL. Apr 5, 2017.
- 43. D. Green, M. Beazley, C. **Bridge**. "Identification and Quantification of sexual lubricant degradation pathways from exposure to the vaginal bacterial environment". UCF Graduate Research Forum. Orlando, FL. Apr 5, **2017**.

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- 42. A. DeRouin*, C. Bridge. "Evaporation trends of condom lubricant components". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 6, 2017.
- 41. M. Tomcsak*, C. **Bridge**. "Characterization of condom lubricants by DART-TOFMS". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 6, **2017**.
- L. Gandy*, C. Bridge. "Mechanistic investigations on organic color spot tests for smokeless powders". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 6, 2017.
- 39. L. Gandy*, M. Terry, C. **Bridge**. "A Combined method of Detection for Organic and Inorganic Gunshot Residue". American Academy of Forensic Sciences 68th Annual Meeting, New Orleans, LA. February 13-18, **2017**.
- 38. D. Green, M. Beazley, C. **Bridge**. "Identification and Quantification of Sexual Assault Lubricant Degradation Pathways from Exposure to the Vaginal Bacterial Environment." American Academy of Forensic Sciences 68th Annual Meeting, New Orleans, LA. February 13-18, **2017**.
- 37. E. Lennert, C. Bridge. "Characterization of pre- and post-burn powders by DART-TOFMS and GC-MS". American Academy of Forensic Sciences 68th Annual Meeting, New Orleans, LA. February 13-18, **2017.**
- 36. M. Maric, L. Harvey, A. Solano*, M. Tomscak*, C. **Bridge**. "Development and Validation of an Analytical Protocol for the Characterization of Lubricant Evidence." American Academy of Forensic Sciences 68th Annual Meeting, New Orleans, LA. February 13-18, **2017**.
- 35. Y. Moustafa, C. Bridge. "Distinguishing Condom Lubricants from Personal Hygiene Products using Direct Analysis in Real Time Analysis-Time of Flight Mass Spectrometry (DART-TOFMS)". American Academy of Forensic Sciences 68th Annual Meeting, New Orleans, LA. February 13-18, 2017.
- 34. M. Marić, C. **Bridge**. "Characterization and Classification of Water-Based Personal Lubricants using DART-TOFMS with Multivariate Statistics." The Australian and New Zealand Forensic Science Society 23rd International Symposium on the Forensic Sciences, Auckland, New Zealand. September 18-23, **2016**.
- 33. L. Harvey, C. **Bridge**. "ATR-FTIR and DART-TOF-MS Analysis of Silicone Based Personal Lubricants." The Australian and New Zealand Forensic Science Society 23rd International Symposium on the Forensic Sciences, Auckland, New Zealand. September 18-23, **2016**.
- 32. M. Terry, C. **Bridge**. "Metallic Characteristics of Post-Fire Priming Cup Residue." The Australian and New Zealand Forensic Science Society 23rd International Symposium on the Forensic Sciences, Auckland, New Zealand. September 18-23, **2016**.
- 31. L. Harvey, C. **Bridge**. "DART-TOF-MS and ATR-FTIR Analysis of Silicone Based Personal Lubricants." American Society of Mass Spectrometry Conference 64th Annual Meeting, San Antonio, TX. June 5-9, **2016.**
- 30. E. Lennert, C. Bridge. "Metallic Muzzle Discharge Gunshot Residue Analysis by DART-TOF-MS." American Society of Mass Spectrometry Conference 64th Annual Meeting, San Antonio, TX. June 5-9, **2016.**
- 29. L. Harvey, C. **Bridge.** "ATR-FTIR and DART-TOF-MS Analysis of Silicone Based Personal Lubricants." 2016 Mid-Atlantic Association of Forensic Scientists Annual Conference, Richmond, VA, May 19-21, **2016.**
- 28. E. Lennert, C. Bridge. "Metal Analysis by ESI-TOF-MS." 2016 Mid-Atlantic Association of Forensic Scientists Annual Conference, Richmond, VA, May 19-21, 2016.
- 27. M. Terry, B. Fookes, C. **Bridge.** "Metallic Characterization of Post-Fire Priming Cup Residue." 2016 Mid-Atlantic Association of Forensic Scientists Annual Conference, Richmond, VA, May 19-21, **2016.**

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- 26. L. Harvey, C. **Bridge.** "ATR-FTIR and DART-TOF-MS Analysis of Silicone Based Personal Lubricants." Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 5-7, **2016**.
- 25. E. Lennert, C. Bridge. "Metal Analysis by ESI-TOF-MS." Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 5-7, 2016.
- 24. D. S. H. Funes*, C. **Bridge**. "Quantification Analysis of Trace Evidence using Direct Analysis in Real Time-Mass Spectrometry". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 5-7, **2016**.
- 23. L. Gandy*, C. Bridge. "A Combined Method of Detection for Organic and Inorganic Gunshot Residue." Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 5-7, 2016.
- 22. M. Terry, C. **Bridge.** "Metallic Characteristics of Post-Fire Priming Cup Residue." Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 5-7, **2016.**
- 21. L. Gandy*, C. **Bridge**. "A Combined Method of Detection for Organic and Inorganic Gunshot Residue". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 7, **2016**.
- D. S. H. Funes*, C. Bridge. "Quantification Analysis using Direct Analysis in Real Time-Mass Spectrometry". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 7, 2016.
- 19. A. Solano*, M. Maríc, C. **Bridge**. "Characterizing Condom Lubricants using Direct Analysis in Real Time-Mass Spectrometry". UCF Showcase of Undergraduate Research Excellence Program, Orlando, FL. April 7, **2016**.
- 18. D. S. H. Funes*, M. Maríc, C. **Bridge**. "Quantification Analysis of Trace Evidence using Direct Analysis in Real Time-Mass Spectrometry". The American Chemical Society Florida Chemistry Conclave, Orlando, FL. April 2, **2016**.
- 17. L. Gandy*, C. Bridge. "A Combined Method of Detection for Organic and Inorganic Gunshot Residue". The American Chemical Society Florida Chemistry Conclave, Orlando, FL. April 2, 2016.
- 16. L. Gandy*, C. Bridge. "A Combined Method of Detection for Organic and Inorganic Gunshot Residue". American Academy of Forensic Sciences 68th Annual Meeting, Las Vegas, NV. February 21-27, 2016.
- 15. M. Marić, L. Harvey, C. **Bridge**. "The Characterization of Personal Lubricants using Direct Analysis in Real Time Time of Flight Mass Spectrometry". Impression, Pattern, and Trace Evidence Symposium, San Antonio, TX. Aug 26-28, **2015**.
- 14. J. Denkins*, V. Slaughter*, M. Rex, B. Fookes, C. **Bridge**. "Metallic Characterization of Priming Cup Residues using Atomic Absorption". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 7-9, **2015**.
- 13. M. Terry, A. Young*, B. Fookes, C. **Bridge**. "Metallic Characteristics of Post-Fire Priming Cup Residue". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 7-9, 2015.
- 12. L. Harvey, C. **Bridge**. "Classification of Silicone Based Personal Lubricants using ATR-FTIR and DART-MS". Florida (ACS) Annual Meeting and Exposition, Palm Harbor, FL. May 7-9, **2015.**
- 11. C. **Bridge.** "Forensic Analysis in Military Criminal Investigations". SciX Conference, Milwaukee, WI. Sep 29 Oct 4, **2013.**
- D. Green*, C. Bridge, S. Lenhard, M. J. Salyards. "Synthetic Cannabinoid Colorimetric Detection". American Academy of Forensic Sciences 64th Annual Meeting, Atlanta, GA. February 20-25, 2012.

