Curriculum vitae

Lane A. Baker

Dr. Carl D. McAfee ’90 Chair in Analytical Chemistry
Professor
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Academic Career

2022	Professor and Dr. Carl D. McAfee ’90 Chair in Analytical Chemistry, Department of Chemistry, Texas A&M University, College Station, TX, USA
2018	Professor, Indiana University, Department of Chemistry, Bloomington, Indiana, USA
2014	James F. Jackson Chair, Indiana University, Department of Chemistry, Bloomington, Indiana, USA
2012	Associate Professor, Indiana University, Department of Chemistry, Bloomington, Indiana, USA
2006 - 2012	Assistant Professor, Indiana University, Department of Chemistry, Bloomington, Indiana, USA
2004-2006	Postdoctoral Associate, University of Florida, Gainesville, Florida, USA Supervisor: Charles R. Martin
2001-2004	National Research Council Postdoctoral Associate, Naval Research Laboratory, Washington, D.C., USA Supervisor: Lloyd J. Whitman
2001	Ph.D. Texas A&M University, College Station, TX, USA Supervisor: Richard M. Crooks
1996	B.S. Missouri State University, Springfield, MO, USA Research Advisor: Shujun Su

Honors, Awards, and Appointments

2024-present	Head, Department of Chemistry Texas A&M
2023-2025	President, Society for Electroanalytical Chemistry
2024	Spiers Memorial Lecture, Faraday Discussions
2023	Charles N. Reilley Award, Society for Electroanalytical Chemistry
2022	Fellow, American Association for the Advancement of Science
2021	Analytical Scientist Power List
2021	Fellow, American Chemical Society
2021	Award in Electrochemistry, Division of Analytical Chemistry, American Chemical Society
2021	NSF Special Creativity Award
2019-2021	Site Director, NSF I/U CRC Center for Bioanalytic Metrology
2019	Chair American Chemical Society Division of Analytical Chemistry
2019	Analytical Scientist Power List
2019	Hach Lecture, University of Wyoming

2017	Trustee's Teaching Award Indiana University
2015-2017	Associate Editor, *RSC Advances*
2014	Fellow, Royal Society of Chemistry
2012	Young Investigator Award, Society for Electroanalytical Chemistry
2009	Cottrell Scholar Award, Research Corporation for Science Advancement
2009	CAREER Award, National Science Foundation
2008	Starter Grant Awardee, Society of Analytical Chemists of Pittsburgh
2001	National Research Council Postdoctoral Associate, Naval Research Laboratory
2001	Celanese Outstanding Graduate Student, Texas A&M University
1996	Hyperchem Hypercube Scholar, Missouri State University
1996	Outstanding Undergraduate in Inorganic Chemistry, Missouri State University

Lane Baker was educated at Missouri State University, Springfield, MO (BS Chem 1996) and Texas A&M University (Ph.D. 2001) working with Richard M. Crooks. He joined the group of Lloyd J. Whitman (2001) in the Surface Nanoscience and Sensor Technology Section of the Naval Research Laboratory as a National Research Council Postdoctoral Associate, conducting research on atomically resolved scanned probe microscopies. He then joined the group of Charles R. Martin (2004) at the University of Florida as a Postdoctoral Associate investigating polymeric nanopores for sensing and separations. He started as an Assistant Professor at Indiana University in the Analytical Chemistry Division (2006) and was promoted to Associate Professor with tenure in 2012, and to Professor in 2012. From 2014-2021, Baker held a James F. Jackson Chair in the Department of Chemistry at Indiana. In 2022, Baker moved to the Department of Chemistry at Texas A&M University with appointment as the inaugural holder of the Dr. Carl D. McAfee '90 Chair in Analytical Chemistry. His research group is broadly interested in electrochemistry with focus in the following areas. (i) Transient and spatial measurement of ion concentrations with scanned probe microscopies. (ii) Electrochemistry coupled to mass spectrometry. (iii) Electrochemistry in small domains. (iv) High-throughput electrochemical measurement.

