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EXPERIENCE AND EDUCATION

AMERICAN UNIVERSITY Assistant Professor, Department of Chemistry	AUGUST 2010-PRESENT
CALIFORNIA INSTITUTE OF TECHNOLOGY NIH Ruth Kirchstein NRSA Postdoctoral Fellow Advisor: Harry B. Gray	2005-2010
NORTHWESTERN UNIVERSITY Ph.D. in Chemistry Advisors: Mark A. Ratner and Thomas J. Meade	2000-2005
SANDIA NATIONAL LABORATORY Research Intern (May thru December) Advisor: Scott E. Bisson	1998
UNIVERSITY OF DAYTON B.S. in Chemistry and Physics (<i>Magna Cum Laude</i>)	1996-2000

AWARDS AND FUNDING

Funding

2012 American University Faculty Research Development Grant
2012 AU College of Arts and Sciences Mellon Grant
2011 NASA DC Space Consortium Grant
2011 American University Faculty Research Development Grant
2010 American University Startup Funding
2006 NIH Ruth Kirchstein NRSA Postdoctoral Fellowship

University Awards

2013 CTRL Teaching with Research Award

Writing Awards

Top Article for the "Maillard reaction" by *Chemical and Engineering News*
"I love gin and tonics" selected for an anthology titled *The Best Science Writing Online 2012*

PUBLICATIONS

HARTINGS, MATTHEW R denotes contribution as an independent investigator

* Denotes American University undergraduate student

^ Denotes American University master's student

Academic

- Rothenberg, P.*; Patel, D.*; Hartman, M.*; HARTINGS, MATTHEW R. Temperature gating of myoglobin peroxidase activity in methanol. *Manuscript in preparation*.
- HARTINGS, MATTHEW R.; Bee, M.*; Channell, M.^; Cvitan, A.*; Esson, M.*; Farag, A.*; Ibeh, T.*; Kalivas, E.*; Larco, D.*; Mendel, Z.*; Miles, N.*; Montanero, C.*; Schwabacher, J.*; Slucher, H.*; Vinals-Camallonga, J.*; Heddleston, J.M.; Fox, D.M.; Miller, A.E. Gold nanoparticles trapped in fibers of unfolded proteins: Hydrophilic proteins are more likely to form fibers than hydrophobic proteins. *Manuscript submitted*.
- HARTINGS, MATTHEW R.; Fox, D.M.; Miller, A.E. Fostering student autonomy in an upper-level undergraduate chemistry laboratory. *Manuscript submitted*.
- HARTINGS, MATTHEW R.; Benjamin, N.*; Briere, F.*; Briscione, M.*; Choudary, O.*; Fisher, T. L.*; Flynn, L.*; Ghias, E.*; Harper, M.*; Khamis, N.*; Koenigsknecht, C.*; Lazor, K.*; Moss, S.*; Robbins, E.*; Schultz, S.*; Yaman, S.*; Haverhals, L. M.; Trulove, P. C.; De Long, H. C.; Miller, A. E.; Fox, D. M. Concurrent 0-D and 1-D biomineralization of gold from a solution of Au³⁺ and bovine serum albumin *Science and Technology of Advanced Materials* **2013**, 14(6), 065004.
- HARTINGS, MATTHEW R.; Fahy, D. Communicating Chemistry for Public Engagement *Nature Chemistry* **2011**, 3, 674-677.
- HARTINGS, MATTHEW R.; Kurnikov, Igor V.; Dunn, Adam R.; Winkler, Jay R.; Gray, Harry B.; Ratner, Mark A. Electron tunneling through sensitizer wires bound to proteins *Coordination Chemistry Reviews* **2010**, 245(3-4), 248-253.
- Barker, Kylie D.; Eckermann, Amanda L.; Sazinsky, Matthew H.; HARTINGS, MATTHEW R.; Abajian, Carnie; Georganopoulou, Dmitra; Ratner, Mark A.; Rosenzweig, Amy C.; Meade, Thomas J. Protein binding and the electronic properties of iron(II) complexes: an electrochemical and optical investigation of outer sphere effects *Bioconjugate Chemistry* **2009**, 20(10), 1930-1939.
- HARTINGS, MATTHEW R.; Gray, Harry B.; Winkler, Jay R. Probing melittin helix-coil equilibria in solutions and vesicles. *Journal of Physical Chemistry B*. **2008**, 112, 3202-3207.
- Eckermann, Amanda L.; Barker, Kylie; HARTINGS, MATTHEW R; Ratner, Mark A.; Meade, Thomas J. Synthesis and electrochemical characterization of a transition-metal-modified ligand-receptor pair. *Journal of the American Chemical Society* **2005**, 127, 11880-11881.
- Damsbo; Martin; Kinnear, Brian S.; HARTINGS, MATTHEW R.; Ruhoff, Peder T.; Jarrold, Martin F.; Ratner, Mark A. Application of evolutionary algorithm methods to polypeptide folding: Comparison with experimental results for unsolvated Ac-(Ala-Gly-Gly)₅-Lys+H⁺. *Proceedings of the National Academy of Sciences* **2004**, 101, 7215-7222.
- HARTINGS, MATTHEW R.; Kinnear, Brian S.; Jarrold, Martin F. The energy landscape of unsolvated peptides: the role of context in the stability of alanine/glycine helices. *Journal of the American Chemical Society* **2003**, 125, 3941-3947.