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- 9. T. Green*, C. Bridge, J. Brown, M. J. Salyards. "Detection of Ammonium Nitrate and Ammonium Nitrate Mixtures in Soil." American Academy of Forensic Sciences 64th Annual Meeting, Atlanta, GA. February 20-25, **2012.**
- 8. D. Shadoin*, A. Robinson*, C. **Bridge**, M. J. Salyards. "The Impact of Gunshot Residue in Military Investigations and Legal Proceedings." American Academy of Forensic Sciences 64th Annual Meeting, Atlanta, GA. February 20-25, **2012**.
- 7. J. Drewicz*, C. **Bridge**, C. Clemmons, M. J. Salyards. "The Effect of Carbon Disulfide on the Elution and Solvation Phases of Light and Medium Range Ignitable Liquids." American Academy of Forensic Sciences 63nd Annual Meeting, Chicago, IL. February 21-25, **2011**.
- 6. C. **Bridge**, M. E. Sigman, and M. Richardson. "Chemometric Analysis of LIBS data: Identification of Explosives". Federation of Analytical Chemistry and Spectroscopy Societies, Reno, NV. September 29 October 2, **2008**.
- 5. C. **Bridge** and M. E. Sigman. "Glass Sample Discrimination by Laser Induced Breakdown Spectroscopy (LIBS)". American Academy of Forensic Sciences 59th Annual Meeting, San Antonio, TX. February 19-24, **2007.**
- 4. C. **Bridge**, J. Powell, K. Vomvoris, J. MacInnis, M. E. Sigman. "Glass Discrimination by Laser Induced Breakdown Spectroscopy (LIBS)". Federation of Analytical Chemistry and Spectroscopy Societies, Orlando, Fl. September 24-28, **2006**.
- 3. C. **Bridge**, J. Powell, K. Vomvoris, M. E. Sigman. "Forensic Comparative Glass Analysis by Laser-Induced Breakdown Spectroscopy." 4th International Conference on Laser-Induced Breakdown Spectroscopy (LIBS 2006), Montreal, CANADA, September 4-8, 2006
- 2. C. **Bridge**, J. Powell, K. Vomvoris, J. MacInnis, M. E. Sigman. "Characterization of Automobile Float Glass with Laser Induced Breakdown Spectroscopy (LIBS) and Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)". Florida (ACS) Annual Meeting and Exposition, Orlando, Fl. May 11-13, **2006**.
- C. Bridge, J. Powell, K. Vomvoris, J. MacInnis, M. E. Sigman. "Characterization of Automobile Float Glass with Laser Induced Breakdown Spectroscopy (LIBS) and Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS)". American Academy of Forensic Sciences 58th Annual Meeting, Seattle, WA. February 20-26, 2006.

Invited University Seminars/Colloquia

- 17. E. Lennert, D. Funes, C. Bridge. "Rapid screening for smokeless powders using DART-HRMS and thermal desorption DART-HRMS". University of Cincinnati and University of North Carolina Analytical Chemistry Diversity Colloquium (Online), Nov 10, 2021 & Nov 17, 2021.
- 16. C. **Bridge**. "Forensic Lubricants: Transforming Sexual Assault Investigations". New Jersey Institute of Technology, Newark, NJ (Online). Nov 4, **2021**
- 15. D. Funes, C. **Bridge**. "Hair Color and Texture Analysis". Crossing Forensic Boarders Series, (Online). June 9, **2021**.
- 14. C. **Bridge**. "Crafting a Path Forward In Forensic Science". National Organization of Black Chemists and Chemical Engineers Chapter at Louisiana State University, Baton Rouge, LA (Online). Apr. 20, **2021**.
- 13. C. **Bridge**. "Lubricants and Glitter: Revolutionizing Sexual Assault Investigation". California section of the American Chemical Society & the Association of Women in Science in the East Bay California. Richmond, CA (Online). Mar. 2, **2021**.
- 12. C. **Bridge**. "Forensic Lubricants: Transforming Sexual Assault Investigations". American University, Washington, DC (Online). Apr 14, **2021**.
- 11. C. **Bridge**. "Analytical Chemistry in Forensic Chemistry". Pacific University, Forest Grove, OR (Online). Mar 29, **2021**.