Current Collaborations

Dana Spence (Michigan State University), Scott Martin (Saint Louis University), Zuzanna Siwy (UC-Irvine), Xingchen Ye (Indiana University), Sara Skrabalak (Indiana University), Graeme Henkleman (University of Texas), Kallie Willets (Temple University), Xin Yan (Texas A&M University); Jonathan Raff (Indiana University), Rahul Srinivasan (Texas A&M University), Michelle Personick (University of Virginia), Shiqing Xu (Texas A&M University), Arthur Laganowsky (Texas A&M University), Alex Keene (Texas A&M University), Marko Iskander (Texas A&M).

Current andPast Group Members

Visiting Faculty: Prof. Michelle Personick (2023, Wesleyan University (now University of Virginia)), Prof. Scott Thorgaard (2022, Grand Valley State University), Prof. Chengxiao Zhang (2016, Director, Key Laboratory of Analytical Chemistry for Life Science of Shanxi Province, China), Prof. Wookyoung Lee (2010-2012, Inje, Korea)

Postdoctoral: Dr. Essraa Hussein (2025-present), Dr. Hugo Samayoa Oviedo (2024-present), Dr. Oluwasegun Wahab (2022-2024), Dr. Xiang Wang (2023-2024), Dr. Brian Choi (2022-2023), Dr. Luan Felipe Campos Oliveira (2023), Dr. Srinivas Beeram (2011-2012), Dr. Jeremy Wilburn (2010-2011), Dr. Yaqin Fu (2006-2009), Dr. Vish Bhakthavatsalam (2007-2008)

Graduate (25 PhD; 7 MS; 10 current): Cody Leasor, Kelly Vernon, Abdoulie Jallow, Kathleen Bailey, Coddy Cash, Josselyn De Leon, Aswathi Sahadevan, Sohini Dawn, Praful Jeyaprakash, Cesar Dominguez, Lingjie Zhang (PhD 2026), Malavika Shashishekar (MS 2026), Yunong Wang (PhD 2025), Alyssa Hash (MS 2025), Sasha Alden (PhD 2024), Kristen Alanis (PhD 2024), Krista Kulesa (JS, PhD 2023), Natasha Siepser (PhD 2022), Brian Choi (PhD2022), Ben Gerroll (DGP, PhD2022), Gargi Jagdale (PhD 2021), Kaixiang Huang (PhD 2021), Cheng Zhu (PhD 2021), Ana Cuoto (DGP, PhD 2021), Tyler Yarger (MS 2020), Alicia Friedman (PhD 2018), Elizabeth Yuill (PhD 2017), Lushan Zhou (PhD 2017), Yuhan Zeng (MS 2017), Wenqing Shi (PhD 2017),Anna Weber (MS 2017), Anumita Saha, (PhD 2016), Yi Zhou (PhD 2014), Kirstin Morton (PhD 2014), Maks Derylo (MS 2014), Niya Sa (PhD 2013), Celeste Morris (PhD 2013), Rahul Thakar (PhD 2013), Rashid Zakeri (MS 2013), Joseph Basore (PhD 2013),Chiao-Chen Chen(PhD, 2012)
Visiting Scholars: Shubhendra Shulka (2024-5), Na Zhang (2014)
Undergraduate: Juan Arroyo (2023); Jacqueline Patterson (2018-2019); Jon-Luc Poirier (2017); Huidi Chen (2017); Curtis Green (2015); David Abrahams (2014); Kayla Matthews (2012); Andrew Rusch (2012); Doug Miller (2010); Kyuwon Kim (2008); Ryan Kapp (2008); Carrie VanLue (2007)

