

2019 WEEKLY BULLETIN
DEPARTMENT OF CHEMISTRY, NORTHWESTERN UNIVERSITY
EVANSTON, ILLINOIS
November 25, 2019

For full schedule, including Center events, please see the Department Calendar:
<http://www.chemistry.northwestern.edu/events/calendar.html>

Arrivals

Yao Yao joined the Facchetti Group

BIP

No BIP for Friday November 29th

Opportunities

University of Calgary In 2016, the University of Calgary was awarded \$75 million, over seven years, from the Canada First Research Excellence Fund (CFREF) for its initiative entitled: “Global Research Initiative in Sustainable Low Carbon Unconventional Resources”. The goal of this research is to dramatically reduce the impact of energy extraction and energy use on the environment.

As part of the implementation of its CFREF scientific strategy and to address the Grand Challenge aiming to develop next generation of CO₂ conversion catalysis, a project in the production climate neutral synthetic fuels through electrocatalytic carbon dioxide reduction is seeking up to three team members at the Postdoctoral level to join the project.

The successful candidates will work within a multidisciplinary team of synthetic chemists, electrochemists, surface scientists and engineers consisting of 5-7 PI's, 5 PDFs and a similar number of graduate students. The primary aim will be to develop new, selective CO₂ conversion catalysts supported on novel conducting materials. While initially CO has been targeted as a product, other potential fuels will also be within scope.

Accordingly, we seek applications from qualified candidates within 2-4 years of their Ph.D. degree to fill Postdoctoral Fellow positions with the following specific qualifications:

1. Synthetic inorganic chemistry (1): Ph.D. in inorganic chemistry with an emphasis on the synthesis and characterization of organometallic and coordination compounds, particularly of the first row transition series. The ability to prepare and manipulate air and moisture sensitive compounds, and characterize them using a suite of modern spectroscopic and analytical techniques. Working knowledge of electrochemistry and electrocatalysis is also strongly desired.

2. Electrochemistry and catalysis: Ph. D. in electrochemistry with an emphasis on electrocatalysis, including homogeneous and surface electrochemistry on novel electrode materials. Experience in the evaluation and benchmarking of new CO₂ reduction catalysts, liquid/gas phase product analysis, surface and materials characterization techniques, and mechanistic analysis would be assets.

The appointments will be for 2 years with a \$55,000/year salary (CND dollars); the positions also come with sufficient research support to be managed by the candidate in consultation with the PI members of the team. In addition, the candidates will be required to work within a team environment and so excellent

communication skills and the ability to work effectively with a diverse group of interdisciplinary researchers is a must. As PDF team members, strong leadership in project management is also expected.

In assembling the CFREF research teams, aggressive diversity and equity targets are in place and so applications from under-represented groups are especially encouraged.

Applications should be sent directly to Prof. Warren Piers, wpiers@ucalgary.ca, and should consist of a current CV, a list of 2-3 referees with contact information and a cover letter indicating your are applying for a position with the *Synthetic Fuels* team as a synthetic inorganic chemist or an electrochemist. Please also indicate your availability. The search will continue until the position is filled, preferably by May 1, 2020.

To be eligible as a Postdoctoral scholar at the University of Calgary, the candidate must have been awarded a PhD or equivalent within the five (5) years immediately preceding the appointment. Please review the Eligibility page for more information prior to applying for this position.

The Department of Chemical Engineering at California State University, Long Beach (CSULB) is searching for a tenure-track assistant professor in the area of Materials Engineering.

Required Qualifications:

- Ph.D. in Chemical Engineering or a closely related field
- Degree at the time of application or official notification of completion of the doctoral degree by August 1, 2020
- Specialization in the area of materials engineering or a closely related field
- Potential for effective teaching at the college level
- Demonstrated potential for successful research, scholarly and creative activities
- Demonstrated commitment to working successfully with a diverse student population

Preferred Qualifications:

- Demonstrated excellence in teaching at the college level
- Experience in teaching courses related to materials engineering
- Demonstrated ability and clear plans for the development of research programs
- Ability to develop the curriculum in the areas of materials engineering, including but not limited to corrosion, formulation and manufacturing of composite materials, nanomaterials, green materials, biomaterials, and energy-storage materials

Duties:

- Teach undergraduate and graduate courses pertinent to materials engineering, such as fluid mechanics, thermodynamics, material purification, heat and mass transfer, and polymer material fabrication
- Develop new courses including laboratories and update existing courses
- Supervise student projects and theses
- Write grant proposals and seek external research funding
- Conduct independent and collaborative research leading to publications and external funding
- Collaborate with faculty members to plan an option or focus on the materials area in the graduate degree and/or the undergraduate degree
- Participate in service to the department, college, university, and community

CSULB seeks to recruit faculty who enthusiastically support the University's strong commitment to the academic success of all of our students, including students of color, students with disabilities, students who are first generation to college, veterans, students with diverse socio-economic backgrounds, and students of diverse sexual orientations and gender expressions. CSULB seeks to recruit and retain a diverse workforce as a reflection of our commitment to serve the People of California, to maintain the

excellence of the University, and to offer our students a rich variety of expertise, perspectives, and ways of knowing and learning.

<http://www.csulb.edu/academic-affairs/faculty-affairs/assistant-professor-of-chemical-engineering-2585>

U.S. Naval Research Laboratory (<http://www.nrl.navy.mil/>)

A full-time postdoctoral research position is available for a Synthetic Organic Chemist. The position is located at the U.S. Naval Research Laboratory (<http://www.nrl.navy.mil/>) in Washington DC, in the Optical Sciences Division (<https://www.nrl.navy.mil/opticalsciences/>). The project is an interdisciplinary effort that includes research collaborators from NRL's Center for Biomolecular Science and Engineering and the Electronics Science and Technology Division. The goal of the project is to identify mechanisms to enhance coherent energy transfer between photoactive molecules attached to DNA nanostructures for application to synthetic light harvesting systems, optoelectronic devices, information processing systems, and quantum computing. The candidate will be primarily responsible for synthesizing a series of organic dyes for incorporation into DNA structures by various chemical means including direct incorporation with phosphoramidite linkers. The ideal candidate will design and synthesize a series of organic dyes with phosphoramidite linkers and perform all aspects of DNA synthesis, purification, and characterization. The candidate must have a Ph.D. in the field of organic chemistry with experience and knowledge of multistep organic synthesis, purification and characterization techniques. The candidates are expected to perform some biochemical protocols and photophysical measurements when necessary, and interact with collaborators in the fields of biology and photophysics. Knowledge and experience in peptide chemistry or DNA chemistry and synthesis using a DNA synthesizer is a plus, but not mandatory. Stipend: \$83,398 annually with health benefits, travel allotment, and reimbursement of relocation costs. Applicants must be US Citizens or US Permanent Residents at time of application. Interested candidates should send a letter of interest, a C.V., and the contact information for at least three references willing to write letters of recommendation confirming their credentials to Dr. Igor L. Medintz at igor.medintz@nrl.navy.mil.

Roosevelt University is seeking applicants for the position of Adjunct Lecturer in Biochemistry for the **Spring 2020 Semester** (January 21 – May 11) at either the Chicago or Schaumburg Campuses. Applicants should have a graduate degree in Chemistry or Biochemistry / Biophysics and be willing to teach "Physical Chemistry for Bioscience" (**BCHM 320**). Send resume and the names, telephone numbers and e-mail addresses of two references to the Assistant Chair, Department of Biological, Physical and Health Sciences, **Roosevelt University**, 430 S. Michigan Ave., Chicago IL 60605. Applications will be considered until the position is filled. Phone: 312-341-3687; Fax: 312-341-4358; <mailto:jtelsr@roosevelt.edu>. *Roosevelt University is an institution dedicated to social justice that serves a diverse population of students. Roosevelt has a campus in Chicago's South Loop and a second major campus in suburban Schaumburg*

The Department of Biology and Chemistry at California State University, Monterey Bay (CSUMB)

invites applications for a tenure-track chemistry faculty position at the assistant level to begin in Fall 2020. We seek applicants with a demonstrated commitment to teaching and research.

- Teaching expectations will be both in lower division chemistry courses and associated lab and electives in the upper division in the applicant's specialty or area of expertise
- The candidate must employ innovative teaching and learning techniques that engage diverse students through active learning, course-based research, and the appropriate use of technology
- There will be a need to develop and maintain a research program that provides opportunities for undergraduates; To do so the candidate must have plans to pursue and obtain extramural funding to support an active research program

- The candidate must sustain scholarly research in chemistry or chemistry education leading to publications and professional visibility
- The successful candidate will collaborate with other faculty and professional outreach programs in the region

Minimum Qualifications

- Ph.D. in Chemistry or Biochemistry by the time of appointment
- Commitment to and experience in teaching undergraduates
- Expertise in any area of chemistry
- Excellent written and oral communication skills