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- 10. C. **Bridge**. "Forensic Lubricants: Transforming Sexual Assault Investigations". Vanderbilt University, Nashville, TN (Online). Dec. 7, **2020**.
- 9. C. **Bridge**. "Forensic Lubricants: Transforming Sexual Assault Investigations". Creighton University, Omaha, Nebraska (Online). Oct. 29, **2020**.
- 8. C. **Bridge.** "Actionable Intelligence: Forensic Science in Sexual Assault Investigations". Andrews University, Berrien Springs, MI. Jan 17, **2019**.
- 7. C. **Bridge.** "Forensic Analysis in Sexual Assaults." University of South Florida, Tampa, FL, Jan 31, **2018.**
- 6. C. **Bridge.** "Forensic Analysis in Sexual Assaults." Caribbean Maritime University, Kingston, Jamaica. Jan 2, **2018.**
- 5. C. **Bridge.** "Forensic Analysis in Sexual Assaults." Florida Southern College, Lakeland, FL. Nov 30, **2017.**
- 4. C. Bridge. "Forensic Trace Evidence." Valencia College, Orlando, FL. Oct 25, 2017.
- 3. C. Bridge. "Forensic Trace Evidence." Valencia College, Orlando, FL. Feb 27, 2017.
- 2. C. **Bridge**. "Forensic Chemistry Applications." UCF Undergraduate Admissions Mini Lectures for Scholars Day and Open House, Orlando, FL. Apr 16, **2016**.
- C. Bridge. "Forensic Analysis in Sexual Assaults: There's More to be Discovered."
 University of North Florida, Forensic Science Day: Sexual Assaults, Jacksonville, FL. Apr 1,
 2016.

Outreach Seminars about Forensic Research

Regularly seeks out opportunities to make students aware of science opportunities in forensic science, with a goal of increasing women and underrepresented people in STEM. Additionally, these opportunities are a manner to educate the law enforcement communities about the forensic science. Items highlighted in red are presentations to the criminal investigation organizations about aspects of my research.

- 11. C. **Bridge**. "Forensic Lubricants: Transforming Sexual Assault Investigations". #BlackinChemJourneys Lectures. UCLA, Los Angeles, CA (Online). Feb 13, **2021**.
- 10. C. **Bridge**. "Breaking Through the GLASS CEILING". UCF LEGACY Leadership Seminar, Office of Diversity and Inclusion. Orlando, FL. Mar 6, 2020.
- 9. C. Bridge. "Forensic Lubricant Analysis". Sexual and Rescue Team of Seminole County Sheriff's Office. Orlando, FL. Apr 13 2019.
- 8. C. **Bridge**. "Crisis in Black Education/American Education: The reality of Shifting Paradigms and Future Career Opportunities in STEM". National Association for the Study of American Life and History, Valencia College, Orlando, FL. Oct 20, **2017**.
- 7. C. Bridge. "Forensic Lubricant Analysis". Sexual Assault Response Team of Orange County, Orlando, FL. June 2016.
- 6. C. **Bridge.** "Forensic Lubricant Analysis". Sexual Assault Response Team of Osceola County, Kissimmee, FL. June **2016**.
- C. Bridge. "Analysis of Fire Debris Evidence". Modern Interpretation of Forensic Evidence, 9th District of the Florida Office of the Public Defender's Spring Training Conference, Orlando, FL. Mar 11, 2016.
- 4. C. **Bridge**. "Forensic Chemistry: Practical Applications". Learning Institute for Elders (LIFE) at UCF, Orlando, FL. Jan 26, **2016**.
- 3. C. **Bridge**. "STEM Opportunities in Forensic Science". Women/Underrepresented groups in STEM Panel at the Share Fair Orlando Meeting, Orlando, FL. January 23, **2016**.
- 2. C. **Bridge**. "STEM Opportunities in Forensic Science". National Organization for Black Chemists and Chemical Engineers Conference, Orlando, FL. Sep 21-25, **2015**.

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C. Bridge. "What is Forensic Science?" Greenwood Lake Middle School, Lake Mary, FL.
 2014. Introduce students to the realities of forensic science and what they need to do to get into a forensic science career.

RESEARCH GRANTS

External Grants Awarded

- 17. Service Contract for Twelve Tabulae. PI: Candice **Bridge** (Split: 100%). **Agency: Twelve Tabulae**. Amount: \$2,277. Period: 4/26/2021 12/31/2023. **Awarded**
- 16. Service Contract for the Keith Borer Consultants. PI: Candice **Bridge** (Split: 100%). **Agency: Keith Borer Consultants**. <u>Amount: \$1,737</u>. Period: 12/9/2020 12/31/2021. **Awarded**
- 15. Electrochemical Detection of Drug Metabolites based on Molecularly Imprinted Polymer Magnetic Nanoparticles. PI: Percy Calvo Marzal, Co-PI: Candice Bridge (Split: 70:30). Agency: National Institutes of Health, National Institute on Drug Abuse. Amount: \$150,134. Period: 4/1/2021 3/31/2024. Awarded
- 14. Inter-Laboratory Organic Gunshot Residue Study. PI: Candice Bridge (Split: 100%). Agency: American Society for Trace Evidence Examiners. Amount: \$500. Period: 1/1/2020 12/31/2020. Awarded
- 13. Service Contract for the Federal Public Defender, Tampa Office. Pl: Candice **Bridge**. Amount: \$600. Period: 10/29/2019 1/31/2020. **Awarded**
- 12. Forensic Research Experience for Undergraduates. PI: Candice Bridge (Split: 100%). **Agency: Pembrian LLC**. <u>Amount: \$8,000</u>. Period: 5/15/2019 7/4/2019. *Awarded*
 - PI: Bridge
- 11. Classification Procedure for Lubricant Stains and Samples Collected from Sexual Assaults. **Agency: National Institute of Justice.** Amount: \$354,195. Period: 1/1/2019 to 12/31/2020. Awarded
 - PI: Bridge
 - Develop an operational procedure for crime labs to analysis and classify unknown lubricant samples collected in sexual assault cases.
 - Highlighted: Telemundo News Orlando, WESH 2 News Orlando
- Analysis and Characterization of Smokeless Powders and Smokeless Powder Residues.
 Agency: National Institute of Justice. <u>Amount: \$150,000</u>. Period: 1/1/2019 to 12/31/2021. <u>Awarded</u>
 - PI: Bridge
 - Develop a method to associate pre-burn smokeless powder with their post-burn smokeless powder residues.
- Public Service to the Offices of Jonathan Rose Public Attorney. PI: Candice Bridge (Split: 100%). Agency: Office of Jonathan Rose Public Attorney. <u>Amount: \$530</u>. Period: 5/1/2018 6/30/2018. Awarded
 - PI: Bridge
- Public Service to the Federal Public Defender's Office. PI: Candice Bridge (Split: 100%).
 Agency: Federal Public Defender's Office. Amount: \$523. Period: 4/2/2018 5/31/2018.
 Awarded
 - PI: Bridge
- 7. A Novel Approach to Automotive Paint Analysis using Direct Analysis in Real Time Mass Spectrometry. **Agency: The Forensic Science Foundation.** Amount: \$4,800. Period: 10/1/2017 to 3/31/2019. **Awarded**
 - PI: Bridge