- Kinnear, Brian S.; HARTINGS, MATTHEW R.; Jarrold, Martin F. The energy landscape of unsolvated peptides: helix formation and cold denaturation in Ac-Ala₄Gly₇-Ala₄+H⁺. *Journal of the American Chemical Society* **2002**, *124*, 4422-4431.
- Kinnear, Brian S.; HARTINGS, MATTHEW R.; Jarrold, Martin F. Helix unfolding in unsolvated peptides. *Journal of the American Chemical Society* **2001**, *123*, 5660-5667.
- Bisson, Scott E.; Armstrong Karla M.; Kulp, Thomas J.; HARTINGS, MATTHEW R. Broadly tunable, mode-hop-tuned cw optical parametric oscillator based on periodically poled lithium niobate *Applied Optics* **2001**, *40*(33), 6094-6055.
- Oomens, Jos; Bisson, Scott E.; HARTINGS, MATTHEW R. ; Kulp, Thomas J.; Harren, Frans J. M. New laser sources for photoacoustic trace gas detection with applications in biomedical science. *Proceedings SPIE (Biomedical Optoacoustics)* Ed. Oraevsky, AA **2000**, *1*(10), 295-300.

Non-academic

- “Food for Thought” *Nature Chemistry* **2014**, *6*, 176
- “I love gin and tonics” in *The Best Science Writing Online 2012* Jennifer Ouellette and Bora Zivkovic (Eds.) Scientific American/Farrar, Strauss and Giroux (September 18, 2012)
- “Reactions coupled to palladium” *Nature Chemistry* **2012**, *4*, 764
- “Maillard Reaction” *Chemical and Engineering News*, November 21st, 2011
- “Cooking up some chemistry inside of cells” Scientific American Guest Blog August 2nd, 2011
<http://blogs.scientificamerican.com/guest-blog/2011/08/02/cooking-up-some-chemistry-inside-a-cell/>

