Kevin R. Hoke

Department of Chemistry
Berry College
Mount Berry, Georgia 30149

email: khoke@berry.edu
phone: (706) 290-2674
fax: (706) 238-7855

Education

California Institute of Technology (Pasadena, California) Ph.D. (Chemistry), 2002
Rice University (Houston, Texas) B.A. (Chemistry), 1993

Professional Experience

Berry College

- Professor, 2024 – present
- Chair, Department of Chemistry and Biochemistry, 2020-2024
- Associate Professor, 2014 – 2024
- Sabbatical Visitor, laboratory of Dr. Laura Hunsicker-Wang, Trinity University, San Antonio, TX, Fall 2016 to Summer 2017
- Assistant Professor, 2007 – 2014
- Courses taught: general chemistry lecture and laboratory, inorganic chemistry and laboratory, organic chemistry laboratory, junior/senior seminar, chemistry for non-science majors lecture and laboratory, first-year seminar

Ithaca College

- Lecturer, general education course in energy and environmental issues, general chemistry laboratory, organic chemistry laboratory, Fall 2006 – Spring 2007

Cornell University

- Postdoctoral Research Fellow, laboratory of Prof. Brian Crane, 2004 – 2007

Oxford University

- Postdoctoral Research Fellow, laboratory of Prof. Fraser Armstrong, 2001 – 2003
- Tutor in biochemistry for first-year chemistry majors, Somerville and St. Catherine's Colleges, Oxford, 2001 – 2002

California Institute of Technology

- Ph.D. Thesis Research, laboratory of Prof. Harry Gray, 1993 – 2001

Thesis

Hoke, K.R. *Electron Tunneling in Blue and Purple Copper Proteins*, Ph.D. Dissertation, California Institute of Technology, Pasadena, California, 2002

Peer Reviewed Articles

Reik, Morgan E.; Taylor C. Rickett, Kevin R. Hoke, Ekaterina V. Pletneva. “Disabling the Entatic Control of Methionine Ligation through Additive Destabilization of Ferric Cytochrome c.” *Inorg Chem* 64.24 (2025): 11966-11980.

Deng, Yunling; Madeline L. Weaver, Kevin R. Hoke, Ekaterina V. Pletneva. “A Heme Propionate Staples the Structure of Cytochrome *c* for Methionine Ligation to the Heme Iron.” *Inorg Chem* 58.20 (2019): 14085–14106.

Devlin, Taylor, Cristina R. Hofman, Zachary P.V. Acevedo, Kelsey R. Kohler, Lizhi Tao, R. David Britt, Kevin R. Hoke; Laura M. Hunsicker-Wang. "DEPC modification of the Cu_A protein from *Thermus thermophilus*." *J Biol Inorg Chem* 24.1 (2019): 117–135.

Deng, Yunling, Fangfang Zhong, Stephanie Alden, Kevin R. Hoke, and Ekaterina V. Pletneva. "The K79G Mutation Reshapes the Heme Crevice and Alters Redox Properties of Cytochrome *c.*" *Biochemistry* 57.40 (2018): 5827-5840.

Amacher, Jeanine F., Fangfang Zhong, George P. Lisi, Michael Q. Zhu, Stephanie L. Alden, Kevin R. Hoke, Dean R. Madden, and Ekaterina V. Pletneva. "Conformational Switch of Cytochrome *c* into a Lysine-Ligated Form: Loop Refolding and Functional Implications of the Structural Transition." *Journal of the American Chemical Society* 137.26 (2015): 8435–8449.

Hoke, Kevin R. and Madison R. Chandler, "Cyclic Voltammetry of Cytochrome *c* as an Undergraduate Laboratory Exercise." *The Chemical Educator* 18 (2013): 263-268.

Breton, Gary W., and Kevin R. Hoke. "Application of Radical Cation Spin Density Maps Toward the Prediction of Photochemical Reactivity Between *N*-Methyl-1,2,4-Triazoline-3,5-Dione and Substituted Benzenes." *Journal of Organic Chemistry* 78.10 (2013): 4697–4707.

Fourmond, V., K. R. Hoke, H. A. Heering, C. Baffert, F. Leroux, P. Bertrand, C. Léger. "SOAS: a free program to analyze electrochemical data and other one-dimensional signals." *Bioelectrochemistry* 76.1-2 (2009): 141–147.

Hoke, K. R. and B. R. Crane. "The Solution Electrochemistry of Tetrahydrobiopterin Revisited," *Nitric Oxide-Biology and Chemistry* 20.2 (2009): 79–87.

