



a place of mind
THE UNIVERSITY OF BRITISH COLUMBIA

Canada Excellence Research Chair in Quantum Materials and Devices

The *University of British Columbia* has been awarded a Canada Excellence Research Chair (CERC) in Quantum Materials and Devices. This major program is designed to attract a researcher of the highest calibre, with \$10 million in CERC research support over seven years, plus over \$30 million in new investments by the University.

UBC has a strong contingent of Condensed Matter researchers in the Department of Physics and Astronomy, an interdisciplinary research environment in the Advanced Materials and Process Engineering Laboratory (AMPEL), and is supporting this field through the development of a Quantum Matter Institute, now partnered with the Max Planck Society in Germany through major bilateral investments in collaborative research. Coupled to this CERC initiative, UBC is committed to an additional three faculty positions in complementary fields, additional research funding, and major expansion of research space.

Applicants must have a PhD Degree or equivalent, in Physics or in related areas of Chemistry, Materials Science or Engineering. An outstanding research record is essential, but could be rooted in industry or national labs as well as academic institutions.

The candidate will be appointed at the level of Professor, but researchers at earlier career stages are welcome to apply, and applicants from research backgrounds outside of academic institutions will be considered. The candidate will contribute to the University's commitment to excellence in teaching and research supervision.

UBC hires on the basis of merit and is committed to employment equity. All qualified persons are encouraged to apply. We especially welcome applications from members of visible minority groups, women, Aboriginal persons, persons with disabilities, persons of minority sexual orientations and gender identities, and others with the skills and knowledge to engage productively with diverse communities.

The University is also responsive to the needs of dual career couples and we encourage all qualified candidates to apply. Canada Excellence Research Chairs are open to individuals of any nationality.

Interested individuals are encouraged to contact the Chair of the Search Committee, Simon Peacock, Dean of Science, or our search consultants, Barbara Morrison and Brent Cameron of Odgers Berndtson, at 1-604-685-0261, or barbara.morrison@odgersberndtson.ca for more information. To apply directly, please email to the above address a copy of your CV, publications list, and a statement of research interests. Review of applications will begin in March/April 2013 and continue until the position has been filled.



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FACULTY POSITION

Chemical and Biomolecular Engineering Department

The Chemical and Biomolecular Engineering Department at The University of Akron seeks to fill a full-time, tenure track assistant professor faculty position as part of its Corrosion Engineering Program for the Fall 2013 semester. We are seeking highly qualified candidates with an earned PhD in Chemical Engineering, Materials Science, or closely related discipline. Candidates are encouraged to apply who have expertise in: fracture mechanics as it relates to corrosion fatigue, SCC and hydrogen embrittlement, computational modeling in corrosion, and/or high temperature oxidation.

The College's diverse faculty members have won numerous national and international awards. More information related to the College of Engineering may be found at www.engineering.uakron.edu and more information about the corrosion engineering program in particular can be found at www.uakron.edu/corrosion. Questions about the department may be directed to evanse@uakron.edu.

The successful candidate is expected to teach a diverse group of students at the undergraduate and graduate level, supervise MS and PhD students, and manage a vigorous, externally funded, scholarly research program. Participation in faculty governance, professional service including outreach to the community and instructional support are also required for this full-time, nine-month position.

For complete details and to apply for this position, visit <http://www.uakron.edu/jobs/>, Job 7796.

The University of Akron is committed to a policy of equal employment opportunity and to the principles of affirmative action in accordance with state and federal laws.

Canada Excellence Research Chair in Materials Engineering for Unconventional Oil Reservoirs



LEADING THE WORLD IN RESEARCH AND INNOVATION

The **Canada Excellence Research Chair (CERC)** in Materials Engineering for Unconventional Oil Reservoirs at the University of Calgary is a world-class opportunity for an outstanding researcher to lead a multidisciplinary research agenda that will discover new solutions to many of the energy industry's grand challenges. As one of the most prestigious research awards in Canada, the CERC will be the nucleus of a dynamic research team, supported by new investments of over \$25M that will integrate materials science, petroleum and reservoir engineering, chemical engineering and bioengineering to find transformative research breakthroughs and commercial opportunities not possible within any one discipline alone. The CERC will also engage the heavy oil industrial sector to explore and field-test new energy and fuel recovery solutions that minimize water use and environmental impacts.

Likely an engineer or scientist working in materials science, you will energize and enable further development of a broad research ecosystem in unconventional oil reservoirs. By building on a foundation of research excellence in new materials, chemistry, biology, micro- and nanomaterials science, engineering and technology development, you will embrace the

CERC vision and unique resources to make game changing discoveries in unconventional oil reservoir research.

