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

- Associate Professor, 2014-present
- 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, senior seminar, 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

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* (2018): Just Accepted Manuscript

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)

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 <u>underlined</u> and listed first for student presentations)

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

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

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

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

Kevin R. Hoke, 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)

Madison R. Chandler, 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)

Kevin R. Hoke, Ashley A. Holland, Matthew B. Summerlin, and Christopher H. Stuart. "Modification of an acacen ligand for use in 'click' chemistry." 243rd National Meeting of the American Chemical Society, San Diego, California, March 2012. (Oral)

Ashley A. Holland, Matthew B. Summerlin, and Kevin R. Hoke. "Use of a metal-coordinating diketone bearing a propargyl group in 'click' chemistry." 243rd National Meeting of the American Chemical Society, San Diego, California, March 2012. (Poster)

Kevin R. Hoke, Stephanie G. Tucker, Brandon G. Moore, and Amanda K. Kyle, "The Effect of 2,4-Dinitrofluorobenzene on the Voltammetry of Cytochrome *c*" 15th International Conference on Biological Inorganic Chemistry, Vancouver, Canada, August 2011. (Poster)

Kevin R. Hoke and Kenneth L. Martin, "Streamlined POGIL Activities and Student Learning," Process Oriented Guided Inquiry Learning Southeast Regional Meeting, Emory University, June 2011. (Poster)

Kevin R. Hoke, Christopher H. Stuart, Matthew Summerlin, and Adam Kase, "Stepwise Assembly of Coordination Compounds on Electrode Surfaces," 241st National Meeting of the American Chemical Society, Anaheim, California, March 2011. (Poster)

Timothy J. Pitchko and Kevin R. Hoke, "Assessing Variations in Electron Exchange Rates for Azurin, a Blue Copper Protein," Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, Florida, February 2010. (Poster)

Brandon G. Moore and Kevin R. Hoke, "The Effect of 2,4-Dinitrofluorobenzene on the Voltammetry of Cytochrome *c*," Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy, Orlando, Florida, February 2010. (Poster)

Eric McDowell, Chuck Lane, Dan Robb, Ron Taylor, Kevin Hoke, and Michael Papazian, "IBL Across Curriculum Panel: Berry College Faculty," 12th Annual Legacy of R. L. Moore Conference, Austin, Texas, July 2009. (Panel)

Kevin R. Hoke and Brian R. Crane, "Electrochemical Properties of Tetrahydrobiopterin," 237th Meeting of the American Chemical Society, Salt Lake City, Utah, March 2009. (Poster)

Stephanie G. Tucker and Kevin R. Hoke, "Effect of Surface modifications on Electron Transfer in Cytochrome *c*," 60th Southeastern Regional Meeting of the American Chemical Society, Nashville, Tenn., November 2008. (Poster)

Stephanie G. Tucker and Kevin R. Hoke, "Voltammetric Investigations of Cytochrome *c*", 43rd Annual National Collegiate Honors Conference, San Antonio, Texas, October 2008. (Poster)

Awards

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

Professional Service

Peer-reviewer for: *ACS Books*, *Bioelectrochemistry, Biomacromolecules, Biopolymers, ECS Letters, International Journal of Hydrogen Energy, 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

Chair of Faculty Assembly, Fall 2018 – Spring 2019
Vice-Chair of Faculty Assembly, Fall 2017 – Spring 2018
Institutional Effectiveness Committee, Fall 2015 – Spring 2016
Planning Council, Fall 2014- Spring 2016
Honors Program Committee, Fall 2014- Spring 2016
Academic Council, Fall 2010-Spring 2012
Academic Council Subcommittee on Course Repetition Policy, 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 Department, Fall 2009-Fall 2012

Professional Affiliations

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