

WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
May 24, 2021

Contents



[Return to Research Guidelines](#)

[New Arrivals](#)

[BIP](#)

[Upcoming Events and News](#)

[Job Openings & Recruiting](#)

 For a full schedule, including Center events, please see the [Department Calendar](#). 

Return to Research Guidelines

[Return to Research Policy](#)

[COVID-19: Return to Campus Guidelines](#)

New Arrivals

No new arrivals this week.

BIP

BIP will be held virtually on Fridays, **10 am to 11 am**. The Zoom link will always be sent out **the Wednesday before the respective seminar to the BIP listserv!** Interested in giving a BIP talk or signing up to be on the BIP listserv? Email the new BIP Meisters, [Zoha Syed](#) or [Megan Kaster](#).

Upcoming Events and News

Call for Abstracts: Webinar Series for Early Career Chemists

JAWSCHEM is a virtual seminar series for chemists in the early stages of their career (i.e. undergraduates, graduate students, and postdocs, as well as people in industry and government/national labs). The goal of this seminar series is to fill the void of missed conferences and provide a platform for junior researchers to share their work with the worldwide chemistry community.

There is currently a call for abstracts from the chemistry community, and they welcome submissions from all over the world. Additional information about times and talk length can be found on our [abstract form](#) and [website](#). You can follow them on Twitter too ([@JAWSCHEM](#)).

Opportunity to meet with Marple Schweitzer Lecturers, Prof Jennifer Dionne or Prof Christine Luscombe 5/26-5/27

PLU is pleased to present the postponed 2020 and the 2021 Marple-Schweitzer Lectures on **May 26 - 27, 2021 at 3 pm via Zoom: <https://northwestern.zoom.us/j/92904245013>**

If you would like to meet with either of the speakers, please sign up on [this spreadsheet](#) by Tuesday, May 25.

Prof. Jennifer Dionne from Stanford will present "The light stuff: sculpting photons at the molecular-scale for sustainability" on **Wednesday, May 26**. Students can meet with Prof Dionne from **12:00 - 12:25 pm on Zoom**.

Prof. Christine Luscombe from the University of Washington will present "Semiconducting polymers: New horizons and unmet future challenges" on **Thursday, May 27**. Students can meet with Prof. Luscombe from **1:15 - 1:40 pm on Zoom**.

We will send the Zoom link to the attendees next week.

Job Openings & Recruiting

Job Opening, Trinity College

Trinity College is seeking candidates for a tenure-track position in physical chemistry and a second potential tenure-track opening in the areas of organic chemistry or chemical biology at Trinity College. This second position could be made possible by the College's renewed Special Opportunity Hire program, which endeavors to recruit "scholars and teachers of exceptional achievement or promise who will diversify the faculty." Both positions would begin in the fall 2022 semester. The Department of Chemistry at Trinity is committed to recruiting, interviewing and hiring diverse candidates for both positions.



Trinity College is a coeducational, independent, nonsectarian liberal arts college located in Connecticut's capital city of Hartford. Our student body is diverse, coming from all socio-economic, racial, religious, and ethnic backgrounds across the U.S. and internationally. Faculty combine teaching excellence with productive research programs that engage undergraduate students. Trinity College is located in an urban environment and nearby institutions include Hartford Hospital, the Institute of Living, Connecticut Children's Medical Center, and University of Connecticut Medical School. Researchers at these institutions often have active collaborations with Trinity faculty. The Chemistry Department is exceptionally well-equipped for both teaching and research.

The ideal applicants would excel at teaching in their area of expertise and in our introductory courses, and who would establish or continue a productive research program that meaningfully involved undergraduate co-workers. Applications are welcome from graduate students, postdoctoral scholars or established faculty members who, through their research, teaching, and service, would contribute to the diversity and excellence of our academic community.

Applications may be submitted to:

Timothy Curran

Vernon K. Kriebel Professor of Chemistry and Chair Email: timothy.curran@trinco ll.edu

Telephone: 860-297-5276

Strategic Planning Associate at Scripps Research



Scripps Research is looking for a PhD/ postdoc with strong organizational and communication skills who would work with them on creating and driving major research/ strategic initiatives across basic and translational research at Scripps—an alternative to a McKinsey or BD career path.

