

EDUCATION

Ph.D., Physical Chemistry – December, 2008

University of Colorado Boulder

Dissertation title: *Atmospheric Chemistry and Fate of Highly-Fluorinated Carboxylic Acids and Alcohols*

B.S., Chemistry (ACS Certified) – May, 2004

Indiana University Purdue University at Indianapolis

TEACHING EXPERIENCE

Associate Teaching Professor, 2022 – current

University of Colorado at Boulder

Instructor, 2013-2022

Lecturer, 2011-2013

- Create and present chemistry content at the appropriate level for intended audience, including lecture notes, practice worksheets, weekly HW assignments, exam, and exam review materials
- Courses taught: Introductory Chemistry (CHEM 1021), Environmental Chemistry I (CHEM 1011) and II (CHEM 1031), General Chemistry I (CHEM 1113) and II (CHEM 1133), General Chemistry I Lab (CHEM 1114), General Chemistry for Engineers-Lab (CHEN 1221), Physical Chemistry I (CHEM 4511) and II (CHEM 4531)
- Class sizes: 20 - 400 students per section

Adjunct Faculty, 2010 – 2011

Community College of Denver

- Presented lectures, created HW assignments, worksheets, quizzes, and exams
- Assisted students in the laboratory, wrote laboratory protocols

CLASSROOM & TEACHING TECHNOLOGY

- iClicker
 - Provides instant feedback during lectures, encourages active learning & student engagement
- Lecture Capture & Document Camera
 - Used in conjunction with PowerPoint presentation, provides accessibility and equity in teaching
- Online Homework Systems
 - Achieve, LabFlow, Sapling Learning, Connect, WebAssign, ALEKS
- Learning Management Systems
 - Canvas, D2L
- Canvas Studio & PlayPosit
 - Allowed remote instruction to remain engaging

SU SUMMARY

Teaching Associate Professor, with a growth mindset, eager to transition into a full Teaching Professor role. I have over 10+ years instructing undergraduate students at the introductory through advanced chemistry levels. I take a holistic approach to teaching and learning and value building an engaging curriculum by fostering positive and nurturing relationships with my students.

SKILLS

In-person teaching	Online teaching
Asynchronous teaching	Hybrid teaching
Active Learning	Inclusive Pedagogy
Gamification	Micro-Learning
Coaching	Mentorship

AWARDS & HONORS

Best Should Teach – Gold (2024)

Climate Across the Curriculum – 2022

Marinus Smith Award (nominee) – 2019

PROFESSIONAL DEVELOPMENT

Faculty Leadership Institute, Fall 2023 – Spring 2024

- Engage with campus leaders to build leadership skills

Active Learning Academy, Fall 2022 – Fall 2023

- Faculty Mentor, Fall 2023
 - Became part of the facilitation team for Learning by Design, helping lead sessions and provide guidance based on my prior experience with the program
- Follow-Up Peer Mentoring Program, Spring 2023
 - Conducted observations with another faculty to get feedback on teaching
- Learning by Design, Fall 2022
 - Gained a strong foundation in instructional design by working in a community of faculty working through the ID process

Online Teaching Academy, Spring 2021

- Learned the skills to effectively teach an online, remote, or hybrid course

ASSETT Faculty Fellow, Spring 2019 – Fall 2020

- Participated in a collaborative community of faculty to address teaching, learning, and challenges with technology in my department

SERVICE/COMMITTEES

Climate, Sustainability, and Justice in Education

University of Colorado at Boulder, Fall 2024 – Spring 2025

- Develop interdisciplinary and educationally-cohesive learning experiences for undergraduate students around climate, sustainability, and justice

Academic Affairs

Boulder Faculty Assembly, Fall 2019 – current

- Advise and make recommendations for matters related to program review, academic policy, and campus-wide curricula
- Served as co-chair 2022 – 2023

Exam Writing – General Chemistry

ACS Exam Writing Committee, Fall 2019 – current

- Authored questions on two separate sets of exams

ACU Peer Mentoring

University of Colorado at Boulder, Fall 2022 – Spring 2024

- Guided and mentored junior teaching colleagues in different departments to help them advance in their roles

General Chemistry Curriculum Committee

Department of Chemistry, Fall 2013 – current

- Collaborate with other members to select textbooks, online HW systems, and implement changes to curriculum

TA Training

Department of Chemistry, Fall 2013 – current

- Present teaching methods
- Facilitate workshops to prepare new in-coming graduate students to be effective teaching assistants

RESEARCH EXPERIENCE

Analytical Research Scientist

New Sky Energy – Boulder, CO

August 2010 – July 2012

- Devised and conducted electrochemical reactions to maximize system efficiency and enhance product recovery
- Developed protocols, assisted with writing patents

Postdoctoral Research Scientist

National Oceanic and Atmospheric Administration – Boulder, CO

January 2009 – June 2010

- UV Absorption and Cavity Ring-Down Spectroscopy
 - Designed and modified experiments to meet project objectives and produce highly reliable results to meet deadlines

PRESENTATIONS

Equitable and Inclusive Engagement Practices for Learner Success - Keynote Panelist

Center for Teaching and Learning, University of Colorado Boulder

September, 2024

Student Engagement with Technology Symposium, "Using iClickers in the General Chemistry Program"