Editorial

2024-present	*ACS Electrochemistry*, Editorial Advisory Board
2021-2029	*ChemElectroChem*, Advisory Board
2021-present	*ACS Measurement Science*, Editorial Advisory Board
2018-present	*Journal of the Electrochemical Society*, Editorial Advisory Committee
2013-present	*Analytical Methods*, Editorial Advisory Board
2019-2022	*Analytical and Bioanalytical Chemistry,* Advisory Board
2017-2022	*ACS Sensors,* Editorial Advisory Board
2019-2021	*Encyclopedia of Electroanalytical Chemistry*, Section Editor
2021	*Journal of the Electrochemical Society*, Society for Electroanalytical Chemistry Members Special Issue, co-Editor (with Bo Zhang, Francis Zamborini and Lanqun Mao)
2019	*ChemElectroChem*, Richard M. Crooks Festschrift, co-Editor (with Francis Zamborini, Wei Zhan, and Robbyn Anand)
2017, 2019	*Analytical Chemistry*, Editorial Advisory Board (ex-officio)
2018	*ChemElectroChem*, co-Editor (with Yitao Long and Patrick Unwin), Special Issue on Single-Entity Electrochemistry
2015-17	*RSC Advances*, Associate Editor
2015	*Analytical Methods*, co-Editor (with Ryan Bailey) Emerging Investigators Issue
2011-14	*Analytical Chemistry,* Features Advisory Panel

Organizations/Societies

American Chemical Society, Society for Electroanalytical Chemistry, The Electrochemical Society, International Society of Electrochemistry, American Society for Mass Spectrometry, American Associate for the Advancement of Science

Outreach and Synergistic Activities

2026-present	External Advisory Board, Department of Chemistry, Missouri State University
2025-present	External Advisory Board, Bard Center for Electrochemistry, University of Texas

2025	co-Chair, Gordon Conference on Chemical Imaging, Stonehill College, MA
2023	Founding Organizer and Vice-Chair, Gordon Conference on Chemical Imaging, Stonehill College, MA
2020-present	Organizing Committee, Analytical Sciences Digital Library Remote Labs and Simulations
2019-present	Founder and Organizer, Society for Electroanalytical Chemistry Student Group Meeting
2018-2023	SENTINEL-ITN, EU Horizon 2020, Member of International Partner Network
2020	NSF Chemistry Division Review, Committee of Visitors
2020	Past-Chair, American Chemical Society Division of Analytical Chemistry
2019	Chair, American Chemical Society Division of Analytical Chemistry
2018	Program Chair, American Chemical Society Division of Analytical Chemistry
2018	Organizing Committee RSC Faraday Discussion on Nanoscale Electrochemistry, Bath, UK
2015-18	Chair Membership Committee, Society for Electroanalytical Chemistry
2017	Chair-Elect American Chemical Society Division of Analytical Chemistry
2015-17	co-Chair, American Chemical Society Division of Analytical Chemistry, Spring and Fall Meetings
2015-16	co-Chair, Long Range Program Planning Committee American Chemical Society, Division of Analytical Chemistry
2014	Discussion Leader, Gordon Research Conference on Electrochemistry, Ventura, CA
2012-14	Organizing Committee and Facilitator, 1st-3rd Cottrell Scholar's Collaborative New Faculty in Chemistry Workshop, Washington, DC
2013-18	Board of Directors of Society for Electroanalytical Chemistry
2011-12	First and Second China-US Analytical Chemistry Workshop, Tsinghua University, Beijing, China
2010	Hosted and Organized Boy Scout Merit Badge Event at Indiana University
2008	Midwest Analytical Universities Chemistry Conference, Indiana University, Bloomington Indiana Meeting Organizer (with Stephen Jacobson)

Invited Seminar Presentations

123. Pittcon 2026, San Antonio, TX (April 2027)
122. Pittcon 2026, San Antonio, TX (April 2027)
121. Critical Minerals and Materials Summit, PNNL, Richland, WA (November 2026)
120. Texas Section of the Electrochemical Society, Texas Tech, Lubbock, TX (September 2026)
119. Pittcon 2026, San Antonio, TX (February 2026)
118. SPIE Photonics West, San Francisco, CA (January 2026)
117. Bard Center for Electrochemistry Workshop, Austin, TX (April 2025)
116. Pittcon 2025, Pittcon Achievement Award Symposium, Boston, MA (February 2025)
115. Pittcon 2025, Reilley Award Symposium, Boston, MA (February 2025)
114. Rensselaer Polytechnic Institute, Troy, NY (February 2025)
113. Baylor University, Waco, TX (January 2025)
112. Spiers Memorial Lecture. Faraday Discussion New Horizons in Nanoelectrochemistry (Introductory Lecture), Nanjing, China (October 2024)