Preferred Qualifications

- Interest in mentoring undergraduate student research projects and/or internships
- Strong interest in contributing to lower division chemistry education as well as specialty upper division courses
- Demonstrated experience with course and curriculum development
- Proven ability and desire to mentor and teach students from diverse cultural, ethnic, educational, and economic backgrounds
- A record of scholarly achievement including publications, grantsmanship, and external funding
- Demonstrated leadership skills

APPLICATION PROCEDURE:

For full consideration, applicants must complete the required online application including three (3) references who can speak to teaching and research abilities, and submit required documents by the priority screening date found at <http://www.csumb.edu/jobs>. Application submissions received after the application screening date will be reviewed at the discretion of the University. Materials submitted become the property of CSUMB and will not be returned.

<http://csumb.peopleadmin.com/postings/5463>

Reasonable accommodations will be provided for qualified applicants with disabilities who self-disclose by contacting University Personnel at (831) 582-3389. For computer/online access you may visit the Tanimura and Antle Family Memorial Library (map).

All employees must be eligible for employment in the U.S.

The Department of Chemistry & Biochemistry at California State University, Los Angeles is again recruiting for a faculty position in Analytical Chemistry at the rank of Assistant Professor. We would appreciate if you would inform doctoral students and/or post-docs throughout your department who are looking for faculty positions of this opening. The position will begin in August, 2020 with the Fall academic term. The full position announcement can be found on the University's website at:

<http://www.calstatela.edu/2020/college-natural-social-sciences/nss-cb-ttf>

CSULA is a comprehensive urban university located east of Downtown Los Angeles with an enrollment of approximately 28,000 students representing one of the most diverse student populations in the country. The Department of Chemistry & Biochemistry offers B.S. degrees in Chemistry and Biochemistry and an M.S. degree in Chemistry with the optional emphasis in Biochemistry. The Department hosts approximately 800 undergraduate majors and 50 Master's students. The Department has a strong

tradition and commitment to research success involving undergraduate and Master's students, and its 17 full-time faculty are active in teaching and research with an ethnically and socioeconomically diverse student population. We invite interested candidates to apply for this position in Analytical Chemistry by the Dec. 1, 2019 deadline.

The Chemical Engineering Department in the College of Engineering at the University of California, Santa Barbara is seeking applications as part of multiple external faculty searches with a start date of July 1, 2020 or later.

At a minimum, applicants must have completed all requirements for a PhD (or equivalent) except the dissertation at the time of application.

Applicants must have a PhD degree or equivalent in chemical engineering or a related field by time of appointment.

Please see links below for application package and submission details.

Two tenure-track Assistant Professor positions, submit application materials via UC Recruit at: <https://recruit.ap.ucsb.edu/apply/JPF01504>

Two Professor positions open to all levels (Assistant, Associate, and Full Professor), submit application materials via UC Recruit at:

<https://recruit.ap.ucsb.edu/JPF01636>

<https://recruit.ap.ucsb.edu/JPF01510>

One Biomolecular engineering professor position open to all levels (Assistant, Associate, and Full Professor), submit application materials via UC Recruit at:

<https://recruit.ap.ucsb.edu/JPF01508>

The department is especially interested in candidates who can contribute to the diversity and excellence of the academic community through research, teaching and service.

The University of California is an Equal Opportunity/Affirmative Action Employer and all qualified applicants will receive consideration for employment without regard to race, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veterans status, or any other characteristic protected by law.

The Department of Physics, Engineering Physics and Astronomy at Queen's University invites applications for a Tenure-track faculty position at the rank of Assistant or Associate Professor with specialization in experimental engineering physics, with a preferred starting date of July 1, 2020. Candidates must have a PhD or equivalent degree completed at the start date of the appointment. The main criteria for selection are academic and teaching excellence. The successful candidate will provide evidence of high quality scholarly output that demonstrates potential for independent research leading to peer assessed publications and the securing of external research funding, as well as strong potential for outstanding teaching contributions at both the undergraduate and graduate levels, and a commitment to academic and pedagogical excellence. Candidates must provide evidence of an ability to work collaboratively in a diverse, equitable, interdisciplinary and student-centred environment. The successful candidate will be expected to make contributions through service to the department, the Faculty, the University, and/or the broader community. Licensure as a Professional Engineer in Ontario, or eligibility to acquire licensure in Canada, is an essential requirement. Salary will be commensurate with qualifications and experience.