More information and job description can be found [here](#).

PhD Research Chemist Position at Eastman Chemical Company in Kingsport, TN



Founded in 1920, Eastman is a global specialty materials company that produces a broad range of products found in items people use every day. With the purpose of enhancing the quality of life in a material way, Eastman works with customers to deliver innovative products and solutions while maintaining a commitment to safety and sustainability. The company's innovation-driven growth model takes advantage of world-class technology platforms, deep customer engagement, and differentiated application development to grow its leading positions in attractive end-markets such as transportation, building and construction, and consumables. As a globally inclusive and diverse company, Eastman employs approximately 14,500 people around the world and serves customers in more than 100 countries. The

company had 2019 revenues of approximately \$9.3 billion and is headquartered in Kingsport, Tennessee, USA. For more information, visit www.eastman.com.

Eastman Chemical Company is seeking a Research Chemist for the Scale-up Chemistry team located in Kingsport, TN. As a member of a high performing team within Eastman's Scaleup & Process Innovation Division, the selected individual will be responsible for developing, optimizing, and scaling synthetic routes to novel compounds. The individual will have an opportunity to develop innovative technical solutions across multiple business areas. Project work will be conducted in the laboratory, pilot plant, and large-scale manufacturing facilities.

Job Responsibilities:

- collaborate with applications R&D, marketing and business partners to understand customer needs and provide technical solutions that are economically viable;
- work in a fast-paced, results-oriented team environment to develop new technologies that provide solutions to customers' needs;
- solve complex problems, analyze results, propose next steps and strategies, and document conclusions/issues on a timely basis;
- work in and lead multidisciplinary teams to execute on technical projects, including directing the work of technicians;
- communicate results to technology, manufacturing, and business stakeholders;
- identify inventive aspects of new technology and work with our Legal department to capture and protect intellectual property.

Research Chemists are expected to take the lead in safety and housekeeping. Additionally, Research Chemists need to be self-starters, work independently, and have good personal organization skills to be successful. Flexibility is a must in this distinctly innovative environment. Candidates should have a positive social attitude and like to work in a team.

Education: Ph.D. in Organic Chemistry or Homogenous Catalysis from an accredited college or university

The candidate must possess:

- a broad exposure to synthetic organic chemistry transformations and laboratory experimentation techniques;
- demonstrated creativity and a desire to solve challenging and complex problems;

- first principles mechanistic approach and a passion for understanding the fundamental aspects of complex chemistries and processes;
- exhibit a high level of initiative and self-motivation;
- broad interests and willingness to take on relatively undefined challenges;
- strong project management and team leadership skills;
- excellent oral and written communication skills;
- ability to work in a team setting and with members from different technical backgrounds.

Postdoctoral fellow recruitment in analytical chemistry



A microfluidic microbial platform to optimize plastic breakdown and valorization using FTIR

Oceans contain 1 kg of plastic for every 5 kg of fish, microplastics are “spiraling” around the globe in the air we breathe—Join a major Canadian initiative to reverse the disastrous effects of plastic pollution.

We are searching for highly qualified and highly *motivated* postdoctoral fellow to coordinate U. Laval’s contribution to a major Canadian initiative targeting depolymerization of plastic using bacteria and their enzymes.

The candidate will be involved in all aspects of development and use “spectrofluidic” bioflow cells (microfluidic assay devices with integrated sensors for infrared spectroscopy) to screen bacteria and enzymes for optimized biodegradation kinetics of major consumer plastics, such as polyethylene (PE), PE terephthalate (PET), polyamide (PA) and polystyrene (PS). The work is being conducted using a pre-commercialized attenuated total reflection (ATR)-spectroscopy assaying accessory developed in partnership between the microfluidic bioanalytical laboratory of [Jesse Greener](#) and the [Bégin-Drolet](#) instrument development lab in mechanical engineering.

The project involves the following aspects:

- Bacteriology: culturing and screening bacteria and enzyme solutions
- Microfluidics: design and microfabrication of spectrofluidic devices
- Spectroscopy: conducting FTIR assay experiments and analyzing spectra

Therefore, candidates should have experience and interest with as many of the following areas as possible: microfluidics, microfabrication, vibrational spectroscopy, bacteriology/enzymology, plastics, programming, as well as mechanical and mechatronics. Applicants should also have excellent skills in collaboration, project management, problem solving, and communication.