111. University of California, Los Angeles, Los Angeles, CA (May 2024)
110. American Chemical Society National Meeting Spring 2024, New Orleans, LA (March 2024)
109. University of South Carolina, Columbia, SC (February 2024)
108. University of Houston, Houston, TX (February 2024)
107. Pittcon 2024 (2 presentation), San Diego, CA (February 2024)
106. University of Florida, Gainesville, FL (April 2023)
105. University of Illinois, Urbana, IL (April 2023)
104. Pittcon 2023, Reilley Award Symposium, Philadelphia, PA (March 2023)
103. Florida State University, Tallahassee, FL (February 2023)
102. University of Arkansas, Fayetteville, AR (January 2023)
101. Eastern Analytical Symposium, R.M.Crooks Award Symposium, Plainsboro, NJ (November 2023)
100. Center for Enhanced Nanofluidic Transport, Energy Frontier Research Center, Boston, MA (Virtual, July 2022)
99. University of Louisville, Louisville, KY (November 2021)
98. SENTINEL Workshop, Rimini, Italy (Virtual, September 2021)
97. Fall National Meeting of the American Chemical Society, Atlanta, GA (Virtual August 2021)
96. Northwest Regional Meeting of the American Chemical Society (Virtual 2021)
95. Texas A&M University, College Station, TX (Virtual, April 2021)
94. Pittcon 2021 (Virtual, March 2021)
93. Clarkson University, Potsdam, NY (Virtual, November 2020)
92. Wayne State University, Detroit, MI (Virtual, November 2020)
91. University of Rhode Island, South Kingston, RI (Virtual, October 2020)
90. Montclair State University, Montclair, NJ (Virtual, October 2020)
89. Colorado State University, Fort Collins, CO (February 2020)
88. University of Miami, Miami, OH (February 2020)
88. Nanoscientific Symposium, Albany, NY (November 2019)
87. University of Texas, El Paso, TX (October 2019)
87. Potter's Lodge Meeting, Blue Mountain Lake, NY (September 2019)
86. Mátrafüred Conference, Visegrád, Hungary (June 2019)
86. 235th Electrochemical Society Meeting, Dallas, TX (May 2019)
85. Missouri State University, Springfield, MO (April 2019)
84. Hach Lecture, University of Wyoming, Laramie, WY (March 2019)
83. East Tennessee State University (February 2019)
82. Purdue University, West Lafayette, IN (February 2019)
81. University of Akron, Akron, OH (February 2019)
80. SciX 2018, Atlanta, GA (October 2018)
79. University of Puerto Rico (September 2018)
78. 69th International Society of Electrochemistry Meeting, Bologna Italy (August 2018)
77. 254th National American Chemical Society, Boston, MA (August 2018)
76. Pittcon 2018, Orlando, FL (March 2018)
75. Gordon Research Conference on Electrochemistry, Ventura, CA (January 2018)
74. Potter's Lodge Meeting, Blue Mountain Lake, NY (September 2017)

