

Positions Available

MASDAR INSTITUTE
OF SCIENCE AND TECHNOLOGY



معهد مصدر
للعلوم والتكنولوجيا



The Center for Nanoscale Materials at Argonne National Laboratory has an opening for a Postdoctoral Appointee in the area of synthesis and characterization of complex oxide thin films and their applications in developing piezo-actuated MEMS/NEMS. The candidate must have completed a Ph.D. degree in Materials Science, Physics, Mechanical engineering or a related field not earlier than 2007. The candidate should have strong expertise in synthesis of complex oxide thin films using PVD or MOCVD processes and their characterization using X-ray diffraction, SEM, XPS, and AFM techniques. Expertise on piezoresponse force microscopy (PFM) to study ferroelectric domains and piezoelectric performance, and /or on RBS analysis would be a plus. The main objective of the project is to integrate complex oxide thin films with other relevant materials of interest for fabricating piezo-actuated nanomechanical switches. The candidate is expected to work in an interdisciplinary environment with a team of researchers having Physics, Materials Science and Electrical Engineering backgrounds. Experience in working in a clean room environment and using microfabrication techniques will be considered as added advantage but not a necessary requirement.

Interested candidates should send a detailed CV, along with a list of publications, and the names and addresses of three references through the Argonne website at <http://www.anl.gov/jobs>, for requisition number 316273 CNM. For additional information, you can contact Dr. Orlando Auciello (e-mail: auciello@anl.gov).

The CNM is a national user-based center dedicated to nanoscience and nanotechnology. Further details about the CNM can be found at its website, <http://nano.anl.gov/>.

Argonne is a U.S. Department of Energy laboratory managed by UChicago Argonne, LLC.

Argonne is an equal opportunity employer, and we value diversity in our workforce.

FACULTY POSITIONS

Materials Science and Engineering

The Masdar Institute of Science and Technology, located in Abu Dhabi, U.A.E., is a private, not-for-profit, independent, graduate-level, research-driven institute developed with the support and cooperation of the Massachusetts Institute of Technology (MIT). Starting fall 2009, the Institute has begun offering graduate degree programs in science and engineering disciplines with a focus on advanced energy and sustainable technologies (www.masdar.ac.ae and <http://web.mit.edu/mit-tdp/www/>).

The Materials Science and Engineering program at Masdar Institute is seeking faculty applicants at the assistant, associate, and full professor levels. The successful candidate, with a PhD degree in science or engineering, is expected to have a broad background and expertise in materials science with particular emphasis on computational materials science. Successful applicants are expected to build a research program that contributes to Masdar Institute's existing strengths in sustainability and renewable energy while enhancing strategic areas targeted for growth, such as materials for micro- and nano-electronics. Applicants should hold a PhD degree in materials science or a related field with a solid background in general materials science, computational methods, and materials modeling. A demonstrated commitment to excellence in teaching and research is essential, as are excellent written and oral communication skills.

The Masdar Institute is committed to establishing a strong, world-class research in materials, structures, and devices for a wide range of applications including renewable energy, sensors, LEDs, advanced organic-inorganic devices, and micro- and nano-electronics. Preference will therefore be given to outstanding candidates with a demonstrated expertise and a strong record of published research in one or more of these areas.

Applicants should have a strong record of published research, experience in supervising graduate students, and relevant teaching experience. In addition, candidates are expected to develop strong collaborative interdisciplinary research programs and seek external funding.

Application submittal information:

Initial screening of applications will begin immediately and the positions will remain open until filled. Application materials should include applicant name and contact information, a curriculum vitae, statements of research and teaching interests, an application letter describing the applicant's current position and how his/her experience matches the position requirements, and e-mail contact information for at least three references. Materials must be submitted electronically to masdar-faculty-applic@mit.edu.

Positions Available

POSTDOCTORAL RESEARCH ASSOCIATE
Institute for Shock Physics
Washington State University

The Institute for Shock Physics at WSU has an immediate opening for a post-doctoral research associate to conduct experimental research on the mechanical response of solids subjected to shock wave loading. For more information and application procedures, please see <http://www.shock.wsu.edu/opportunities.html>.

EEO/AA/ADA

RESEARCH ASSOCIATE POSITION
Transmission Electron Microscopy



The Institute for Advanced Materials, Devices and Nanotechnology (IAMDN) and the Department of Materials Science and Engineering at Rutgers University are currently seeking a candidate for a Research Associate position in Transmission Electron Microscopy.