Kang, Seong A., Kevin R. Hoke, and Brian R. Crane. "Solvent Isotope Effects on Interfacial Protein Electron Transfer in Crystals and Electrode Films." *Journal of the American Chemical Society* 128.7 (2006): 2346–2355.

Hoke, K. R., N. Cobb, F. A. Armstrong, and R. Hille. "Electrochemical Studies of Arsenite Oxidase: an Unusual Example of a Highly Cooperative Two-Electron Molybdenum Center." *Biochemistry* 43.6 (2004): 1667–1674.

Elliott, S. J. and Hoke, K. R., K. Heffron, M. Palak, M.; R.A. Rothery, J. H. Weiner, and F. A. Armstrong. "Voltammetric Studies of the Catalytic Mechanism of the Respiratory Nitrate Reductase from *Escherichia coli*: How Nitrate Reduction and Inhibition Depend on the Oxidation State of the Active Site." *Biochemistry* 43.3 (2004): 799–807.

Armstrong, F. A., N. L. Barlow, P. L. Burn, K. R. Hoke, L. J. C. Jeuken, C. Shenton, G. R. Webster. "Fast, Long-Range Electron-Transfer Reactions of a 'Blue' Copper Protein Coupled Non-Covalently to an Electrode Through a Stilbenyl Thiolate Monolayer." *Chemical Communications (Cambridge, England)* 3 (2004): 316–317.

Léger, C., S. J. Elliott, K. R. Hoke, L. J. C. Jeuken, A. K. Jones, F. A. Armstrong. "Enzyme Electrokinetics: Using Protein Film Voltammetry to Investigate Redox Enzymes and Their Mechanisms." *Biochemistry* 42.29 (2003): 8653–8662.

Funded Research Proposals (External)

Laura Hunsicker-Wang (Trinity University) and Kevin Hoke, "Probing the potential role of the Rieske protein in superoxide formation in Complex III," NIH AREA, $119,563 subaward to Berry College (Funded August 2024)

Gary Breton, Kevin Hoke, Dominic Qualley, Theunis Van Aardt (Shorter U.), "Acquisition of a 400 MHz Spectrometer to Facilitate Faculty Research and Improve Undergraduate Research Training." Award # 1125616, National Science Foundation, $258,871. (Funded September 2011)

Recent Scholarly Presentations (Berry undergraduate coauthors are underlined and listed first for student presentations)

Hoke, Kevin R. Ligand exchange in cytochrome c measured by cyclic voltammetry, 75th Southeastern Regional Meeting of the American Chemical Society, Atlanta, Georgia, October 2025. (Oral)

Ivester, Peter and Kevin R. Hoke, Voltammetric assessment of yeast Rieske protein pK_a values, 75th Southeastern Regional Meeting of the American Chemical Society, Atlanta, Georgia, October 2025. (Poster)

Hoke, Kevin R. Ligand exchange rates in cytochrome *c* revealed through cyclic voltammetry. Fraser Armstrong's Platinum Jubilee, St John's College, Oxford, UK, August 22-23, 2024. (Oral)

Hoke, Kevin R. and Taylor F. Carles. Electrochemical detection of ligand exchange in cytochrome *c*. American Chemical Society Meeting, San Diego, CA, March 19-24, 2022. (Oral)

Button-Jennings, Dillon and Kevin R. Hoke. Effect of distal charges on the reduction potential of the Rieske protein. American Chemical Society Meeting, San Diego, CA, March 19-24, 2022. (Poster)

Carles, Taylor and Kevin R. Hoke. Rapid ligand exchange in a cytochrome *c* mutant. American Chemical Society Meeting, San Diego, CA, March 19-24, 2022. (Poster)

Cochran, Jill, Zack Walch, Kevin Hoke, Melissa Demetrikopoulos "Mentor Days: Collaborative Professional Development." Southeastern Regional Noyce Conference, Mobile Alabama, June 2019 (Poster)

Hoke, Kevin R., Luke Buttram, Megan Moeller and Maddie Weaver. DEPC modification of metalloproteins. 257th National Meeting of the American Chemical Society, Orlando, FL, March 30-April 4, 2019. (Oral)

Weaver, Madeline, Megan Moeller and Kevin R. Hoke. Effect of pH on the reduction potential of cytochrome c_2 and its H42F mutant. 257th National Meeting of the American Chemical Society, Orlando, FL, March 30-April 4, 2019. (Oral)

Buttram, Luke J. and Kevin R. Hoke. Effect of active-site alterations on the reduction potential of the Rieske protein. 257th National Meeting of the American Chemical Society, Orlando, FL, March 30-April 4, 2019. (Oral)