73. German Society of Biochemistry and Molecular Biology Satellite Meeting: Novel tools to investigate cellular physiology at the nanoscale, Ruhr-Bochum, Germany (October 2017)
72. SciX 2017, Reno, NV (October 2017)
71. 254th National American Chemical Society, Washington, DC (August 2017)
70. University of Texas, Austin, TX (May 2017)
69. Pittcon 2017, Chicago, IL (March 2017)
68. University of Arizona, Tucson, AZ (February 2017)
67. University of Utah, Salt Lake City, UT (October 2016)
66. Royal Society of Chemistry Faraday Discussion Single-Entity Electrochemistry, York, UK (September 2016)
65. International Society of Electrochemistry, 67th Annual Meeting, The Hague, Netherlands (August 2016)
64. 252nd National American Chemical Society Meeting, Philadelphia, PA (August 2016)
63. Fourth China-US Analytical Chemistry Workshop, Xiamen, China (June 2016)
62. CERMACS, Bill Heineman Symposium, Cincinnati, OH (May 2016)
61. 251st National American Chemical Society Meeting, San Diego, CA (March 2016)
61. Reilly Award Symposium, Pittcon 2016, Atlanta, GA (March 2016)
60. Pittcon 2016, Atlanta, GA (March 2016)
59. ICASE, Indianapolis, IN (October 2016)
58. Pacifichem Honolulu, HI (December 2015)
57. Case Western Reserve University, Cleveland, OH (November 2014)
56. Center for Analytical Instrument Development Workshop, 7th Annual Meeting, Purdue University, West Lafayette, IN (September 2014)
55. International Society of Electrochemistry, 65th Annual Meeting, Lausanne, Switzerland (September 2014)
54. Chalmers University of Technology, Area of Advance Nanoscience and Nanotechnology Workshop, Gothenburg, Sweden (June 2014)
53. Argonne National Laboratory, Chicago, IL (June 2014)
52. University of Pittsburgh, Pittsburgh, PA (April 2014)
51. University of Maryland-Baltimore County, Baltimore, MD (February 2014)
50. SciX, Milwaukee, WI (October 2013)
49. Watanabe Symposium, Indiana University, Bloomington, IN (October 2013)
48. Potter's Lodge Meeting, Blue Mountain Lake, NY (September 2013)
47. City University of New York, New York, NY (April 2013)
46. Pittcon 2013, Philadelphia PA (March 2013)
45. University of California-Irvine, Irvine, CA (December 2012)
44. University of Minnesota, Minneapolis, MN (October 2012)
43. SciX, Kansas City, MO (October 2012)
43. Second China-US Analytical Chemistry Workshop, Tsinghua University, Beijing, China, (September 2012)
42. Texas A&M University, College Station, TX (September 2012)
41. Gordon Research Conference on Biosensors (July 2012)
40. Cottrell Scholar's Conference, Tucson, AZ (July 2012)
39. Reilly Award Symposium, Pittcon 2012, Orlando, FL (March 2012)
38. Southwest Regional American Chemical Society Meeting, Austin, TX (November 2011)
37. University of Notre Dame, Notre Dame, IN (October 2011)

36. Texas Tech, Lubbock, TX (September 2011)
35. Potter's Lodge Meeting, Blue Mountain Lake, NY (September 2011)
34. Cottrell Scholar's Conference, Tucson, AZ (July 2011)
33. University of Washington, Seattle, WA (May 2011)
32. Kansas State University, Manhattan, KS (May 2011)
31. University of Kansas, Lawrence, KS (May 2011)
30. University of North Carolina, Chapel Hill, NC (April 2011)
29. Scanning Ion Conductance Microscopy Workshop, London, UK (March 2011)
28. Pittcon 2011, Atlanta, GA (March 2011)
27. University of Illinois, Urbana, IL (February 2011)
26. Pacifichem 2010, Honolulu, HI (December 2010)
25. Purdue University, West Lafayette, IN (November 2010)
24. University of Texas, Austin, TX (November 2010)
23. Texas A&M University, College Station, TX (November 2010)
22. St. Louis University, St. Louis, MO (September 2010)
21. Georgia State University, Atlanta, GA (April 2010)
20. University of Florida, Gainesville, FL (April 2010)
19. Michigan State University, East Lansing, MI (March 2010)
18. Optical Society of America 93rd Annual Meeting, San Jose, CA (October 2009)
17. Potter's Lodge Meeting, Blue Mountain Lake, NY (September 2009)
16. University of Louisville, Louisville, KY (April 2009)
15. Northern Kentucky University, Highland Heights, KY (April 2009)
14. Pittcon 2009, Chicago, IL (March 2009)
13. IUPUI, Indianapolis, IN (February 2009)
12. Lab Automation 2009, Palm Springs, CA (January 2009)
11. Southern Illinois University, Carbondale, IL (November 2008)
10. Rose-Hulman Institute of Technology, Terre Haute, IN (October 2008)
9. Valparaiso University, Valparaiso, IN (September 2008)
8. 20th International Conference on Accelerators, Fort Worth, TX (August 2008)
7. HPLC2008, Baltimore, MD (May 2008)
6. Wright State University, Dayton, OH (February 2008)
5. National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan (December 2007)
4. Eastern Kentucky University, Richmond, KY (December 2007)
3. Western Kentucky University, Bowling Green, KY (November 2007)
2. Benedictine College, Atchison, KS (November 2007)
1. Indiana State University, Terre Haute, IN (April 2007)