A new era is unfolding at the University of Calgary, Canada's most enterprising city. *Eyes High* is the University's new strategic direction, a bold and ambitious vision to become one of Canada's top five research universities, grounded in innovative learning and teaching and fully integrated with the community of Calgary by the University's 50th anniversary in 2016. With Research and Academic Plans that identify and enable *Energy Innovations* as a strategic priority and housing one of the world's largest research programs related to unconventional oil, the University of Calgary is uniquely positioned to lead the transformation of unconventional oil technologies.

The University of Calgary welcomes diversity and encourages applications from all qualified women and men, including persons with disabilities, members of visible minorities, and Aboriginal persons.

To explore this exciting opportunity further, contact +1-403-410-6700 or calgary@odgersberndtson.ca. To be considered for this position, submit your CV and related information at www.odgersberndtson.ca/en/careers/11473.



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UNIVERSITY of HOUSTON

CULLEN COLLEGE of ENGINEERING

FACULTY POSITION Semiconductor Device Manufacturing

The Department of Mechanical Engineering at the University of Houston (UH), Cullen College of Engineering, seeks a highly motivated and creative person for a faculty position to build a world-class research program on semiconductor device manufacturing with emphasis on energy applications. Flexible electronics manufacturing is another area of interest. The University of Houston has recently made a significant investment to establish a 74-acre Energy Research Park (ERP) and has now established a 13,000 sq. ft. state-of-the-art Energy Devices Fabrication Laboratory in the Park. Details of the ERP can be found at <http://www.uh.edu/af/universityservices/erp/>. Thin film-based manufacturing and continuous as opposed to batch processing, including roll-to-roll coating, are particular focus areas.

The appropriate candidate would have demonstrated internationally-recognized leadership in research in the semiconductor device manufacturing including device design and simulation, fabrication, diagnostics, and reliability testing. Semiconductor device manufacturing research experience in the target areas of energy and flexible electronics is highly preferred. Successful candidates must have a strong, demonstrated scholarship as well as a commitment to teaching.

This position requires a PhD degree in engineering or related discipline. Interested persons should submit a curriculum vita detailing academic and professional experiences, publications, research support, research and teaching summaries, and research and teaching goals/vision to Prof. Venkat Selvamanickam, Dept. of Mechanical Engineering, University of Houston, Houston, Texas, 77204-4006. The target start date is Fall 2013.

The University of Houston is an equal opportunity/affirmative action employer. Minorities, women, veterans, and persons with disabilities are encouraged to apply.



ELECTRON MICROSCOPIST

Advanced Materials Processing and Analysis Center | Materials Characterization Facility

Materials Characterization Facility (MCF, www.ampac.ucf.edu/mcf) of Advanced Materials Processing and Analysis Center (AMPAC, www.ampac.ucf.edu) at University of Central Florida is seeking to hire a scientist/engineer to manage and operate its electron microscopes with an emphasis on transmission and scanning electron microscopy. The University of Central Florida is a major metropolitan research university located in Orlando, Florida, with over 50,000 students. MCF is a 10,000-sq.ft. multiuser facility with two TEMs, three SEMs, one CrossBeam FIB/SEM, two SIMS, EPMA, FIB, AES, XPS, RBS, MicroRaman, AFM/STM, LSCM, and complete specimen preparation laboratory. The TEM and SEM laboratory currently comprises a JEOL 1011B TEM, FEI Tecnai F30 TEM/STEM, Zeiss ULTRA-55 FESEM, JEOL 6480LV SEM, Hitachi 3500N SEM, and associated sample preparation equipment including Zeiss 1540EsB CrossBeam and FEI 200TEM FIB. MCF is a vibrant multiuser facility that provides microscope and spectroscope facilities to a wide range of users from academia, industry, and national laboratories around the world from all disciplines of science, engineering, and technology. Typically on an annual basis, 200 UCF internal users and 30 external users including 20 private companies work at and with MCF for their materials characterization needs.

We are particularly interested in individuals who have a strong record with TEM/STEM for solving scientific and engineering challenges, training students, and operation maintenance. The position will involve management and operation of instruments on a day-to-day basis, support and training of users, instrument maintenance, and instrument development. The applicant should have strong interpersonal as well as oral and written communication skills. We are seeking a TEM/SEM microscopist with a minimum of Master's degree in related sciences/engineering or Bachelor's degree and at least two years appropriate experience. Doctoral degree with a significant expertise and experience in TEM/STEM would be preferred.