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- Develop a rapid analytical method for automobile paint samples using DART-MS and comparing discrimination capability to FTIR
- 6. Forensic Science Education of Central Florida Attorneys. **Agency: Orlando Public Defender's Office**. <u>Amount: \$70,173</u>. Period: 8/10/2017 12/31/2019. **Awarded**
 - PI: Bridge
 - Continued grant to educate lawyers on how forensic science can aid legal cases and continue to populate the website.
- Identification and Detection of Cosmetics Transferred during Close Personal Attacks.
 Agency: National Institute of Justice. <u>Amount: \$150,000.</u> Period: 8/1/2017 to 12/31/2021. Awarded
 - PI: Bridge
 - Characterization shimmer and glitter that can be transferred in assaults and identify transfer rates
- Characterization and Classification of Sexual Assault Lubricants using DART-TOFMS.
 Agency: National Institute of Justice. <u>Amount: \$324,082</u>. Period: 1/1/2017 to 5/31/2019.
 Awarded
 - PI: Bridge
 - Develop characterization scheme and associated database to aid in the analysis of unknown sexual lubricants
 - Highlighted: Essence Magazine (2017, 2016), Black Enterprise, UCF Today, ~30 websites and magazines
- 3. Characterization of Personal and Condom Lubricants using DART-TOFMS and Comprehensive GC-MS. **Agency: National Institute of Justice**. <u>Amount: \$100,000</u>. Period: 8/1/16 to 10/31/18. **Awarded**
 - PI: Bridge
 - Analyze sexual lubricants and personal hygiene products using DART-MS and 2D-GC-MS. Additionally, we will look at environmental degradation of lubricants.
- Quantification and Characterization of Microbial Degradation of Sexual Lubricants.
 Agency: National Institute of Justice. <u>Amount: \$150,000</u>. Period: 8/1/16 to 7/31/20.
 Awarded
 - PI: Bridge
 - Since microbes can consume compounds as an energy source, it is necessary to determine how and identify degradation trends of lubricants that are generated from vaginal microbial exposure.
- Forensic Science Education of Central Florida Attorneys. PI: Candice Bridge (Split: 100%).
 Agency: Orlando Public Defender's Office. Amount: \$49,280. Period: 6/15/2016 6/30/2017. Awarded
 - PI: Bridge
 - 1st in the department to receive this service award to educate lawyers on how forensic science can aid legal cases and develop associated website.
 - <u>www.FloridaForensicScience.com</u>

Internal UCF Grants Awarded

- Detection of Drug Metabolites and Adulterants in Urine Drug Screenings via DART-TOFMS.
 Program: Office of Undergraduate Research. Amount: \$500. Period: 1/1/19 to 5/31/2019. Awarded
 - PI: B. Olivieri*, M. Maric, C. Bridge

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- Compare drug screening methods for adulterated urine samples via the current methodology, Enzyme linked immunosorbent assay (ELISA), vs a novel technique, direct analysis in real time-mass spectrometry (DART-MS).
- 4. Novel Combined Method of Detection for Organic and Inorganic Gunshot Residue. **Program: Office of Undergraduate Research**. Amount: \$1,000. Period: 9/1/16 to 5/31/17. **Awarded**
 - PI: L. Gandy*, Q. Price, M. Sigman, C. Bridge
 - Develop a simultaneous test that can analyze organic gunshot residue without adversely affecting inorganic gunshot residue analysis.
- 3. Microbial Degradation of Condom Lubricants. **Agency: UCF In House Research Grant.** Amount: \$7,500. Period: 5/1/2016 to 4/30/2017. **Awarded**
 - PI: C. Bridge
 - Collect preliminary data for future research grants on microbial degradation of condom lubricants.
- Novel Combined Method of Detection for Organic and Inorganic Gunshot Residue.
 Program: Research and Mentoring Program. <u>Amount: \$5,600</u>. Period: 1/1/16 to 8/31/17.
 Awarded
 - PI: L. Gandy*, C. Bridge
 - Develop a simultaneous test that can analyze organic gunshot residue without adversely affecting inorganic gunshot residue analysis.
- Novel Combined Method of Detection for Organic and Inorganic Gunshot Residue.
 Program: Office of Undergraduate Research. <u>Amount: \$500</u>. Period: 9/1/15 to 5/31/16.
 Awarded
 - PI: L. Gandy*, C. Bridge
 - Develop a simultaneous test that can analyze organic gunshot residue without adversely affecting inorganic gunshot residue analysis.

Pending Grants

1. .