Arranged and Contributed Seminars

37. 260th National American Chemical Society Meeting, San Francisco, CA (September 2019)
36. Midwest Universities Analytical Chemistry Conference, Michigan State University, East Lansing, MI (November 2018)
35. International Society for Electrochemistry Meeting, Providence, RI (August 2017)
34. 253rd National American Chemical Society Meeting, San Francisco, CA (March 2016)
33. Midwest Universities Analytical Chemistry Conference, University of Illinois, Urbana-Champaign, IL (October 2016)

32. Midwest Universities Analytical Chemistry Conference, University of Minnesota, Minneapolis, MN (October 2015)
31. Pittcon 2013, Philadelphia, PA (March 2013)
30. Midwest Universities Analytical Chemistry Conference, University of Wisconsin, Madison, WI (September 2012)
29. Center for Analytical Instrumentation Development Annual Meeting, West Lafayette, IN (May 2011)
28. 218th Electrochemical Society Meeting, Las Vegas, NV (October 2010)
27. Midwest Universities Analytical Chemistry Conference, Purdue University, West Lafayette, IN (October 2010)
26. Midwest Universities Analytical Chemistry Conference, Michigan State University, East Lansing, MI (December 2009)
25. Pittcon 2008, New Orleans, LA (March 2008)
24. Midwest Universities Analytical Chemistry Conference, University of Illinois, Urbana, IL (November 2007)
23. University of Kansas, Lawrence, KS (February 2006)
22. The Ohio State University, Columbus, OH (February 2006)
21. Virginia Polytechnic Institute, Blacksburg, VA (January 2006)
20. Indiana University, Bloomington, IN (January 2006)
19. Florida State University, Tallahassee, FL (January 2006)
18. University of California, Riverside, CA (December 2005)
17. University of Massachusetts, Amherst, MA (December 2005)
16. University of Delaware, Newark, DE (December 2005)
15. University of Florida, Gainesville, FL (December 2005)
14. University of Texas, Austin, TX (November 2005)
13. Renesselaer Polytechnic Institute, Troy, NY (November 2005)
12. Auburn University, Auburn, AL (November 2005)
11. Wayne State University, Detroit, MI (November 2005)
10. University of Kentucky, Lexington, KY (October 2005)
9. 230th National American Chemical Society Meeting in the Analytical Chemistry Division; Washington, DC (August 2005)
8. 229th National American Chemical Society Meeting in the Colloid and Surface Chemistry Division, San Diego, CA (March 2005)
7. Pittcon 2005, Orlando, FL (March 2005)
6. AVS 50th International Symposium, Baltimore, MD (November 2003)
5. 226th National American Chemical Society Meeting in the Colloid and Surface Chemistry Division, New York, NY (September 2003)
4. 2003 Physical Electronics Conference, Ithaca, NY (June 2003)
3. 221st National American Chemical Society Meeting in the Polymer Materials Science and Engineering Division, San Diego, CA (April 2001)
2. Missouri State University, Springfield, MO (October 1999)
1. 218th National American Chemical Society Meeting in the Organic Chemistry Division, New Orleans, LA (August 1999)

Poster Presentations

Gordon Research Conference on Electrochemistry, Ventura, CA (January 2024); Gordon Research Conference on Electrochemistry, Ventura, CA (January 2022); Faraday Discussion: Nanoscale Interfaces, Bath, UK (June 2018), 250th National American Chemical Society Meeting, Boston, MA (August 2015); Gordon Research Conference on Electrochemistry, Ventura, CA (January 2010); Gordon Research Conference on Cell Contact and Adhesion, Waterville, NH (June 2009); Pittcon 2006, Orlando, FL (March 2006); 230th National American Chemical Society Meeting, Washington, DC (August 2005); 215th National American Chemical Society Meeting in the Colloid and Surface Chemistry Division; Dallas, TX (March 1998); Midwest Regional ACS Meeting in the Physical Chemistry Division; Joplin, MO (March 1996).