MEDIA COVERAGE

- “Here’s why stale bread is hard, but stale chips are soft” *Business Insider*, September 5, 2014 (Online at: <http://www.businessinsider.com/what-makes-bread-and-chips-stale-2014-9>)
- “The science behind why bacon smells so good” *The Today Show*, May 29, 2014 (Online at: <http://www.today.com/video/today/55285278#55285278>)
- “Powdered booze, Washing machine Lego complexes” *Chemical and Engineering News*, May 26, 2014 (Online at: <http://cen.acs.org/articles/92/i21/Powdered-Booze-Washing-Machine-Lego.html>)
- “No more formaldehyde baby shampoo” *Slate*, March 3, 2014 (Online at: http://www.slate.com/articles/health_and_science/medical_examiner/2014/03/is_formaldehyde_dangerous_no_but_johnson_johnson_removed_it_from_baby_shampoo.html)
- “The Alchemist to Open at AU’s Greenberg Theater” January 29, 2014 (Online at: <http://www.american.edu/cas/news/the-alchemist.cfm>)
- “What are you afraid of?” *Chemistry World*, October 29th, 2013 (Online at: <http://www.rsc.org/chemistryworld/2013/10/chemophobia>)
- “The judgement of your peers” *Chemistry World*, October 24th, 2013 (Online at: <http://www.rsc.org/chemistryworld/2013/10/research-quality-measuring-judgement-metrics>)
- “To Act or Not to Act” *Chemical and Engineering News*, April 22nd, 2013 (Online at: <http://cen.acs.org/articles/91/i16/Act-Act.html>)

- “An insider’s view of chemistry (and chemical communication)” *The Knight Science Journalism Tracker*, October 26th, 2012 (Online at: <http://ksj.mit.edu/tracker/2012/10/insiders-view-chemistry-and-chemical-com>)
- “A Chemist Comes Very Close to a Midas Touch” *New York Times*, October 15th, 2012 (Online at: http://www.nytimes.com/2012/10/16/science/modern-day-alchemy-has-iron-working-like-platinum.html?_r=0)
- “So About that 2012 Nobel Prize in Chemistry” *The Knight Science Journalism Tracker*, October 11th, 2012 (Online at: <http://ksj.mit.edu/tracker/2012/10/so-about-2012-nobel-prize-chemistry>)
- “Kitchen Chemistry Classes Take Off” *Chemical and Engineering News*, September 3rd, 2012 (Online at: <http://cen.acs.org/articles/90/i36/Kitchen-Chemistry-Classes-Take-Off.html>)

TEACHING EXPERIENCE

- The Chemistry of Cooking
- General Chemistry I
- General Chemistry II
- Experimental Biological Chemistry
- Advanced Chemistry Laboratory
- Advanced Inorganic Chemistry

PRESENTATIONS

INVITED LECTURES:

- The Ohio State University Spectroscopy Seminar (November 2014)
- North Carolina Inorganic Research Seminar (April 2014)
- American University Emeriti Professor and Alumni Luncheon (September 2012)

CONFERENCE PRESENTATIONS

- American Chemical Society National Conference Fall (lecture and poster) (August 2014)
- International Conference of Bioinorganic Chemistry (July 2013)
- American Chemical Society National Conference Spring (lecture and poster) (April 2013)
- American Chemical Society National Conference Fall (lecture and poster) (August 2012)
- International Conference of Bioinorganic Chemistry (August 2011)
- American Chemical Society National Conference, Fall (lecture) (August 2009)
- International Conference on Bioinorganic Chemistry (July 2009)
- American Chemical Society National Conference, Fall (lecture and poster) (August 2007)
- American Chemical Society National Conference, Fall (poster) (August 2006)
- Gordon Research Conference on Protein Folding Dynamics (poster) (January 2006)
- 7th Molecular Scale Electronics Meeting (poster) (January 2005)
- American Chemical Society National Conference, Fall (poster) (August 2004)
- Gordon Research Conference on Electron Donor Acceptor Interactions (poster) (August 2004)
- Gordon Research Conference on Protein Folding Dynamics (poster) (January 2001)
- Gordon Research Conference on Biomolecules in the Gas Phase (poster) (August 2000)

PROFESSIONAL ASSOCIATIONS

- American Chemical Society
- American Association for the Advancement of Sciences
- Society of Biological Inorganic Chemistry

COMMUNITY OUTREACH and PROFESSIONAL SERVICE

- Advisory Board member for Chemical and Engineering News
- Board member for the American Chemical Society's online journalism outpost: CENtral Science (2012 - current)
- Chemistry blogger at sciencegeist.net (2010 - current)
- General lecture titled, "Nano 101" given to high school and senior citizen groups (2004-2005)