RESEARCH PROPOSAL REVIEWER

2022-2023: NSF 2021-2022: NSF

2020-2021: NSF

2019-2020: NSF, Switzerland NSF

2018-2019: NSF, NSF

2017-2018: NIH, ACS (PRF), NSF

2016-2017: NSF

NEWS COVERAGE OF RESEARCH (SUBSET)

2020 Jul: Sexual Lubricant Survey Database See to Understand Needs of Forensic Community. Forensic Magazine (https://www.forensicmag.com/566719-Sexual-Lubricant-Survey-Database-Seekto-Understand-Needs-of-Forensic-Community/)

2020 Jun: Chemistry and Engineering News Weekly Letter to the Committee
(https://app.acspubs.org/e/es.aspx?s=1913652004&e=966853&elqTrackId=82ff34bf9b84449
e8c402ddde9680e0c&elq=c4ff93bd281a4aa7ae1408b1f7d757c6&elqaid=12962&elqat=1)

2019 Mar: Black Enterprise (https://www.blackenterprise.com/chemist-candice-bridge-lands-second-grant-for-her-forensics-research-on-sexual-assault/)

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- 2019 Mar: The Voice (https://www.voice-online.co.uk/article/prof-receives-funding-research-aid-assault-victims) 2019 Mar: Channel 6 News
- 2019 Mar: BlackDoctor.org "#WhiteCoatWednesday: Dr. Candice Bridge Awarded \$324,000 Grant for Groundbreaking Rape Research". (https://blackdoctor.org/508124/whitecoatwednesday-dr-candice-bridge-awarded-324000-grant-for-groundbreaking-rape-research/)
- 2019 Feb: UCF Nicholson Student Media "UCF Forensic Scientist receives grant to make new sexual assault case database go nationwide."

 (http://www.nicholsonstudentmedia.com/knightly_news/ucf-forensic-scientist-receives-grant-to-make-new-sexual-assault/article_3cbff07a-3177-11e9-ba84-0389d18188dd.html)
- 2019 Feb: UCF Knightly News (https://youtu.be/LBCBvazbHlk?t=748)
- 2019 Feb: Telemundo Telenoticias Orlando
- 2019 Feb: WESH 2 News (https://www.wesh.com/article/researchers-create-new-tools-to-solve-rape-cases/26437577)
- 2018 Nov: Cape Gazette News "Candice Bridge Receives \$324,000 Grant for Forensics Research from National Institute of Justice".
- 2018 Feb: Essence Magazine "STEMS's New Guard"
- 2018 Feb: Essence Magazine "15 Black Women who are Paving the Way in STEM and Breaking Barriers". (https://www.essence.com/holidays/black-history-month/black-women-stem-careers/)
- 2017 Jan: BlackMattersUS.com "Forensic Science New Field for Black Women" (https://blackmattersus.com/27885-forensic-science-new-field-for-black-women/)
- 2016 Dec: Black Enterprise "How This Black Female Chemists is Helping to Solve Sex Crimes". (https://www.blackenterprise.com/black-female-chemist-solve-sex-crimes/)
- 2016 Dec: AtlantaBlackStar.com "Black Female Chemistry Instructor Earns \$324K Grant to Research Rape Investigation Methods." (https://atlantablackstar.com/2016/12/05/howards-first-black-female-chemistry-instructor-earns-324k-grant-to-research-rape-investigation-methods/)
- 2016 Dec: TheRoot.com "Black Female Chemistry Instructor Earns \$324K Grant to Research Rape Investigation Methods." (https://www.theroot.com/black-female-chemistry-professor-awarded-324-000-to-st-1790858078).
- 2016 Nov: Essence Magazine "Young Phenom"
- 2016 May: Space Coast Daily "University of Central Florida Forensic Scientist Set Standards, Educates Public on Real CSI" (http://spacecoastdaily.com/2016/05/university-of-central-florida-forensic-scientist-set-standards-educates-public-on-real-csi/)

OTHER NEWS MENTIONS

2015 Nov: Chemical & Engineering News "The NOBCChE Community"

(https://cen.acs.org/articles/93/i43/NOBCChE-Community.html).

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Teaching & Mentorship

CLASSES TAUGHT

I developed 3 new courses (*) whereas the average Assistant Professor develops 1 new course during tenure. I also taught 4 courses and the average new faculty teaches 3.

Undergraduate Courses

CM 2046: Chemistry Fundamentals II In-Person (370 seats)
 CHS 3501: Introduction to Forensic Science In-Person (210 seats)

• CHM 4912: Directed Independent Research

Graduate Courses

CHS 6513: Quality Assurance for Forensic Scientists* Online
 CHS 6545: Forensic Analysis of Explosives* Online
 CHS 6546: Forensic Analysis of Ignitable Liquids* Online

• CHM 6918: Directed Research

CH 6908: Independent Research / Capstone

CHS 6971: Thesis Research
 CHS 7919: Doctoral Research

Post-Doctoral Associate

- 1. Mark Maric, 2015-2020, Characterization and Differentiation of Lubricants
- 2. Santana Thomas, 2019-2021, Characterization and Differentiation of Lubricants

Doctoral Research Advisees

- Currently Pursuing
 - 1. Hadley Woodfin, 2022-Present, Organic Gunshot Residue
 - 2. Jillian Morgan, 2020-Present, Common Metabolites of Synthetic Fentanyl
 - 3. Safiya Best, 2019-Present, Lubricant Collection Process that does not adversely affect DNA analysis
 - 4. David S. Hernandez Funes, 2018-Present, Quantitative Hair Comparison
- Graduated
 - 5. Jessica Kindell, 2016-2023, Rapid Detection of Forged Documents and Currency using Mass Spectrometry
 - 6. Emily Lennert, 2017-2022, Source Determination of Smokeless Powder Organic Residue
 - 7. Kandyss Najjar, 2017-2021, Identification and Detection of Cosmetics Transferred during Personal Attacks
 - 8. Brooke Baumgarten, 2017-2021, Development of Lubricant Characterization and Identification Classification Scheme
 - 9. Yasmine Moustafa, 2015-2019, Characterization of Sexual Lubricants and Condoms using DART-TOFMS and 2D-GC-MS (Co-Advisor)
- Left Program
 - 10. Ky-Mani Miller, 2021-2022, Organic Gunshot Residue
 - 11. Danielle Green, 2015-2021, Quantification and Characterization of the Microbiome Degradation of Sexual Lubricants

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12. Jessica Sprague, 2017-2021, Optimization of DART-HRMS Ionization Parameters for Targeted Analytical Screening