Departmental/University Service

2024-present	Department Head, Chemistry (TAMU)
2023-2024	Council of Principal Investigators (TAMU)
2023-2024	Chemistry Department Faculty Search Committee, Chair (TAMU)
2023-2026	Chemistry Department Promotion and Tenure Committee (TAMU)
2022-present	Chemistry Department Analytical Area Coordinator (TAMU)
2022-present	Chemistry Department Awards Committee (TAMU)
2012-21	Faculty Advisor for Student Electrochemical Society Chapter (Indiana)
2015-21	Chemistry Department Analytical Area Coordinator
2014-16, 2020-21	Chemistry Department Diversity Affairs Committee
2020	Chair of Graduate Admissions Committee
2017-19	Associate Chair, Department of Chemistry
2016-19	Chemistry Department Policy Committee
2015-18	Quantitative Chemical Biology (NIH Training Grant) Curriculum Committee
2016	Faculty Search Committee Precision Medicine Initiative, Chemistry Pillar
2016	Chair, Departmental External Review Committee
2014-16	Chemistry Department Graduate Standards Committee
2013-15	College Academic Fairness Committee (Arts and Science)
2014	Gill Center review
2009-12	NOBCChE Faculty Advisor
2012	College Evaluation Committee for WISE and Herbert Fellowships
2012	Chemistry Website Redesign Committee
2012	Analytical/Bioanalytical Faculty Search Committee
2009-12	Graduate Recruiting Analytical Division
2008	Graduate Recruiting Materials Division

Teaching

4846 Students Total

(Semester, *Course*, Student Enrollment)

S2024 *CHEM 602: Analytical Chemistry II,* 27
S2024 *CHEM 434: Analytical Instrumentation Laboratory,* 24
F2023 *CHEM 600: Chemical Instrumentation and Analysis,* 8
F2023 *CHEM 434: Analytical Instrumentation Laboratory,* 13
S2023 *CHEM 434: Analytical Instrumentation Laboratory,* 27
F2022 *CHEM 434: Analytical Instrumentation Laboratory,* 12
F2020 *C611: Electroanalytical Chemistry*, 11

S2020 *C611: Electroanalytical Chemistry*, 11
F2018 *A315: Chemical Measurements Laboratory,* 24
F2017 *C127: Principles of Chemistry and Biochemistry Laboratory,* 599
S2017 *C127: Principles of Chemistry and Biochemistry Laboratory,* 576
F2016 *C127: Principles of Chemistry and Biochemistry Laboratory,* 574
S2016 *C611: Electroanalytical Chemistry,* 7
F2015 *A315: Chemical Measurements Laboratory*, 20
S2015 *C611: Electroanalytical Chemistry,* 12
F2014 *A315: Chemical Measurements Laboratory*, 34
SU2014 *C127: Principles of Chemistry and Biochemistry Laboratory,* 49
S2014 *A800: Analytical Chemistry Research Seminar*, 13
S2014 *C620: Chemical Measurements* 20
F2013 *A315: Chemical Measurements Laboratory*, 17
F2013 *A800: Analytical Chemistry Research Seminar*, 8
F2013 *C689 Quantitative Chemical Biology Journal Club*, 6
S2013 *C117: Principles of Chemistry and Biochemistry Laboratory,* 640
S2013 *M608: Materials Chemistry,* 12
F2012 *A315: Chemical Measurements Laboratory,* 13
S2012 *M608: Materials Chemistry,* 9
F2011 *C611: Electroanalytical Chemistry,* 20
S2011 *A800: Analytical Chemistry Research Seminar*, 20
F2010 *A315: Chemical Measurements Laboratory*, 12
F2010 *A800: Analytical Chemistry Research Seminar*, 20
S2010 *C611: Electroanalytical Chemistry,* 20
F2009 *C117: Principles of Chemistry and Biochemistry,* 572
S2009 *C117: Principles of Chemistry and Biochemistry Laboratory,* 473
F2008 *C117: Principles of Chemistry and Biochemistry,* 572
S2008 *C117: Principles of Chemistry and Biochemistry Laboratory,* 473
F2007 *C611: Electroanalytical Chemistry,* 20
F2006 *A315: Chemical Measurements Laboratory,* 12