The successful candidate should have a PhD degree in Materials Science or related discipline and have extensive experience in transmission electron microscopy including HAADF-STEM and EELS spectroscopy. Responsibilities will involve supervision of TEM/STEM microscopes, student training, and guidance for implementation of new microscopy and spectroscopy techniques for materials research. The candidate will also have opportunities for research in the areas of advanced battery materials, thin film electronic devices, and nanomaterials.

Interested candidate should send their CV with three references to:

Professor Frederic Cosandey
 Department of Materials Science
 and Engineering
 Rutgers University, 607 Taylor Road
 Piscataway, NJ 08854-8065
cosandey@rci.rutgers.edu
 Tel: 732-445-4942

Rutgers is an Equal Opportunity/Affirmative Action Employer. The University has a strong commitment to achieving diversity among faculty and staff, and strongly encourages women and members of underrepresented groups to apply.

The Advantage Is You!

With a 50-plus year history of leadership, Tyco Electronics is a \$10.3 billion global provider of engineered electronic components for thousands of consumer and industrial products. Our 75,000 committed employees working in more than 50 countries around the world give us a competitive advantage.

Tyco Electronics is hiring for the following positions in **Harrisburg, PA**:

Manager – Materials Research (Job ID #2010-18873)

Responsibilities: Manage the internal and external resources required to develop new technologies. Partner with the business units and Lab Director to establish research directions and strategy. Manage the overall team budget, laboratories, university relationships and development of the team members. Nurture a culture in the lab of being fast, data driven, decisive with a high level of technological competence. Develop technologies in coordination with the other research teams and the business unit advanced development teams. Lead technology development to a point where the business units can commercialize them.

Qualifications: Experience with contact physics to metallurgy, plating, polymer science and composites. Broad technological and supervisory capabilities required. PhD in Engineering or Physics is preferred. A passion for technology and learning required.

Surface Engineer – Contact Physics (Job ID #2010-18875)

Responsibilities: Maintain capability in the laboratory and contribute to the 5 year lab strategic and equipment plans. Apply knowledge of the fundamental sciences to solve challenging problems. Develop new technologies to a point where the business units can commercialize them.

Qualifications: Expertise in physics, and materials science with specific expertise in contact physics desired. PhD in engineering or physics is preferred. Experience or familiarity with the following tools is preferred: SEM, FIB, EDS, metallography and electrical test equipment. A passion for technology and learning required.

Tyco Electronics is hiring for the following position in **Middletown, PA**:

Lead Thermal Design and Simulation Engineer (Job ID #2010-18104)

Responsibilities: Be a central resource to educate others on how to do system design and testing for the global corporation. Apply conventional thermal design skills to non-typical applications including manufacturing processes (stamping and molding). Support multiphysics application (electrical engineering, mechanical structural design, thermal heat transfer, etc.). Research and identify a roadmap for where TE needs to be in 3-5 years in the areas of thermal design, simulation and multiphysics. Model/test concepts for production and research. Work with business units to identify skill needs and gaps for thermal system design.

Qualifications: 5-10 years of experience actively modeling thermal systems. BS in Mechanical Engineering required. MS/PhD in Thermal Analysis preferred. Experience with structural design, multiphysics applications and simulation a plus. Practical experience in design and simulation of thermal system including cooling electronics systems. Icepack or similar software. Good written and oral skills in English required.

Interested candidates please apply via our website:
<http://www.tycoelectronicscareers.com/>

Tyco Electronics is an Affirmative Action/
 Equal Opportunity Employer.



CERAMIC ENGINEERS / MATERIALS SCIENTISTS

ConocoPhillips Research & Development organization in Bartlesville, OK seeks ceramic engineers or material scientists for our **high temperature fuel cell program**. Qualified applicants will possess a PhD degree in Materials Science and Engineering or closely related discipline and have at least two years of postdoctoral training in ceramic materials synthesis and characterization.

Hands-on laboratory skills and in depth knowledge of developing novel ionic and mixed ionic and electronic conductors for high temperature fuel cells and characterizing bulk and grain boundary properties of newly developed materials by various electrochemical and structure-sensitive analytical tools are required. In addition the candidate must demonstrate technical proficiency and expert knowledge in high temperature oxide materials and electrochemistry; evidenced by a review of accomplishments, publications, and patents.

To submit resume, please visit www.conocophillips.com/careers and apply under job code 008U3.

