

Akiko Fillinger

Address

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Education

Ph.D. in Analytical Chemistry, Colorado State University, Fort Collins, Colorado
December 2000, Research Advisor: Professor Bruce Parkinson

B.S. in Chemistry, Portland State University, Portland, Oregon
May 1995, Research Advisor: Professor Carl Wamser

Teaching Experience

August 2009 – present

Associate Professor, Ithaca College, Ithaca, NY

August 2003 – August 2009

Assistant Professor, Ithaca College

- Courses taught: Principles of Chemistry II (name change to Quantitative Chemistry in 2007), Experimental Chemistry I, Physical Chemistry I, Experimental Chemistry V, Instrumental Analysis, Environmental Chemistry with Laboratory
- Supervised more than 20 undergraduate students in scholarly research

August 2002 – May 2003

Visiting Assistant Professor, Grinnell College, Grinnell, IA

August 1995 – December 2000

Teaching Assistant, Colorado State University, Fort Collins, CO

Research Experience

2001

Postdoctoral Research, Harvard University

Division of Engineering and Applied Sciences

Advisors: Professor Steven Wofsy and Professor Scott Martin

Nanoscale investigation of atmospheric particles

1995 -2000

Doctoral Research, Colorado State University

Advisor: Professor Bruce Parkinson

Investigation of mechanism of dye sensitized TiO₂ solar cells

1994-1995

Undergraduate Research, Portland State University

Advisor: Professor Carl Wamser

Investigation of light absorption variation of organic dye molecules

Journal Publications since 2004 (*Ithaca College undergraduates are underlined.*)

- Kelly L. Sowers and Akiko Fillinger, “Crystal Orientation Dependence of Stability of p-Cu₂O as Photocathode” *Journal of the Electrochemical Society*, 156 (2009).
- Clifford J. Engel, Thomas A. Polson, Jacy R. Spado, Jennifer M. Bell and Akiko Fillinger, “Photoelectrochemistry of Porous Colloidal p-Cu₂O Films” *Journal of the Electrochemical Society*, 155 (3) F37-F42 (2008).

Undergraduate Research Students Supervised at Ithaca College

- Current undergraduate research students: 4 students
 - Joshua Thomas (Chemistry '10) Fall 2008 - present
 - Layne Kasprzyk (Environmental Science '10) Spring 2009 – present
 - Cliff Engel (Chemistry '10) Fall 2006 – Summer 2007, Spring 2009 – present
 - Ian Weiss (Chemistry '10) Fall 2007 – present
- Number of undergraduate research students I mentored to date: 22 students

Fall 2003

Meaghan Daniel (Chemistry '05)

Spring 2004 - Fall 2004

Thomas Polson (Chemistry '05)
Meaghan Daniel (Chemistry '05)
Jacy Spado (Chemistry '05)
Meredith Cummings (Biochemistry '06)
Ryan King (Chemistry '06)
Joseph Livingston (Chemistry '07)

Spring 2005 - Fall 2005

Thomas Polson (Chemistry '05)
Shikhar Bajracharya (Chemistry '06)
Kira Erikson (Chemistry '06)
Justin Fisher (Chemistry '06)
Beth Pallo (Environmental Science with Chemistry concentration '06)

Spring 2006 - Fall 2006

Beth Pallo (Environmental Science with Chemistry concentration '06)
Whitney Thurber (Biochemistry '09)
Jennifer Bell (Environmental Studies '09)
Julian Halfmann (Environmental Science with Biology concentration '08)
Alyssa de Villiers (Chemistry '10)
Clifford Engel (Chemistry '10)

Spring 2007 – Fall 2007

Julian Halfmann (Environmental Science with Biology concentration '08)
Jonathan Hershenson (Chemistry '09)

Alyssa de Villiers (Chemistry '10)
Kelly Sowers (Chemistry '09)
Ian Weiss (Chemistry '10)

Spring 2008 – Fall 2008

Julian Halfmann (Environmental Science with Biology concentration '08)
Jonathan Hershenson (Chemistry '09)
Kelly Sowers (Chemistry '09)
Ian Weiss (Chemistry '10)
Nita Norasethaporn (Master of Art of Teaching '09)
Joshua Thomas (Chemistry '10)
Krista Fieselmann (Biochemistry '10)

Spring 2009 – Summer 2009

Kelly Sowers (Chemistry '09)
Cliff Engel (Chemistry '10)
Joshua Thomas (Chemistry '10)
Layne Kasprzyk (Environmental Science '10)
Miles Crettien (Environmental Science '09)
Nita Norasethaporn (Master of Art of Teaching '09)