M.S. Graduate Researcher Advisees

- Forensic Science M.S. (FS MS) Thesis Based
 - Currently Pursuing
 - 13. Inez Jacobs-Hinton, FS MS, 2022-Present, Common Metabolites of Synthetic Cathinones
 - Graduated
 - 14. Molly Terry, FS MS, 2014-2016, Elemental Characterization of Post-Fired Priming Residue (Thesis)
 - 15. Lauren Harvey, FS MS, 2014-2016, Characterization of Silicone Based Lubricants (Thesis)
 - Left Program
 - 16. Danielle Green, 2021-2021, Quantification and Characterization of the Microbiome Degradation of Sexual Lubricants (thesis)
- Forensic Science M.S. (FS MS) Professional Non-Thesis Based
 - Currently Pursuing
 - 17. Frank Krist III, FS MS, 2022-Present, (Non-Thesis)
 - 18. Hadley Woodfin, FS MS, 2021-Present, (Non-Thesis)
 - 19. Safiya Best FS MS, 2019-Present, (Non-Thesis)
 - Graduated
 - 20. Brian Kissane, FS MS, 2018-2021, REVIEW: Forensic Analysis of Glass Sample (non-thesis)
 - 21. David S. H. Funes, MS Chem, 2018 2022, Quantitative Hair Comparison (Non-Thesis)
 - 22. Emily Lennert, FS MS, 2015-2020, Elemental Characterization of Post-Fired Muzzle Discharge (Non-Thesis)
 - 23. Jessica Sprague, FS MS, 2017-2019, Optimization of DART-HRMS Ionization Parameters for Targeted Analytical Screening (Non-Thesis)
- M.S. of Chemistry
 - Currently Pursuing

24.

- Graduated
 - 25. Kaitlin Jones, MS Chem, 2017-2020, DART-MS analysis of Auto Paint Samples (Thesis)
 - 26. Danielle Green, MS Chem, 2015-2020, Quantification and Characterization of the Microbiome Degradation of Sexual Lubricants (Non-Thesis)
- 27. Brooke Baumgarten, MS Chem, 2017-2019, Development of Lubricant Characterization and Identification Classification Scheme (Non-Thesis)
- 28. Kandyss Najjar, MS Chem, 2017-2018, Identification and Detection of Cosmetics Transferred during Personal Attacks (Non-Thesis)
- 29. Nathan Schiavon, 2017, Tandem Mass Spectrometry Analysis of Explosives (Non-Thesis)
- M.S. of Nanotechnology
 - Graduated
 - 30. Gabrielle Henson, MS Nano, 2019 (Fall), Physics and Microfluidics of Blood Spatter Markings in Forensic Science (Non-Thesis)

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Undergraduate Research - Direct Supervision

- 1. David Hernandez Funes, BS, 2015-2016, 1) Calibration of the DART-TOF-MS (Forensic Science) and 2) Detection of Masking Agents used in Drug Testing
- 2. Chalynette Martinez Martinez, BS, 2015-2015, Water Based Lubricant Extraction
- 3. Angelique Solano BS, 2015-2017, Microbial Condom Lubricant Analysis
- 4. Lauren Gandy, BS, 2015-2017, Gunshot Residue Colorimetric Stub
- 5. Maren Tomcsak, BS, 2016-2017, Silicone Condom Lubricant Analysis
- 6. Andrew DeRouin, BS, 2016-2017, Condom Dye Analysis
- 7. Kiersten Bertsch, BS, 2016-2017, Microscopic Characterization of Smokeless Powders
- 8. Dejanae Wallace, BS, 2016-2017, Increasing Temperature and Its Effects on Benzocaine in Anal Lubricants
- 9. Bianca Olivieri, BS, 2016-2019, Adulterant Effects on Drug Analysis
- 10. Lovely Davilmar, BS, 2017-2017, Lubricant analysis
- 11. Taya Lennon, BS, 2017-2017, Exit Grid Voltage Effects on Organic Compounds
- 12. Rebecca Kleinkauf, BS, 2017, TBD
- 13. Gabriela Nevarez, BS, 2017-2018, Condom Evaporation
- 14. Steve Lindsay, BS, 2017-2018, Gunshot Residue Colorimetric Stub
- 15. Caterina Vadell, BS, 2017-2018, IR analysis of lubricants
- 16. Sonia Bencomo, BS, 2017, FTIR analysis of auto paint clear coat
- 17. Keisha Foon, BS, 2018, Determining the effects of dopants on DART analysis of lubricants
- 18. Abryana Fergus, BS, 2018-2019, Raman analysis of lubricants
- 19. Lisa Iglesias, BS, 2019, IR analysis of lubricant samples
- 20. Jillian Morgan, BS, 2019-2020, Quantitative microscopic analysis of human hair
- 21. Monica Ortiz, BS, 2019-2020, TBD
- 22. Nancy Flynn, BS, 2019-2021, Lubricant degradation
- 23. Sharon Dale, BS, 2019-2021, Lubricant database
- 24. Tona Rimpel, BS, 2019-2020, Extraction of formaldehyde from hair samples
- 25. Tanmai Bandarupalli, BS, 2019-2021, Infrared spectroscopy analysis of bulk vs trace residues of lubricant samples
- 26. Velda Iskandar, BS, 2019-2020, Shimmer extraction process development
- 27. Kaleb Maloney, BS, 2020-2021, Explosives
- 28. Emily Learn, BS, 2021-2021, Hair dye analysis
- 29. Frank Krist III, BS, 2021-2022, Explosive concomitance
- 30. Dylan Leemook, BS, 2021-2022, Simultaneous OGSR and IGSR Gunshot Residue Analysis (Seminar Literature Research)

Undergraduate Internships - Direct Supervision

- 31. Andrea Young, BS, 2015-2016, LIBS Analysis of Post-Fired Priming Residue and Cartridge Cases
- 32. Victoria Hadnot, BS, 2016, AAS analysis of Gunshot Residue
- 33. Taya Lennon, BS, 2017, Exit Grid Voltage Effects on Organic Compounds
- 34. Nicholas Anderson, BS, 2019, Raman Analysis of lubricant samples
- 35. Arianna Robinson, BS, 2019, Raman Analysis of Lubricant Samples
- 36. Devinne Mitchell, BS, 2021, Lubricant Database