The successful candidate will carry out their innovative project in [Québec City](#), one of the most beautiful cities in Canada. Bilingualism is not a requisite, but a commitment to learning French will be an advantage for integration into daily life. The host lab of Jesse Greener is highly interdisciplinary with a distinctly international flavor. The laboratory is new, featuring top-of-the-line instrumentation: FTIR spectrometers, advanced imaging including a live-cell hyperspectral confocal imaging system, bio-electrochemical stations, microbiology preparation and cutting-edge microfabrication tools. Join us in the perfect environment for discovery and the advancement of your career!

Department of admission

Chemistry

Research director

Jesse Greener, U. Laval.
Research [website](#).

Profile of candidate

Holds a PhD in analytical chemistry, bioengineering, biophysics or a related field.

Conditions of tenure

2-3 years. \$40k per year.
Health plan included.
Courses in French for the candidate and family members can be arranged free of charge.

Start date

Flexible with preferred date of September 2021.

Equity, diversity and inclusion

U. Laval and the Greener Group invite applications from all qualified individuals. Read [here](#) the university's equity, diversity and inclusion commitment.

For more information

Check [here](#) for updates.

To apply, email

jesse.greener@chm.ulaval.ca
(email title: “Postdoc position in plastic biodegradation”). Please include (1) a CV, (2) a letter outlining qualifications and your motivation for the position, (3) one sample of your research writing, and (4) names of two references.

Doctoral student recruitment in analytical chemistry



A microfluidic microbial platform to optimize plastic breakdown and valorization using FTIR

Oceans contain 1 kg of plastic for every 5 kg of fish, microplastics are “spiralling” around the globe in the air we breathe—Join a major Canadian initiative to reverse the disastrous effects of plastic pollution.

We are searching for highly qualified and highly *motivated* doctoral candidates for a major Canadian initiative targeting depolymerization of plastic using bacteria and their enzymes.

The candidate will develop and use “spectrofluidic” bioflow cells (microfluidic devices with integrated sensors for infrared spectroscopy) to screen bacteria and enzymes for optimized biodegradation kinetics of major consumer plastics, such as polyethylene (PE), PE terephthalate (PET), polyamide (PA) and polystyrene (PS). The work is being conducted using a pre-commercialized attenuated total reflection (ATR)-spectroscopy assaying accessory developed in partnership between the microfluidic bioanalytical laboratory of [Jesse Greener](#) in Chemistry and the instrument development lab of [Bégin-Drolet](#) in Mechanical Engineering.

The project involves the following aspects:

- Bacteriology: culturing and screening bacteria and enzyme solutions
- Microfluidics: design and microfabrication of spectrofluidic devices
- Spectroscopy: conducting FTIR assay experiments and analyzing spectra

Therefore, candidates should have experience and interest with as many of the following areas as possible: microfluidics, microfabrication, vibrational spectroscopy, bacteriology/enzymology, plastics, programming, as well as mechanical and mechatronics. Applicants should also have excellent skills in collaboration, leadership, innovation, problem solving, and communication.

The successful candidate will carry out their innovative project in [Québec City](#), one of the most beautiful cities in Canada. Bilingualism is not a requisite, but a commitment to learning French will be an advantage for integration into daily life. The host lab of Jesse Greener is highly international with most students coming from abroad. The laboratory is new, featuring top-of-the-line instrumentation: FTIR spectrometers, advanced imaging including a live-cell hyperspectral confocal imaging system, bio-electrochemical stations, microbiology preparation and cutting-edge microfabrication tools. This is a multi-disciplinary environment where students can discover *and* play!

Department of admission
Chemistry

Research director

Jesse Greener, U. Laval.
Research [website](#).

Profile of candidate

Holds a Bachelor's of science and a Master's in analytical chemistry, engineering, biophysics or a related field.

Requirements

Meets admission requirements for admission to U. Laval as a chemistry PhD student.