Positions Available



**TENURE-TRACK
FACULTY POSITION**
Nuclear Materials



The Faculty of Engineering at McMaster University invites applications for a tenure-track faculty position in the area of Nuclear Materials. The appointment is intended to be at the Assistant or Associate Professor level; however, consideration will also be given to exceptional candidates at the Full Professor level. This position will expand upon current McMaster expertise in nuclear engineering and materials research as well as contributing to the Faculty's strategic initiatives in sustainability.

The applicant should have expertise in the field of nuclear materials, with a focus on structure and properties relationships of various reactor components and technologies. The applicant is expected to develop a strong externally funded research program and capitalize on existing and new infrastructure at the university including the McMaster Nuclear Reactor, the accelerator laboratories and the state-of-the-art characterization facilities at the Canadian Centre for Electron Microscopy, and a new facility to characterize irradiated samples. McMaster University has also received new funding from the Canada Foundation for Innovation (CFI), the Ontario Research Fund Research Infrastructure program, and the Natural Sciences and Engineering Research Council totaling approximately \$50 million in infrastructure in the areas of nuclear energy and \$20M in materials analysis at the Canadian Centre for Electron Microscopy. This position will build upon faculty expertise in materials engineering, nuclear engineering, as well as facilities and experience available through the Brockhouse Institute for Materials Research and the McMaster Institute for Energy Studies.

Applicants must have earned a PhD degree in Materials Science/Engineering or Engineering Physics or a closely related discipline. The successful applicant will be expected to develop an effective research program and demonstrate a strong commitment to teaching and curriculum development at both the undergraduate and graduate levels. The Faculty expects the successful candidate to become registered as a Professional Engineer in the Province of Ontario.

This position is available as of **July 1, 2010** and will remain open until the position is filled. Applications by e-mail are encouraged.

All qualified applicants are encouraged to apply; however, Canadian Citizens and permanent residents will be given priority. McMaster University is strongly committed to employment equity within the community, and to recruiting a diverse faculty and staff. The University welcomes applications from all qualified applicants, including women, members of visible minorities, Aboriginal persons, members of sexual minorities, and persons with disabilities.

Interested applicants should send a letter of application, curriculum vitae, statements of teaching and research interests, a selection of research publications, and the names and addresses of at least three references to:

Faculty Selection Committee
Department of Materials Science and Engineering
McMaster University
1280 Main Street West
Hamilton, Ontario, L8S 4L7 Canada
E-mail: matsci@mcmaster.ca
Reference: **NUCLEAR 2010**

Alfred University

**POSTDOCTORAL
RESEARCHER
POSITIONS**

**Kazuo Inamori School
of Engineering**

The Kazuo Inamori School of Engineering at Alfred University has three available postdoctoral researcher positions for a 3-year project involving the study and development of materials for sodium-metal halide batteries. We are looking for qualified applicants in the following areas:

Computational Modeling

The applicant must have significant expertise in molecular dynamics simulations and solid state defect chemistry of oxides. Experience in classical and quantum mechanical computational techniques is strongly preferred. Experience with finite element analysis and lumped parameter modeling is also needed, with emphasis placed on familiarity with the COMSOL and Octave software packages.

Ceramic Ionic Conductors

The applicant must have significant expertise in using impedance spectroscopy and X-ray diffraction to characterize the electrical properties and structure of ceramic materials. Familiarity with advanced ceramic processing techniques such as injection molding, electrophoretic deposition, hot isostatic pressing, etc. is preferred. Experience with mechanical property testing is also desirable.

High-Temperature Sealing Glasses

The applicant must have significant expertise in glass formulation and techniques for characterizing thermal properties of glass (DTA/DSC, dilatometry, viscosity). Experience with characterization techniques that may be applied to the study of glass corrosion/ reaction products such as X-ray diffraction, X-ray photoelectron spectroscopy, electron microprobe analysis, etc. is also required. Experience working in glove boxes is desirable.

Researchers hired for these positions will be eligible for New York State benefits, including health insurance.

The application deadline is June 30, 2010.

Inquiries and CV's may be submitted using the following contact information:

Dr. Matthew Hall, Director
Center for Advanced Ceramic Technology
Kazuo Inamori School of Engineering
Alfred University
2 Pine Street, Alfred, NY 14802
Tel: +1 607-871-2486
E-mail: hallmm@alfred.edu

Alfred University is fully committed to Equal Employment Opportunity and to attracting, retaining, developing and promoting the most qualified employees without regard to their race, gender, color, religion, sexual orientation, national origin, age, physical or mental disability, citizenship status, veteran status, or any other characteristic prohibited by federal, state, or local law.