Carolyn Schoenbaum Kohlmeier
Teaching Associate Professor of Chemical and Biological Engineering
University of Colorado at Boulder

EDUCATION

University of Colorado Boulder *2009 – 2014*
- PhD; Chemical Engineering – Graduated: Aug 2014
- Advisors: James Will Medlin and Daniel K. Schwartz

University of Washington *2004 – 2009*
- B.S.; Physics, Chemistry – Departmental distinction in chemistry
- Advisor: Charles T. Campbell

University of California, Santa Barbara *2003 – 2004*
- CCS Physics immersion program
- Advisor: David S. Cannell

EMPLOYMENT EXPERIENCE

Chemical Engineering Dept. – Teaching Assistant Professor/Instructor *Fall 2017 – present*
College of Engineering, University of Colorado Boulder

Chemical Engineering Dept. – Lecturer *Fall 2016, Summer 2017*
College of Engineering, University of Colorado Boulder

Intel Corporation – Process Engineer; Gas Systems *Nov. 2015 – July 2016*
Logic Technology Development Group

Intel Corporation – Process Engineer; Development/Yield Metals *Aug. 2014 – Nov. 2015*
Logic Technology Development Group

Catalysis Research Group – Doctoral Student *Jan. 2010 – Aug. 2014*
Department of Chemical and Biological Engineering, University of Colorado Boulder

Chemical Engineering Dept. – Teaching Assistant *2009, 2011*
Department of Chemical and Biological Engineering, University of Colorado Boulder

Surface Science Research Group – Undergraduate Researcher *2008 – 2009*
Department of Chemistry, University of Washington

Physics Department – Teaching Assistant: Optics Laboratory *2009*
College of Arts and Sciences, University of Washington

AWARDS AND HONORS

- Faculty Performance Award: Undergraduate Teaching (faculty awarded) *2022*
- Engineering Excellence Fund Grant: New Course Development *2022*
- Faculty Performance Award: Undergraduate Teaching (faculty awarded) *2018*
- Outstanding Undergraduate Teaching Award (student awarded) *2017 – 2018*
- Faculty Recognition for Departmental Service, CU CHBE Department *2014*
- DoEd GAANN Fellow for Renewable and Sustainable Energy *2013 – 2014*
- Conoco Phillips Graduate Research Fellowship *2011 – 2013*
- University of Washington Mary Gates Research Scholar *2009*

PUBLICATIONS

- Schoenbaum & Pang *et al.* Effects of Thiol Modifiers on the Kinetics of Furfural Hydrogenation over Pd Catalysts. ***ACS Catalysis*** (2014) 4 (9) pp 3123-3131.
- Schoenbaum *et al.* Self-Assembled Monolayers in Heterogeneous Catalysis. ***Accounts of Chemical Research*** (2014) 47 (4) pp 1438-1445.
- Schoenbaum & Pang *et al.* Directing Reaction Pathways by Catalyst Active-Site Selection Using Self-Assembled Monolayers. ***Nature Communications*** (2013) 4, 10.1038/ncomms3448.
- Schoenbaum *et al.* Controlling Surface Crowding on a Pd Catalyst with Thiolate Self-Assembled Monolayers. ***Journal of Catalysis*** (2013) 303, pp 92-99.
- Wanda Lew *et al.* The Energy of Adsorbed Hydroxyl on Pt(111) by Microcalorimetry. ***Journal of Physical Chemistry C*** (2011) 115 (23), pp 11586-11594.

SELECTED PRESENTATIONS AND PANELS

- "Forging Faculty Relationships", C. A. Schoenbaum and panel, CEAS Academic Success Workshops, Boulder, CO; March 2019
- "WileyPLUS integration with Canvas", C. A. Schoenbaum, Faculty Teaching Workshop, Boulder, CO; November 2018.
- "Controlling Surface Crowding on a Pd Catalyst with Self-Assembled Monolayers", C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, AICHE National Meeting, Pittsburgh, PA; October 2012.
- "Selectivity Control Using Self-Assembled Monolayers on Pd Catalysts", C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, ACS National Meeting, Denver, CO; September 2011.
- "Selectivity Control Using Self-Assembled Monolayers on Pd Catalysts", C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, North American Meeting of the Catalysis Society, Detroit, MI; June 2011.
- "Controlling selectivity by modifying supported metal catalysts with alkanethiol monolayers", C. A. Schoenbaum, S. T. Marshall, D. K. Schwartz, J. W. Medlin, Western States Catalysis Club Annual Symposium, Albuquerque, NM; February 2011.
- "Controlling selectivity by modifying supported metal catalysts with alkanethiol monolayers", S. T. Marshall, C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, AIChE Annual Meeting, Salt Lake City, UT; November 2010.
- "Controlling selectivity by modifying supported metal catalysts with alkanethiol monolayers", S. T. Marshall, C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, Student Annual Research Symposium, Boulder, CO; October 2010.
- "Selectivity control by modification of supported metal catalysts with organic ligands", S. T. Marshall, C. A. Schoenbaum, D. K. Schwartz, J. W. Medlin, Western States Catalysis Club Annual Symposium, Provo, UT; February 2010.
- "Calorimetric measurements of adsorption energies of well-defined species on single crystal surfaces" (poster), M. C. Crowe, W. Lew, C. A. Schoenbaum, C. T. Campbell, Undergraduate Research Symposium, Seattle, WA; May 2009.

PROFESSIONAL AFFILLIATIONS AND ACTIVITIES

- Senior Thesis Research Advisor *2018 – present*
- Total Quality Framework (TQF) Committee *2021 – present*
- ChBE Undergraduate Committee *2017 – present*
- AIChE Student Chapter Advisor *2018 – 2019*
- Omega Chi Epsilon National Honor Society *2018 – 2019*
- Academic Technology Advisory Group *2018 – 2019*
- Humanities and Social Sciences Committee *2017 – 2018*

- Laboratory Safety Proctor, *UCB Chemical Engineering Department* *2010 – 2014*
- Colorado Nanofabrication Laboratory Member, *UCB Engineering* *2012 – 2014*
- Trades Teaching Laboratory: Machine Shop Certified, *UCB Physics Department* *2012 – 2014*
- Graduate Leadership Council Chair, *UCB Chemical Engineering Department* *2013 – 2014*

VOLUNTEER AND OUTREACH

- Engineering Launch: Strengths Facilitator *2017*
- Middle School Science Field Day Group Leader *2013 – 2014*
- Annual Research Symposium Organizer, *UCB Chemical Engineering Department* *2011 – 2012*

SCREENCASTS

http://www.learncheme.com/screencasts/p-chem

- Particle in a Box
- Separation of Variables
- Normalizing a Wavefunction
- Harmonic Oscillator
- Eigenvalues and Eigenfunctions
- Degeneracy: Particle in a Square Box

COURSES TAUGHT

- CHEN 1201 (4) – General Chemistry for Engineers 1, F20, F21, F23
- CHEN 1211 (4) – General Chemistry for Engineers, F17, S20
- CHEN 1310 (3) – Introduction to Engineering Computing, S22, F22, S23
- CHEN 2120 (3) – Chemical Engineering Material and Energy Balances, F16, Su17, F17, Su18, F18
- CHEN 3010 (3) – Applied Data Analysis, F22, F23
- CHEN 3200 (3) – Chemical Engineering Fluid Mechanics, S18, S19, S20
- CHEN 3210 (3) – Chemical Engineering Heat Transfer, F18
- CHEN 4838 (1) – Special Topics: Intro to Python Programming, Su22
- CHEN 4838 (3) – Special Topics: Data Projects, S23