

# LACEY S. FITTS

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P.O. Box 9705, MS State University

## EDUCATION

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- Doctor of Education, Ed Leadership** 2014  
“Perceptions versus Realities: Exploring Needs and Science Learning Outcomes in the Mississippi Delta”  
Conducted an exploratory analysis science teacher needs and science learning outcomes in the high poverty rural schools of the MS Delta.  
Delta State University, Cleveland, MS
- Master of Science, Inorganic Chemistry** 2007  
“Cationic and Neutral Coordination Complexes of the Heavy Alkaline Earth Metals”  
Inorganic Chemistry -Organometallic group 2 synthesis with Dr. Timothy Hanusa  
Vanderbilt University, Nashville, TN
- Bachelor of Arts, Chemistry** 1998  
Summa Cum Laude Mississippi State  
University, MS

## COLLEGE / UNIVERSITY TEACHING EXPERIENCE

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- Mississippi State University, Starkville, MS** August 2024 - present  
Assistant Professor, Secondary Science Education  
Teaching Science Methods and graduate education courses
- Delta State University, Cleveland, MS** 2008-2014  
Science Education Program Coordinator and Instructor in Chemistry
- Belmont University, Nashville, TN** 2004-2005  
Chemistry & Physics Instructor, co-advisor for Student Members of ACS
- Vanderbilt University, Nashville, TN** 1998-2003  
Lab Instructor, Graduate Teaching Assistant
- Mississippi State University, Starkville, MS** 1996-1998  
Lab Instructor / TA, University Chemistry Tutor Student support services

## SECONDARY TEACHING EXPERIENCE

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- Lewisburg High School, Desoto County Mississippi 2016 - 2024  
Chemistry, AP Chemistry, Physics, Dual enrollment chemistry & physics Chemistry Olympiad, Chemistry Club, Interact Community Service Club
- The Bayou Academy, Cleveland, MS, part-time / as needed 2007 - 2016  
7th - 8th Science, Chemistry, Physics, Ag Science, Dual enrollment chemistry ACS Chemistry Club, Envirothon
- Hillwood High School, Metro Nashville Public Schools 2005 - 2007  
Chemistry, AP Chemistry, Physics, Chemistry Olympiad, Rube Goldberg Club
- Head Middle Magnet School, Metro Nashville Public Schools 2003 - 2004  
NSF Scientist in the Classroom Fellowship, GK12 program

## CONSULTING, SERVICE, AND OUTREACH

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**Board Member**, MS Science Teachers Association, Preservice Teachers Liason, (2024 – present)

**National Chemistry Olympiad Coach**, (2021 – present) American Chemical Society, preparing students to compete in the Olympiad (USNCO)

**AP Chemistry Exam early table leader** (2023-present) and reader (2012-2022), The College Board.

**Science Teacher Preparation Program Reviewer** (NCATE / NSTA / CAEP), 2011-2015, served as accreditation reviewer for teacher preparation programs

**Region III science fair co-coordinator**, 2012-2015, The Delta Region, MS. Took students to ISEF for the first time.

**Saturday Program Consultant for AP Chemistry**, National Math and Science Institute, as needed

**Informal Science Education Outreach**, Tennessee Women in Science, Technology, Engineering, and Research (TWISTER) conference presenter for middle school girls, multiple years, National Chemistry week volunteer scientist, Family science night science outreach volunteer, Adventure Science Center, Nashville, TN

## CERTIFICATIONS & LICENSES

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Mississippi Class 5A Teaching License with endorsements in Chemistry, Secondary English, AP chem (until 2027)

Flinn Chemical Safety certification for secondary science teachers

IACUC certification for ethical use of animals in research (7 certifications) NIH-IRB certification for research involving human subjects

## PROFESSIONAL MEMBERSHIPS

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National Science Teachers Association & Mississippi Science Teachers Association

Phi Kappa Phi honor society, student member, graduate student member, alum

## PUBLICATIONS, PRESENTATIONS, AND FUNDING

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Conference Roundtable host, "Recruiting & Retaining Teachers in Economically Disadvantaged Areas," National Science Teachers Association National Conference, March 29, 2025

"How is Fertilizer Use Impacting the Environment? An Adaptable Inquiry into the Socioscientific issue of Man's Impact on Earth" – National Science Teachers Association National Conference, March 29, 2025

Fitts, Lacey S. "Place-based Agriculture for the Science Classroom" Mississippi Science Teachers Association conference, October 21, 2024, Biloxi, MS.