Publications

145. Yang, T.; Edwards, M.E.; Kapuria, N.; Tsia, C.; Kar, N.; Zhu, B.; Baker, L.A.; Ye, X.; Skrabalak, S.E.; Yan, X. A Palladium Nanoparticle-Coated Electrode for Rapid Reaction Studies by Reactive Nanoelectrospray Mass Spectrometry, **2026** (*submitted*).
144. Bahramimoghaddam, H; Shu, Y.; Chang, J.-Y.; Alanis, K.; Hash, A.; Lynn, M.; Stover, L.; Yadav, G.P.; Russell, D.; Hochberg, G.; Baker, L.A.; Laganowsky, A. Convergent evolution of copper-mediated lipid binding tunes TRAAK mechanosensitivity, **2026**, (*submitted*).
143. Huang, C.; Zhu, B.; Diao, J.; Garcia, P.C.; Peng, Z.; Wu, S.; Guo, H.; Yan, C.; Yang, F.; Wang, M.; Wahab, O.J.; Butrum-Griffith, A.N.; Chen, F.; Chen, J.; Losovyj, Y.; Zhou, H.; Ma, L. Li, R.; Wang, C.; Srkabalak, S.E.; Baker, L.A., Henkleman, G.; Ye, X. Metastable Manganese–Cobalt Spinel Nanocrystals Enable Selective and Efficient Nitrate-to-Ammonia Electroreduction, **2026**, (*submitted*)
142. Sahadevan, A.; Leasor, C.W.; Baker, L.A. Electrochemical Imaging of Ion Transport in Tissues *Acc. Chem Res.*, **2026** (*invited, submitted*).

141. Dawn, S.; Hussein, E.; Baker, L.A. Scanning Ion Conductance Microscopy of Cell Barriers, *Ann. Rev. Anal. Chem.*, **2026**, (*invited, submitted*).
140. Cho, A.; Dewi, C.; Cao, E.; Vernon, K.; Leasor, C.W.; Schaffer, T.E.; Baker, L.A.; Siwy, Z.S. Multi-Barrel Nanopipettes as a Model System for Quantifying Interpore Interactions and Superadditive Transport, *J. Phys. Chem. Lett.*, **2026**, (*accepted*).
139. Ito, T.; Bailey, K.O.; De Leon, J.; Harvey, N.F.; Zhang, L.; Baker, L.A. Immersion-Controlled Nanoparticle Electrodeposition on a Patterned Pyrolyzed Photoresist Film Electrode for Single-Entity Electrochemistry Studies Using Scanning Electrochemical Cell Microscopy, *Langmuir*, **2026**, *accepted*. (https://doi.org/10.1021/acs.langmuir.6c03912)
138. James, V.K.; Stover, L.; Bahramimoghaddam, H.; Khandelwal, T.; Chang, J.-y.; Downing, J.; Scott, E.; Bailey, K.O.; Russell, D.H.; Baker, L.A.; Laganowsky, A. Time-Resolved Native Mass Spectrometry for Direct Measurement of Biomolecular Kinetics, *J. Am. Chem. Soc.*, **2026**, *148*, 19567-19577. (https://dx.doi.org/10.1021/jacs.5c21842)
137. Edwards, M.E.; Kar, N.; Freitas, D.P.; Zhang, L.; Wahab, O.J.; Baker, L.A.; Skrabalak, S.E.; Yan, X. Size and Shape Effects on Nanoparticle Catalyzed Reactions Enabled by High-throughput Variable Tempearature Desoprtion Electrospray Ionization Mass Spectrometry, *Anal. Chem.*, **2025**, 19544-19551. (https://doi.org/10.1021/acs.analchem.5c02537
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