Undergraduate Research – Co-Mentored Supervision

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- 37. Jacob Denkins, BS, 2015-2016, Atomic Absorption of Post-Fired Priming and Muzzle Residue, co-mentored with Matthew Rex (Chemistry)
- 38. Victoria Slaughter, BS, 2015-2016, Atomic Absorption of Post-Fired Priming and Muzzle Residue, co-mentored with Matthew Rex (Chemistry)

Undergraduate Internships – Co-Mentored Supervision

- 39. Denise Kain, BS, 2015-2016, Metal Characteristics of Post-Fired Priming Mixtures, co-mentored with Barry Fookes (Forensic Science)
- 40. Chris Felton, BS, 2016-2016, Atomic Absorption of Post-Fired Priming and Muzzle Residue, co-mentored with Matthew Rex (Chemistry)

Work Study

- 41. David Hernandez Funes, BS, 2015-2016, Calibration of the DART-TOF-MS (Forensic Science)
- 42. Chalynette Martinez Martinez, BS, 2015, Water Based Lubricant Extraction
- 43. Bianca Olivieri, BS, 2017-2019, Adulterant Effects on Drug Analysis
- 44. Caterina Vadell, BS, 2017-2018, IR analysis of lubricants
- 45. Abryana Fergus, BS, 2018-2019, Raman analysis of lubricants

GRADUATE STUDENTS IN OTHER RESEARCH GROUPS

I was a committee member of the following students graduate committee or panel review member:

17. Aesha Patel	M.S. Forensic Science	2023-Pres	VA Commonwealth Univ.
16. Kristen Livingston	Ph.D. Chemistry	2020-Pres	UCF Dept of Chemistry
15. Olivia Field	Ph.D. Chemistry	2020-Pres	UCF Dept of Chemistry
14. Ahmed Comas	Ph.D. Chemistry	2017-2023	UCF Dept of Chemistry
13. John Lucchi	Ph.D. Chemistry	2019-Pres	UCF Dept of Chemistry
12. Nicholas Thurn	Ph.D. Chemistry	2016-2021	UCF Dept of Chemistry
11. Imogen Raynor	M.S. Forensic Science	2017-Pres	Univ of Auckland, Australia
10. Jordan Dowell	Ph.D. Biology	2017-2021	UCF Dept of Biology
9. Anu Akmeemana	Ph.D. Chemistry	2014-2019	UCF Dept of Chemistry
8. Alyssa Allen	Ph.D. Chemistry	2014-2019	UCF Dept of Chemistry
7. Yuemin Wang	Ph.D. Chemistry	2013-2019	UCF Dept of Chemistry
6. Gavin Pour	Ph.D. Chemistry	2013-2019	UCF Dept of Chemistry
5. Richard Coulson	M.S. Forensic Science	2014-2017	UCF Dept of Chemistry
4. Adibah Almutairi	Ph.D. Chemistry	2012-2019	UCF Dept of Chemistry
3. Sara Martinez	M.S. Forensic Science	2013-2016	UCF Dept of Chemistry
2. Jessica Kindell	M.S. Forensic Science	2013-2016	UCF Dept of Chemistry
1. Katie Farash	M.S. Forensic Science	2013-2015	UCF Dept of Chemistry

INSTRUCTIONAL SERVICE

- 2015-2020: UCF COMPASS/EXCEL Mentor
- 2017-2018: UCF Legacy Mentor
- Fall 2016: UCF TRiO mentor
- Summer 2016: Invited speaker to the UCF Faculty Summer Conference (Online Teaching)

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Service

SERVICE ACTIVITIES

Department

- Standing Committees
 - 2022-Pres: Chemistry Department's Promotion and Tenure Committee
 - 2020-Pres: Chemistry Department's Diversity Committee
 - 2019-Pres: Chemistry Department's Seminar Committee
 - 2016-Pres: Chemistry Department Space and Facilities Committee Member
 - 2018-2021: Chemistry Department's Graduate Research & Outreach Committee Member
- Ad-Hoc Committees
 - Fall 2022-Spring 2023: Forensic Science Biochemistry Professor Hiring Committee Chair
 - Fall 2018: Forensic Science & Statistics Professor Hiring Committee Member
 - Fall 2016: Forensic Science & Statistics Professor Hiring Committee Chair
 - Fall 2016: Chemistry Department Open Rank Faculty Hiring Committee
 - Fall 2016: Forensic Science & College of Engineering Faculty Hiring Committee
 - Spring 2015: Forensic Science Chemistry Professor Hiring Committee Member
 - Fall 2015: Forensic Science & Statistics Professor Hiring Committee Member
 - Fall 2015: Chemistry Department Chair Hiring Committee Member
 - Fall 2015: Digital Evidence Professor Hiring Committee Member

College

- Standing Committees
 - 2022-Pres: Global Medical Missions Alliance Faculty Advisor
 - 2015-2017: College of Sciences Graduate Curriculum & Standards Committee
- Ad-Hoc Committees
 - Spring 2022: College of Science Associate Dean of Faculty & Students Search Committee
 - Spring 2017: College of Science Dean's 5 Year Review Committee Member
 - Spring 2016: Developed NCFS Speaker Series
- 2015-2016: Developed and managed Speaker Series for the Community on "Statistics, Science and the Law" for local attorneys, forensic scientists, academics, and the local community.