Conditions of tenure

4 years. \$24k per year plus options for \$10.5k in other bonuses. Free courses in French can be arranged. Candidates obtaining an excellence scholarship from NSERC or FRQNT will obtain a supplemental \$5k per year on their bursary.

Start date

Flexible, with preferred date of September 2021.

Equity, diversity and inclusion

U. Laval and the Greener Group invite applications from all qualified individuals. Read [here](#) the university's equity, diversity and inclusion commitment.

For more information

Check [here](#) for updates.

To apply, email

jesse.greener@chm.ulaval.ca

(email title: “Doctoral position in plastic biodegradation”) Please include (1) a CV, (2) a letter outlining qualifications and motivation, (3) research writing sample, and (4) names of two references.

One Year Visiting Position in Physical Chemistry at Randolph-Macon College

Position Details: The Chemistry Department at Randolph-Macon College in Ashland, VA seeks candidates for a **one-year visiting position in physical chemistry** (sabbatical replacement), rank to be determined, for a contract to begin in August 2021 and end in July 2022.

Institution Information: Randolph-Macon College, founded in 1830, is a selective, primarily residential liberal arts college with an enrollment of 1500 students located 15 miles north of Richmond and 90 miles south of Washington, DC. The College seeks employees committed to advancing inclusion and equity and to cultivating a community that welcomes all people, regardless of race, gender, disability, age, national origin, religion, sexual orientation, or gender expression.

The Department of Chemistry is committed to excellence in educating future STEM professionals through inquiry, innovative teaching, and laboratory exploration. The Chemistry Department is located on the third floors of both the Copley Science Center and Brock Hall, and consists of seven teaching laboratories, five research laboratories, two multimedia classrooms, and additional rooms for housing instrumentation. We are among the best-equipped chemistry departments in the country regarding quantity and quality of instruments and student to instrument ratio. Our students are trained to use each of these instruments via laboratory courses and through their own research projects.

Major/Essential Functions: The candidate will teach the following undergraduate courses: physical chemistry 1&2 lecture, physical chemistry 1 laboratory, and contribute to the general chemistry sequence.

Minimum Qualifications: Ph.D. in chemistry or a related field. Demonstrated commitment to teaching at the undergraduate level. Demonstrated effectiveness in teaching. Experience working with people from diverse backgrounds and a demonstrated commitment to pedagogical methods that enable students across racial, ethnic, and socio-economic groups to reach their maximum potential.

Preferred Qualifications: Willingness to collaborate with department members in recruitment of students, instrument maintenance, and other departmental responsibilities. Research with undergraduate students is not required but is encouraged.

Application Procedures: To apply, please submit the following as a single pdf document to Sabrina Granderson, Administrative Services Coordinator, at sabrinagranderson@rmc.edu

The documents that must be submitted include the following:

- Letter of application that addresses the applicant's qualifications.
- Curriculum vitae.
- A brief (one page) statement of teaching philosophy.
- A brief (one page) statement of research interests, if applicable.
- A brief (one page) statement describing past, present, and planned contributions to equity, diversity, and inclusion.
- Undergraduate and graduate school transcripts (scanned copies acceptable); and

- The names and contact information for three professional references. At least one must be able to address commitment to undergraduate teaching; please indicate the teaching reference in your letter of application. Please do not ask references to submit letters of recommendation; the committee will conduct reference checks by phone.

For full consideration, applications must be received by May 25, 2021. While applications may be accepted after this date, it is not guaranteed that they will be considered. At this time, please only upload the required documents listed above; finalists will be asked to submit recordings, syllabi, publications and/or student evaluations. Incomplete applications will not be considered by the search committee.

Randolph-Macon College does not discriminate on the basis of race, color, creed, religion, age, sex, sexual orientation, gender identity, national origin, marital status, disability, or veteran status in its education or employment programs or activities.



RANDOLPH-MACON

C O L L E G E



Reposted 9 March 2021

Post doc announcement: ink formulation chemist

Position #3065784

Post doc description

This Post-Doctoral R&D chemist position is in HP's imaging and printing business in our Corvallis, Oregon facility. The work will be focused on development of new ink formulations for inkjet printers.