Review of candidates will begin immediately, and will continue until the position is filled. Interested candidates should submit an application via <https://www.jobswithucf.com/> for position number 41482, Coordinator, Research Programs/Services, and include a curriculum vitae, a summary of expertise and accomplishments, and contact information of three references. Applicants are encouraged to submit the same content to Prof. Yongho Sohn, Yongho.Sohn@ucf.edu, Associate Director for MCF, Advanced Materials Processing and Analysis Center, University of Central Florida.

The University of Central Florida is an affirmative action/equal opportunity employer. As a member of the Florida State University System, all application materials and selection procedures are available for public review.



CDTi

SENIOR SCIENTIST (NEW MARKETS) Clean Diesel Technologies, Inc.

Clean Diesel Technologies, Inc. (CDTi) is a leader in innovative materials and catalyst development for emissions control, enabling OEMs to meet emissions regulations with advanced nanotechnology and reduced precious metal. CDTi is looking to expand its market focus using its materials technology platform, and is inviting applications for a Senior Scientist position to help lead the materials technology and product development initiative for future emissions control, chemical process, and new energy efficiency markets.

The successful candidate will be responsible for technology leadership, IP protection, and initial product concepts in identified new market verticals using CDTi base technology and other platforms.

Candidates must have demonstrated ability to undertake independent, interdisciplinary, and collaborative research; materials synthesis, testing, and characterization; and writing and filing patents. The candidate must demonstrate the leadership abilities to build a thriving technology and product innovation program in new markets and effectively communicate with a wide variety of audiences.

Required Education and Work Experience

- PhD degree in Solid State Chemistry, Materials Science, Chemistry, or related field
- A minimum of 3-5 years of relevant industrial post-doctoral experience, including technology development for new market and business development

- Knowledge of materials design, synthesis, and application
- Characterization of materials and demonstrated analytical skills in problem analysis and resolution
- Knowledge of materials function and testing for markets of interest
- Experience and skills in licensing, JDA, and JV agreements to be preferred
- Demonstrated project management skills
- Track history of managing to milestones and timetables and delivering results
- Proven skills in effective written and verbal communications

Location: Ventura County, California

Qualified applicants are invited to submit a cover letter, resume, and salary expectations in confidence to hr@cdti.com. Please reference **SS-NM** in the subject line of your submission. Thank you in advance for your interest. No phone calls please.

Company Contact:

Alex Rivera, Director of Human Resources
805-205-1307
arivera@cdti.com



TEM Lab/Group Leader | Postdoctoral Positions | Operator Positions

Multi-disciplinary Materials Research Center (MMRC)
Frontier Institute of Science and Technology (FIST)
Xi'an Jiaotong University (XJTU)

Frontier Institute of Science and Technology (FIST) is a large selective investment by XJTU in an effort to establish a world-class, multi-disciplinary research institute. To achieve this goal, FIST is setting up ten research centers of excellence in Physics, Chemistry, Bio-Science/Life-Science/ Basic-medical-Science, and Materials Science, and adopting a new management system similar to that of most U.S. universities. The Multi-disciplinary Materials Research Center (MMRC) is the first research center of FIST. It focuses on interdisciplinary research with emphasis on smart materials such as piezoelectrics, shape memory materials, and magnetostrictive materials. Over the years, MMRC has gained a significant reputation for its high-quality research and people.

To strengthen the microscopic characterization of MMRC's diverse research, MMRC has purchased a JEOL 2100F high-resolution transmission electron microscope, together with a full set of periphery equipment. We have decided to establish a TEM laboratory/group and all the positions are open for application.

Positions Available (full-time):

1. One TEM Lab/Group Leader (tenured or tenure-track depending on qualifications)
2. One or two Postdoctoral Positions
3. One TEM Operator

Job Description:

- The lab/group leader will lead a research group and generate high-quality research using TEM.
- Collaborate with MMRC members and carry out TEM characterization experiments for the entire MMRC.
- TEM operator will be in charge of TEM operation, training of users, maintenance of the TEM and its periphery equipment, and establish an efficient system to assist users to obtain high-quality results.

An eligible candidate for the **TEM lab/group leader position** should have a track record for excellence in research using TEM and the potential to lead the lab/group to success. Depending on the qualifications, the position may be tenured or tenure-track. Successful candidates will be provided with a competitive start-up package including an annual salary of 300k-500k RMB, and competitive start-up funds, together with many other benefits. Position offer and start-up package will vary with the candidate's qualifications. See our Chinese ad at <http://fist.xjtu.edu.cn/zp.php?id=5> for details.

An eligible candidate for the **postdoctoral positions** should have at least two years of experience in TEM and have demonstrated a potential for excellence. An ideal candidate for the TEM operator position should have at least five years hands-on experience in TEM. We shall provide competitive salary and other benefits. See our Chinese ad at <http://fist.xjtu.edu.cn/zp.php?id=5> for details.