The successful candidate for this position will be an experimentalist with a research program that complements the existing research activities of the Queen's engineering physics, condensed matter

physics and optics groups. These groups perform pure and applied research, with core research strength in: nanoscience, quantum and nonlinear optics, surface science, materials science, laser machining, organic and inorganic opto-electronic devices, spintronics, scanning probe microscopy and low-temperature physics. Faculty have ready access to major shared infrastructure at Queen's, including Nanofabrication Kingston (www.nanofabkingston.ca/), which provides researchers with access to leading-edge equipment, methodologies, and expertise for designing and prototyping microsystems and nanotechnologies, and the Centre for Advanced Computing (<https://cac.queensu.ca/>). We have also recently established a new CFI-funded Nanophotonic Research Centre (through the Innovation Fund program), which forms an important research strength within the department and university. Providing opportunities for junior faculty to develop a strong teaching and research profile and maintaining an environment where all faculty can thrive is our top priority. Support for course development and delivery is provided by the Department, the Queen's Centre for Teaching and Learning, and the 'First day to First Sabbatical' program of the Faculty of Arts and Science. Support of junior faculty to develop strong research programs includes a significant Research Initiation Grant, grant writing workshops and review services, funding support for graduate students through the Queen's Graduate Award program, and one-to-one mentorship from senior faculty members. The University invites applications from all qualified individuals. Queen's is committed to employment equity and diversity in the workplace and welcomes applications from women, visible minorities, Aboriginal peoples, persons with disabilities, and LGBTQ persons. All qualified candidates are encouraged to apply; however, in accordance with Canadian immigration requirements, Canadian citizens and permanent residents of Canada will be given priority.

A complete application consists of:

- a cover letter (including one of the two statements regarding Canadian citizenship / permanent resident status specified in the previous paragraph);
- a current Curriculum Vitae (including a list of publications);
- a statement of research interests;
- a statement of teaching interests, experience and vision (which may include mentorship, and promotion of equity, diversity and inclusivity in physics); and,
- Three letters of reference to be sent directly to Prof. Rob Knobel, physhead@queensu.ca

The first review of applications will begin on December 15, 2019, and will continue until a successful candidate is found. Applicants are encouraged to send all documents in their application packages electronically as PDFs to Prof. Robert Knobel at physhead@queensu.ca

<https://www.queensu.ca/physics/tenure-track-faculty-position-engineering-physics>

The Department of Physics and Astronomy at the University of Texas at San Antonio (UTSA) is conducting a search at the Assistant Professor level in Materials Physics (broadly defined). The search spans from experimental to computation to theory in all areas of Materials Physics and is open until December 19.

The posting can be found here: <https://jobs.utsa.edu/postings/14158>

The Department of Chemistry at the University of Houston (UH) invites applications for a tenure-track assistant professor position in experimental polymer chemistry. The faculty member will be expected to teach undergraduate and graduate-level courses in the Department of Chemistry, including possibly introductory general chemistry or introductory organic chemistry, and to perform cutting-edge research in experimental polymer chemistry. To gain promotion to associate professor with tenure in the Department of Chemistry at UH, a faculty member is expected to garner peer-reviewed funding from a

federal agency to support his or her research, publish a substantial number of papers in high impact peer-reviewed journals from research performed at UH, and establish a national reputation for excellence in research during his or her probationary period. In addition to these criteria for research excellence, the Department expects the candidate to excel at teaching, as documented through teaching evaluations, and to serve on various Departmental, College, and University committees.

To apply, upload a cover letter, full curriculum vitae, one-page statement of teaching interests and experience, summary of research plans (five pages maximum), all as PDF documents. During the application process, the applicant will be prompted to provide the names and email addresses of three people to whom requests will be sent directly for letters of recommendation.

The University of Houston, with one of the most diverse student bodies in the nation, seeks to recruit and retain a diverse community of scholars. Additionally, the University is responsive to the needs of dual career couples.

The University of Houston is an Equal Opportunity/Affirmative Action Institute. Minorities, women, veterans, and persons with disabilities are encouraged to apply.

Qualifications

Ph.D. in chemistry, materials chemistry, or chemical physics. Postdoctoral research experience or the equivalent industrial research experience strongly preferred.

https://uhs.taleo.net/careersection/ex2_uhf/jobdetail.ftl?job=FAC001078&tz=GMT-05%3A00&tzname=America%2FChicago