University

- Standing Committees
 - 2022-Pres: UCF Human Resources Search Committee Training Work Group
 - 2022-Pres: UCF Police Department Leadership Council Member
 - 2020-Pres: Division of Student Learning and Academic Success Graduation Success
 Team Member
 - 2020-2021: UCF Office of Diversity and Inclusion Leadership Committee Member
- Ad-Hoc Committees
 - Sum 2020: Application Reviewer for the UCF Leadership Empowerment Program

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- Fall 2018: Member of the UCF's Vice President of Equity, Inclusion and Diversity Search Committee
- Spr 2016: Member of the COACHE Sub-Committee on Promotion and Tenure
- Spr 2015: Lead a new Faculty Cluster Hire Group on Cognitive Bias in the Criminal Justice System
- Speaking Engagements
 - Spr 2022: Invited speaker for the TRiO Program
 - Fall 2018: Invited Keynote speaker for the TRiO Program graduating students
 - Spr 2018: Keynote speaker for the UCF TriO program graduating students
 - Fall 2017: Provost Whittaker asked me to speak to the Board of Trustee's Educational Program Committee
 - 2015: Developed forensic education programs for the UCF STEM Day

Professional

- 2021-Pres: Frontiers in Analytical Sciences Journal Editorial Board Member
 - Forensic Chemistry Sub-section
 - Co-Edited a research topic on Women in Analytical Chemistry (2022)
- 2021-Pres: University of Mississippi Forensic Science Advisory Board Member
- 2019-Pres: Working Group Chair International Scientific Working Group of Lubricant Analysis
 - Established and developed working group
 - Conducted a lubricant analysis survey of the forensic science community
 - Developed and reviewing standards
 - L001: Standard Practice for the Preparation of Sexual Lubricant Samples for Instrumental Analysis
 - L002: Standard Practice for the Analysis of Lubricants used in Alleged Sexual Assaults using Fourier Transform Infrared Spectroscopy
 - L003: Standard Practice for the Analysis of Lubricants used in Alleged Sexual Assaults using Gas Chromatography-Mass Spectrometry
 - Spr 2019: Established and developed the 1st ever database of Forensic Science Sexual Lubricant Database (https://ncfs.ucf.edu/sal/.
- 2018-Pres: Council of Forensic Science Educators,
 - Research Committee Team Member
- 2016-Pres: National Institute of Standards and Technology Organization of the Scientific Area Committees
 - 2021-Pres: Inorganic Gunshot Residue Collection Task Group
 - o 2021-Pres: Task Group Member
 - 2021-Pres: Organic Gunshot Residue Task Group
 - o 2021-Pres: Task Group Member
 - o 2016-2021: Task Group Chair
 - o Developed the following standards:
 - 2021-N-0009: Standard Practice for the Collection and Preservation of Organic Gunshot Residue (*ASTM Balloting*)
 - 2022-S-0002: Standard Practice for the Identification of Compounds related to Organic Gunshot Residue (OGSR) by Gas Chromatography— Mass Spectrometry (GC-MS) (STRP Review)

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- 2022-S-0003: Standard Practice for the Identification of Compounds related to Organic Gunshot Residue (OGSR) by Liquid Chromatography

 – Mass Spectrometry (LC-MS) (STRP Review)
- 2016-Pres: Conference Organization Committees
 - 2022-Pres: American Academy of Forensic Science 2023 Conference Organization Board Member
 - Fall 2018: Conference Session Chair for American Chemical Society
 - Spr 2018: Conference Session Chair for Florida ACS Meeting and Exposition
 - Fall 2017: Conference Session Chair for SciX 2017
 - Spr 2016: Conference Session Chair for Forensic Science at the American Society for Mass Spectrometry Conference
- 2019-2023: National Science Foundation Grant Reviewer
- Fall 2016: Developed DART-MS Demo Day for Orlando Health Medical Community
- Sum 2016: Developed DART-MS Demo Day for Forensic Crime Labs

Editorial Journal Reviews

- 2022-2023: Forensic Chemistry (x1), ACS Omega (x1)
- 2021-2022: Forensic Science International (x1), Science & Justice (x1), New Phytologist (x1)
- 2020-2021: Genetics (x1), Forensic Science International (x1), ACS (x1)
- 2019-2020: Journal of Analytical and Applied Pyrolysis (x2), Forensic Chemistry (x3),
 Journal of Forensic Science (x3), Forensic Science International (x3),
 Analytical Chemistry (x1), Analytical Methods (x2), Rapid Communications in
 Mass Spectrometry (x1)
- 2018-2019: Forensic Science International, Analytical Chemistry, Science & Justice,
 Journal of Forensic Science, ACS Omega, Forensic Chemistry, Rapid
 Communications of Mass Spectrometry, Separations, JAAP
- 2017-2018: Forensic Chemistry; Analytical Chemistry; Forensic Science International;
 Analytical Methods
- 2016-2017: Science & Justice; Analytical Chemistry; Forensic Science International;
 Forensic Chemistry
- 2015-2016: National Institute for Standards and Justice; Science & Justice, Drug Testing & Analysis, Forensic Chemistry, Forensic Science International
- 2014-2015: Analytical Methods; Journal of Forensic Sciences

Outreach

- 2019-Pres: STEMConnect Presentations
 - Fall 2021: Presentation for Middle School Students
 - Fall 2019: Presentation for Middle School Students
 - Sum 2019: Presentation for the Orlando Science Center
 - Fall 2019: Presentation for Middle School Students
- Spring 2022: Invited Panel Member for UCF Women in STEM, hosted by the TRiO Program
- Fall 2020: Invited Panel member for STEM Diversity, Equity and Inclusion Panel at the University of Florida American Chemistry Society Chapter
- Fall 2020: Invited Speaker for the Girls EXCELing in Math and Science (GEMS) program
- Spring 2020: Invited speaker for the Science Leadership and Mentoring Program for local
 7th grade girls

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- 2015-2018: National Organization of Chemists and Chemical Engineers
 - Fall 2018: Invited to be the Keynote Speaker for the NOBCChE STEM Week Festival
 - Sum 2016: Participated in the NOBCChE Science Bowl at UCF
 - Fall 2015: Invited Panelist for NOBCChE <u>STEM's Impact on 21st Century Forensic Science</u>
- Fall 2018: Invited Speaker for the GEMS program
- Spr 2017: Delta Sigma Theta's <u>The Aha! Moment Exploring Traditional and Non-Traditional Careers</u> (Apr 16, 2017)
- Fall 2016: Invited Speaker for the UCF GEMS Program
- Sum 2016: Participated in the UCF Prime STEM Career Academy Reception
- Su, 2016: Developed an Instrument Demonstration Day for local forensic crime laboratories to introduce to the DART-MS
- Spr 2016: Invited Speaker for the LIFE at UCF Program

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