Interested individuals should provide a cover letter, CV, and a list of ten representative publications (not required for TEM operator position). The application materials should be sent to:

Dr. Xiangli Meng
Frontier Institute of Science and Technology (FIST)
Xi'an Jiaotong University
1 West Building, Yanxiang Road
Yanta District, Xi'an, Shaanxi Province, P.R. China, 710054
Tel/Fax: +86 29 8339-5131
Email: fist@mail.xjtu.edu.cn

XJTU is an AA / EOE employer.



RESEARCH SCIENTIST POSITION

Boise State University invites applications for the position of Research Scientist, to manage a research and instrumentation center that houses several advanced materials research instruments, including a multi-user XPS and an ESR spectrometer, and to coordinate experimental research in several areas of condensed-matter and nanomaterials physics. This position requires a good working knowledge of the theory and operation of various materials characterization tools, most importantly XPS and/or ESR.

Good troubleshooting and maintenance skills are essential. Excellent communication skills are required, to write high-quality manuscripts and grant proposals, to work with vendors/manufacturers for instrument evaluation/purchase, to obtain timely service support for instrumentation, and to supervise and train students and users. Although a doctoral degree in Physics or related areas is generally required, an individual could qualify with a BS/MS degree and extensive research experience in relevant areas. A competitive salary and benefits package is available for this position. Email application materials to physics@boisestate.edu before May 08, 2013 with the subject line "**Research Scientist—AS-0042-23**". For more details, please visit <http://www.boisestate.edu/physics>.

EEO/AA Institution, Veterans preference.



MONASH University

THE UNIVERSITY OF
WARWICK

PROFESSOR OF POLYMER MATERIALS

Monash University | University of Warwick

The Monash Warwick Alliance represents an innovative and unique advancement in the higher education sector. Two world-class institutions are coming together to accelerate the exchange of people, ideas and information, exploiting the opportunities offered by their different geographies. This joint venture is extraordinarily well-positioned to thrive in the globalised and technology-enabled world of international higher education.

Both Monash and Warwick have established reputations for research excellence. The Monash Warwick Alliance offers a new model for research-led institutions to meet the global challenges of the 21st century.

A key aim of the Alliance is to help meet the increasing student, industry and government demand for universities to produce graduates with a global education, and to undertake research that addresses world-relevant and strategically important problems.

The Opportunity

Monash University and the University of Warwick are seeking to recruit an outstanding scientist to pursue internationally leading research in polymeric materials science and engineering.

You will primarily be based at Monash but are expected to spend a significant amount of time at Warwick, to direct substantial research efforts in both institutions and to contribute to teaching and leadership. Resources will be available to facilitate this international programme, including personnel, travel and other budgets.

The Department of Materials Engineering at Monash University has excellent modern facilities and is moving into a large, exciting, multidisciplinary research-themed building in early 2013. In addition to a range of aspects of polymer engineering, including polymer nanocomposites, other areas of departmental research include biomaterials, nanomaterials, metals and alloys, functional materials, corrosion and modelling of materials. The department's equipment covers most areas of materials processing and characterisation. The Australian Synchrotron is across the road, and the Melbourne Centre for Nanofabrication is next door. Substantial numbers of polymer-related researchers from CSIRO will also be collocated in the building. A number of materials-related divisions of CSIRO are adjacent and the University also houses other significant related institutes, such as in stem cell science and regenerative medicine. Monash University is located in the south east corridor of Melbourne, with significant amounts of local industry.

The groups in Warwick in polymers are world leaders in polymer chemistry and in polymer materials engineering, and in materials engineering more generally, and will provide excellent and unique possibilities for collaboration and interaction.

We are seeking an academic with an outstanding international reputation in one or more of the following fields: polymer characterisation (including advanced characterisation techniques such as synchrotron characterisation), physical chemistry of polymers, polymer physics, polymer processing (including polymer nanofabrication and nanomaterials) and other aspects of polymer engineering. You will have the ability to complement on-going research at Monash or Warwick.

A generous start-up package is available.

Duration

Continuing

The Benefits

Remuneration package (which includes employer superannuation contribution of 17%): Relocation travel, removal allowance and salary packaging are available.

Monash offers a range of professional development programs, support for research, study and overseas work, generous maternity leave and flexible work arrangements.

Applications

To view a detailed Position Description and to submit an application, please visit: <http://www.monash.edu.au/jobs/>. Enter '510720' in the search field and click Go.

Enquiries

Professor George Simon, george.simon@monash.edu, + 61 39905 4936

Closing Date

Monday, 20 May 2013, Aus. Eastern Standard Time