Undergraduate Student Presentations

- “Reduction of cadmium and lead uptake of carrots with calcium, zinc, and manganese”, poster presentation by Krista Fieselmann (Biochemistry '10) at the 238th ACS National Meeting, Washington DC., in August 2009.
- “Crystal Face Dependence of p-Cu₂O Stability”, poster presentation by Kelly Sowers (Chemistry '09) at the 237th ACS National Meeting, Salt Lake City, UT, in April 2009.
- “SHaRK (Solar Hydrogen Activity research Kit) project”, poster presentation by Nita Norasethaporn (MAT Chemistry '09) and Joshua Thomas (Chemistry '10) at the 237th ACS National Meeting, Salt Lake City, UT, in April 2009.
- “Biodiesel Accreditation Project at Ithaca College”, oral presentation by Miles Crettien (Environmental Science '09) and Layne Kasprzyk (Environmental Science '10) at the Whalen Symposium at Ithaca College in April 2009.
- “Reduction of cadmium and lead uptake of carrots with calcium, zinc, and manganese”, oral presentation by Krista Fieselmann (Biochemistry '10) at the Whalen Symposium at Ithaca College in April 2009.
- “Crystal Face Dependence of p-Cu₂O Reactivity”, oral presentation by Cliff Engel at National Council for Undergraduate Research Conference at La Cross, WI in April 2009.

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- “Reduction of Carrot’s Heavy Metal (Lead and Cadmium) Intake by Calcium, Zinc, and Manganese?”, oral presentation by Julian Halfmann (Environmental Science '08) at the James Whalen Academic Symposium at Ithaca College in April 2008.
- “Analyzing Homemade Biodiesel toward ASTM Accreditation”, poster presentation by Jonathan Hershenson (Chemistry '09) at the 235th ACS National Meeting, New Orleans, LA, in April 2008.
- “Crystal Face Dependence of p-Cu₂O Stability as Photocathode”, poster presentation by Clifford Engel (Chemistry '10) at the 235th ACS National Meeting, New Orleans, LA, in April 2008.
- “Colloidal Porous Cu₂O Films for Solar Energy Conversion”, poster presentation by Jennifer Bell (Environmental Studies '09) and Whitney Thurber (Chemistry '09) at the North Eastern Regional Meeting of the American Chemical Society, Binghamton, NY, in October 2006.
- “Multi-faceted Evaluation of Alternative Landscaping on College Campus”, poster presentation by Beth Pallo (Environmental Science '06) at the 2nd International Conference on Environmental Science and Engineering, Houston, TX, in August 2006.
- “Probing Soil Chemistry of Alternative Landscaping Site on Campus”, oral presentation by Beth Pall (Environmental Science '06) at the James Whalen Academic Symposium at Ithaca College in April 2006.
- “Nanocrystalline Cu₂O and CuO films for photoelectrochemical energy conversion”, poster presentation by Shikhar Bajracharya (Chemistry '06), Kira Erikson (Chemistry '06) and Justin Fisher (Chemistry '06) at the American Chemical Society 231th National Meeting, Atlanta, GA, in March 2006.
- “Cu₂O and CuO Nanocrystalline Photoelectrochemical Systems”, oral presentation by Thomas Polson (Chemistry '05) at the James Whalen Academic Symposium at Ithaca College in April, 2005.
- “Nanocubic CuO Non-Aqueous Solar Cells”, poster presentation by Thomas Polson (Chemistry '05) at American Chemical Society 229th National Meeting at San Diego, CA, March 2005.
- “Solar Energy Conversion with Nanocrystalline CuO and Cu₂O”, poster presentation by Thomas Polson (Chemistry '05), Meaghan Daniel (Chemistry '05), and Jacy Spado (Chemistry '05) at the 37th American Chemical Society Northeastern Regional Meeting at Rochester, NY, November 2004.

Grants

- American Chemical Society Petroleum Research Fund Starter Grant (2005), \$35,000.
- Ithaca College Summer Research Grant (2004, 2007, 2009), \$3,350 each.
- Ithaca Fund/School of Humanities and Sciences Educational Grant Initiative (2004, 2005, 2007, 2008, 2009) ~\$1,000 each to support student-centered research projects.

Academic Service

- Ithaca College Environmental Studies and Sciences Curriculum Committee, Fall 2003 - present
- Ithaca College Sustainability Committee (Footprint Group), Fall 2004 - present

Affiliation

American Chemical Society
The Electrochemical Society
Middle Atlantic Association of Liberal Arts Chemistry Teachers