American Chemical Society Hach Grant, 2023, "Technology-enhanced inquiry into water quality in rural Mississippi," travel and materials grant.

Desoto County Foundation for Excellence in Education grant, 2018, materials grant for Vernier probeware for Chemistry instruction.

Society for Science and the Public Science Teachers Conference Grant, 2017, to attend the National Research Teachers Conference, Washington, D.C.

Fitts, LS.; Bierschenck, E; Hanusa, TP; Rheingold, A; Pink, M; Young, VJ. "Selective Modification of the Metal Coordination Environment in Heavy Alkaline-earth Iodide Complexes," *New J. Chem.*, 2016, 40 (10), DOI 10.1039/C6NJ01713D

"Investigating the Fate of Agrochemicals in the MS Delta: A Research Project with Dual- Enrollment High School Students," – L. Fitts and P. Fitts, presentation at 2014 Biennial Conference on Chemical Education, August 2014 (BCCE).

"Equipping Rural Chemistry Teachers in High Poverty Areas: An Approach for the MS Delta and Other Agricultural Communities," Presentation at 2014 Biennial Conference on Chemical Education, August 2014.

Fitts, Lacey S.; *Perceptions versus Realities: Exploring Needs and Science Learning Outcomes in the Mississippi Delta*; Delta State University Proquest Dissertations Publishing, 2014. 3662443.

"Vermicomposting and Teaching with Gardens, an Environmental Science Workshop," presented at Mississippi Science Teachers Association Annual Meeting, October 2013.

"Engaging rural students in place-based chemistry: Development and implementation of contextualized experiments for agricultural regions," November 2013, Southeastern Meeting of the American Chemical Society, Atlanta, GA.

Hosted and taught Hands-on Science Workshop for Region III MS Delta science teachers for professional development CEU credit, Fall and Spring semesters each year, Delta State University (2012 and 2013)

"Rural Science Education in the Mississippi Delta," Research poster presented at the Biennial Conference on Chemical Education, July 2012, Penn State University (BCCE).

"The Louis-Stokes Mississippi Alliance for Minority Participation Program at Delta State University," Poster presented at the American Chemical Society southeastern regional meeting (SERMACS), Fall 2010, Puerto Rico

Fitts, Lacey S.; Hanusa, Timothy P. "A theoretical and experimental investigation of  $\text{Ph}_2\text{Ca}$  and its derivatives;" presented at 225th ACS National Meeting, New Orleans, LA, March 2003.

Fitts, Lacey S.; Hanusa, T. "Theoretical and Experimental Evidence for trans-influence in alkaline- earth coordination compounds." presented at Vanderbilt University Chemistry Department poster session, Fall 2002.

Jayaratne, K., Fitts, L., Hanusa, T. "Formation and Crystal Structure of a Cationic Mono(cyclopentadienyl) Complex of Calcium,  $[(\text{C}_5\text{Me}_5)\text{Ca}(\text{OPPh}_3)_3]^+\text{I}^-$ ." *Organometallics* 2001, 20, 3638-3640.

Fitts, Lacey S.; Hanusa, Timothy P. "Diphenylcalcium Revisited: A Theoretical and Experimental Investigation," ACS Southeastern Regional Meeting, Charleston, SC, November 2002.

Hanusa, Timothy P.; Fitts, Lacey S.; Brady, Erik D.; Jayaratne, Kumudini C.; Overby, Jason S.; Young, Victor G., Jr. "Stabilization of cationic organoalkaline-earth complexes with oxygen donor ligands" presented at 219th ACS National Meeting, San Francisco, CA, March 2000.