Our group is responsible for the design and formulation of inkjet printing inks including the characterization of the print attributes and robustness. This project will focus on developing components that expand various ink attributes such as optical density and durability on different media. The project will also involve optimizing the new inks for drop formation and the printing process. Part of the role is to collaborate with the printer component designers to implement system level changes to balance tradeoffs in the various components.

Aspects of this role include:

- Component development, refinement, and selection
- Formulation design (includes design for performance, manufacturing and chemical regulatory guidelines)
- Print system characterization
- Cross functional/ pan global team participation and leadership
- External supplier material co-development and manufacturing

Our group is part of a chemistry center of excellence that develops inks for the different print businesses. While we work across several sites, this project will partner with colleagues at our Corvallis, Oregon location. The Corvallis site includes a combination of R&D and manufacturing facilities with work ranging from MEMS fabs to development of large industrial printing presses.

Qualifications

- A recent (<1 year) PhD in chemistry, chemical engineering, or related field.
- Understanding of fundamental chemical mechanisms, key areas include
 - Pigment and dye chemistry
 - Polymers in solution
 - Organic and inorganic nanoparticle suspensions
 - Interfacial and surface chemistry
 - Proficiency in appropriate analytical instruments and the data interpretation
- Wet chemistry experience
- Strong written and spoken communication skills.
- Ability to creatively solve problems in a fast-paced product development environment
- Ability to work & effectively interact (remotely, as needed) with team members from other disciplines, projects, organizations, cultures, & companies.
- Demonstrated leadership, teamwork/interpersonal, communication and technical skills.
- Resourceful, creative, and flexible
- Fluency in English

HP Inc.
1070 Circle Blvd
Corvallis, Oregon 97330
hp.com



Desired qualifications

- Programming skills
- Familiarity with printing technology and color science
- Formulation experience is a plus

To apply, please visit our website: https://hp.wd5.myworkdayjobs.com/ExternalCareerSite/job/Corvallis-Oregon-United-States-of-America/Post-Doc-Ink-Chemist_3065784-2

Postdoctoral Scientist

Abbott is a global healthcare leader that helps people live more fully at all stages of life. Our portfolio of life-changing technologies spans the spectrum of healthcare, with leading businesses and products in diagnostics, medical devices, nutritionals and branded generic medicines. Our 107,000 colleagues serve people in more than 160 countries.

ABOUT ABBOTT DIAGNOSTICS:

The key to successful treatment and full recovery is often fast, accurate diagnosis. Abbott's life-changing tests and diagnostic tools provide insights that enable smarter, faster decisions and transform the way the world is managing health. Our pioneering technology spans the world of healthcare operations — with medical diagnostic instruments, tests, automation and informatics solutions for hospitals, reference labs, blood centers, emergency departments, physician offices and clinics.

Our location in **Lake County, Illinois** currently has an opportunity for a **Postdoctoral Scientist**. **This is a Postdoctoral Scientist fellowship and will last up to two years.**

WHAT YOU'LL DO

- Design and conduct multiple mass spectrometry (MS) experiments towards characterization of proteins where selected proteins will be used in clinical immunoassay formulations
- Troubleshoot instrumentation and method problems
- Critically execute MS experiments, process analytical data and results with attention to detail
- Evaluate and summarize data using various MS methodologies, interpret results, draw conclusions and recommend options for future experiments to achieve project goals
- Participate in cross-functional teams including collaborations with protein fermentation, cell culture, purification and bioanalytical scientists.
- Document studies effectively and timely in an electronic laboratory notebook.
- Present scientific observations at team meetings.
- Anticipate, recognize and resolve technical problems

EDUCATION AND EXPERIENCE YOU'LL BRING

Preferred:

- Ph.D. with at least 2 years relevant research or industrial experience where the Ph.D. is in a life or physical science; Analytical Chemistry or Biochemistry preferred.
- 2+ years lab experience or the equivalent in mass spectrometry (MS) desired
- Experience with multiple mass spectrometers: Sciex, Waters, Shimadzu and / or Thermo
- Publications or presentations where the candidate provided MS data and data interpretation
- Knowledge of test method characterization and/or validation processes, as well as execution of MS methods under established operating procedures would be beneficial.