Kevin R. Hoke, Anna L. Watkins and Robert J. Quarles, Protein charge effects on Rieske protein reduction potentials, 253rd National Meeting of the American Chemical Society, San Francisco, April 2017. (Oral)

Hoke, Kevin R., Madison R. Chandler and Robert J. Quarles, Redox-induced ligand switching in mutants of cytochrome *c,* 251st National Meeting of the American Chemical Society, San Diego, March 2016. (Oral)

Hoke, Kevin R. and Robert J. Quarles, Voltammetric studies of the Rieske protein, 249th National Meeting of the American Chemical Society, Denver, Colorado, March 2015. (Oral)

Quarles, Robert J. and Kevin R. Hoke, Voltammetry of the Rieske Protein, 66th Southeastern Regional Meeting of the American Chemical Society, Nashville, Tennessee, October 2014. (Poster)

Hoke, Kevin R., Madison R. Chandler and Robert J. Quarles, Redox-induced ligand switching in F82H cytochrome *c,* 247th National Meeting of the American Chemical Society, Dallas, Texas, March 2014. (Poster)

Chandler, Madison R., Robert J. Quarles and Kevin R. Hoke, Effect of pH on cytochrome *c* voltammetry, 65th Southeastern Regional Meeting of the American Chemical Society, Atlanta, Georgia, November 2013. (Poster)

Awards

Carden Award, Berry College, 2016
McCrae Award (from graduating Chemistry majors), Berry College, 2010

Professional Activities

IONiC VIPEr Fellow, Cohort 1
Member, Committee for the 2022 ACS Foundations of Inorganic Chemistry Exam
Peer-reviewer for: *ACS Books*, *ACS Chemical Biology*, *Bioelectrochemistry, Biomacromolecules, Biopolymers, ECS Letters, Electronic Journal of Biotechnology, International Journal of Hydrogen Energy, Journal of Biological Inorganic Chemistry, Journal of Catalysis, Journal of the Electrochemical Society, Journal of the American Chemical Society, Journal of Chemical Education, Langmuir, Physical Chemistry-Chemical Physics, The Chemical Educator*

College Service

Academic Council, Fall 2010-Spring 2012, Fall 2025-Spring 2027
School of MNS Promotion and Tenure Advisory Committee, Fall 2025- Spring 2027
President of the Berry Chapter of Phi Kappa Phi, Fall 2019 – Spring 2021, Spring 2025-Fall 2025
STEMTeach Chemistry Department Liason, Fall 2024-present
Chair of Chemistry and Biochemistry Department, Fall 2020 – Spring 2024
Faculty and Staff Benefits Committee, Fall 2022-Spring 2024
Task Force on Faculty Titles, Fall 2021 – Spring 2022
Foundations Committee, Fall 2020 – Spring 2022
Ad-Hoc Liberal Arts Curriculum Exploration Committee, Fall 2019 – Spring 2020
STEMTeach Steering Committee, Spring 2019-Fall 2021

Chair of Faculty Assembly, Fall 2018 – Spring 2019
Planning Council, Fall 2014 – Spring 2016, Fall 2018 – Fall 2019
President's Advisory Council, Fall 2018 – Fall 2019
Budget Advisory Committee, Fall 2018 – Spring 2020
Vice-Chair of Faculty Assembly, Fall 2017 – Spring 2018
Faculty Development Committee, Fall 2017 – Spring 2018
Student Personal and Professional Development Task Force, Fall 2017 – Spring 2018
Institutional Effectiveness Committee, Fall 2015 – Spring 2016
Honors Program Committee, Fall 2014 – Spring 2016
Academic Council Ad Hoc Committee on Course Repetition, Fall 2011 – Spring 2012
Center for Teaching Excellence Committee, Fall 2011 – Spring 2012
Conson Wilson/Endowed Lectureship Committee, Fall 2012 – Spring 2014
Rhodes Scholarship Review Committee, Fall 2009 – Fall 2013
MNS Development of Undergraduates through Research Committee, Chair 2008-2011, Ex-Chair 2011 – 2012, Chair 2014 – 15
Departmental Coordinator for General Chemistry Laboratory, Fall 2008 – Fall 2012, Fall 2015
Faculty Search Committees for Chemistry, Biology, Fine Arts, and Exercise Science Departments (various years)

Professional Affiliations

Member, Council on Undergraduate Research
Member, American Chemical Society
Member, Society for Biological Inorganic Chemistry