University of Colorado Boulder

January, 2024

TriO Student Support Services: Fall Gateway Retreat, "Getting the Most out of Lectures and Networking with Professors"

University of Colorado Boulder

September, 2022

Miramontes Arts and Sciences Program Colloquium Series, "From Bangladesh to Boulder - My Journey to Teaching"

University of Colorado Boulder

April, 2021

Photoreactivity of Perfluorinated Compounds at the Air-Water Interface

DuPont Chemical Company, Wilmington, DE

March, 2008

Photolysis of Perfluorinated Compounds at the Air-Water Interface

ACS 235th National Meeting & Expo, Poster Presentation
New Orleans, LA – 2008

Surface Partitioning and Stability of Mixed Films of Fluorinated Alcohols and Acids at the Air-Water Interface

ACS 234th National Meeting & Expo

Boston, MA – 2007

Surface Partitioning and Stability of Mixed Films of Fluorinated Alcohols and Acids at the Air-Water Interface

American Geophysical Union Joint Assembly

Acapulco, Mexico – 2007

Vibrational Spectroscopy of Perfluorocarboxylic Acids

ACS 231st National Meeting & Expo, Poster Presentation

Atlanta, GA – 2006

RESEARCH EXPERIENCE (cont.)

- Increased experimental productivity by troubleshooting and maintaining laboratory equipment to ensure optimal instrumental performance

Research Associate

University of Colorado Boulder, Dept. of Chemistry – Boulder, CO
January 2005 – December 2008

- Fourier-transform infra-red spectroscopy
 - Trained 3 of 5 group members as the recognized subject matter expert in gas-phase vibrational spectra of organic compounds, assisting in instrument theory and operation, data acquisition and analysis
 - Extensive knowledge of maintenance and operation of commercial infra-red spectrometers allowing for efficient data collection and analysis, turnaround time from experiments to publication ~ 5 months
- Langmuir-Blodgett Films
 - Expertise of the characterization of organic films at the air-water interface, with the capacity to identify errors early on and improvise solutions based on experimental limitations
 - Preliminary experimental knowledge of atmospheric processing and photochemistry of organic films at the air-water interface including several solutions to increase experimental efficiency
- Gas Chromatography-Mass Spectrometry
 - Proficient at data interpretation with strong ability to connect results to the broader experimental implications
 - Skilled at sample derivatization procedures and instrument operation

PUBLICATIONS

Carlton, N.; Fajardo, J.; Guha, S.; Habeeb, Z.; Johnson, S.; Kautz, J.; Krouse, I.; Lebeau, E.; Leontyev, A.; Porello, S.; Pribyl, J.; Ratcliff, B.; Shinn, D.; Sra, A.; Takahara, P.; Voska, K.; Wren, D.; General Chemistry, ACS Division of Chemical Education Examination, 2023

Papanastasiou, D. K.; **Rontu Carlton, N.;** Neuman, J. A.; Fleming, E. L.; Jackman, C. H.; Burkholder, J. B. "Revised UV Absorption Spectra, Ozone Depletion Potentials, and Global Warming Potentials for the Ozone Depleting Substances CF₂Br₂, CF₂ClBr, and CF₂BrCF₂Br," *Geophysical Research Letters*, 2012

Rontu Carlton, N.; Wise, M. *Environmental Chemistry II*, Kendal Hunt, 2012.

Kosmoski, J., Little, D.; **Rontu Carlton, N.;** "Sodium Sulfate Isolation", US Provisional Patent, May 3, 2011.

PUBLICATIONS (cont.)

Rontu Carlton, N.; Papanastasiou, D. K.; Fleming, E.L.; Jackman, C.H.; Newman, J. A.; Burkholder, J. B. "UV Absorption Cross Sections of Nitrous Oxide (N₂O) and Carbon Tetrachloride (CCl₄) between 210 and 350 K and the Atmospheric Implications," *Atmospheric Chemistry and Physics*, 10, 6137-6149, 2010.

Vaida, V.; Feierabend, K. J.; **Rontu, N.;** Takahashi, K. "Sunlight-Initiated Photochemistry: Excited Vibrational States of Atmospheric Chromophores," *International Journal of Photoenergy*, 2008, 138091.

Rontu, N.; Vaida, V. "Surface Activity of Perfluorinated Compounds at the Air- Water Interface," *ACS Symposium Series: Atmospheric Aerosols: Characterization, Chemistry, Modeling, and Climate*, 2008, 65-77.

Rontu, N.; Vaida, V. "Vibrational Spectroscopy of Perfluorocarboxylic Acids from the Infrared to the Visible Regions," *Journal of Physical Chemistry B*, 2008, 112, 276-282.

Rontu, N.; Vaida, V. "Surface Partitioning and Stability of Pure and Mixed Films of 8-2 Fluorotelomer Alcohol at the Air-Water Interface," *Journal of Physical Chemistry C*, 2007, 111, 11612-11618.

Rontu, N.; Vaida, V. "Miscibility of Perfluorododecanoic Acid with Organic Acids at the Air-Water Interface," *Journal of Physical Chemistry C*, 2007, 111, 9975-9980.

Rontu, N.; Vaida, V. "Vibrational Spectroscopy of Perfluoropropionic Acid in the Region Between 1000-11000 cm⁻¹," *Journal of Molecular Spectroscopy*, 2006, 237, 19-26