Required:

- B.S. with 4 years minimum related lab/industrial experience or M.S. with 2 years minimum relevant experience or Ph.D. in a life or physical science; Analytical Chemistry, Biochemistry, Biophysical Chemistry desired.
- Hands-on working knowledge of mass spectrometry systems used for the analysis of proteins including qualitative analysis, identification of target molecule as well as impurities based on MS

data, peptide mapping, determining post-translational modifications of the target molecule is strongly desired

- Basic Computer skills
- Oral and written presentation skills

WHAT WE OFFER

At Abbott, you can have a good job that can grow into a great career. We offer:

- Training and career development, with onboarding programs for new employees and tuition assistance
- Financial security through competitive compensation, incentives and retirement plans
- Health care and well-being programs including medical, dental, vision, wellness and occupational health programs
- Paid time off
- 401(k) retirement savings with a generous company match
- The stability of a company with a record of strong financial performance and history of being actively involved in local communities

Learn more about our benefits that add real value to your life to help you live fully: www.abbottbenefits.com

Follow your career aspirations to Abbott for diverse opportunities with a company that provides the growth and strength to build your future. Abbott is an Equal Opportunity Employer, committed to employee diversity.

Connect with us at www.abbott.com, on Facebook at www.facebook.com/Abbott and on Twitter @AbbottNews and @AbbottGlobal.

Post doctoral positions at Johnson & Johnson



J&J Vision(JJV), a member of Johnson & Johnson's Family of Companies, is recruiting two Post-Doctoral Fellows in Research & Development (R&D) located in Jacksonville, Florida.

Applications can be found [here](#) and [here](#)

Data Scientist opening at Phillips 66



Phillips 66 is looking to hire a PhD level data scientist with a background in chemistry/chemical engineering:

Apply [here](#).

Northwestern | Chemistry

Postdoctoral Opening

Two immediate postdoctoral openings in Chen Group on ultrafast laser spectroscopy and X-ray spectroscopy/scattering are available to study structural and electronic dynamics in transition metal complexes and clusters using nonlinear optical spectroscopy combined with time-resolved X-ray spectroscopy and scattering. The position will be at NU and Argonne National Laboratory. Interested persons may contact Prof. Lin Chen for further details (l-chen@northwestern.edu).

**Current Opening:**

Princeton Computer Science is seeking a Data Scientist to work with its world-renowned faculty and students to solve biomedical research questions using novel computational approaches. The data scientist will develop novel, scalable algorithms and machine learning techniques and apply these to large repositories of biomedical data. They will work with faculty, post-doctoral researchers, and graduate students in research projects across multiple biomedical applications, particularly in human genetics and disease.

As a Data Scientist you will work in a collaborative, multidisciplinary environment and actively contribute your skills to advance scientific discovery. You will have access to Princeton's first-class resources, the opportunity to co-author academic publications, to offer short courses and workshops on data science, and to collaborate with the larger data science community. You will join a team of five Data Scientists working across multiple disciplines as part of the Schmidt DataX Project at Princeton, an initiative made possible by a major gift from Schmidt Futures.

Appointments are for 3-years and offer a very competitive salary and excellent opportunities for growth and career development. The Biomedical Data Science initiative is spearheaded by the Department of Computer Science, with strong connections to the Lewis-Sigler Institute for Integrative Genomics, Center for Statistics and Machine Learning, and other engineering departments.

Required Qualifications:

- Ph.D. required in computer science, mathematics, statistics, data/computational science, or related disciplinary field or equivalent combination of educational training and relevant experience.
- Strong coding/algorithm prototyping skills, and ability to explain and document work.
- Proficiency in one or more of the following: Python, R, C/C++, or Julia.
- Experience using data analysis, statistics, machine learning, and/or scientific computing to address basic research questions; or commensurate achievements

Questions? Contact Project Manager, [Ellen DiPippo](#)

Ready to Apply: Full job description and access to application on Princeton's job posting system: <https://www.princeton.edu/acad-positions/position/19701>.

Do you have news or opportunities to share in the Weekly Bulletin?
Please email them to Colleen Kjellberg at colleen.kjellberg@northwestern.edu

For an archive of the Department of Chemistry's Weekly Bulletins, please visit: [Bulletin Archive](#)