



# RUTGERS

THE STATE UNIVERSITY  
OF NEW JERSEY

## FACULTY POSITION

Department of Mechanical and Aerospace Engineering

The Department of Mechanical and Aerospace Engineering at Rutgers University (<http://mech.rutgers.edu>) invites applications and nominations for a tenure-track/tenured faculty position at the Assistant, Associate, or Full Professor level beginning in September 2011. Candidates with expertise in emerging areas of **advanced manufacturing systems, nano-micro-meso scale manufacturing, pharmaceutical manufacturing, advanced/alternative energy systems**, and sustainable systems are highly encouraged to apply.

Candidates should demonstrate a capacity to develop a nationally-recognized, externally-funded, scholarly research program. Excellence in teaching in both our undergraduate and graduate programs is also expected. The candidate must hold an earned doctorate in Engineering or a closely related field. We also encourage strong candidates in all the relevant disciplines of Mechanical and Aerospace Engineering to apply. Candidates are expected to develop strong interdisciplinary collaborations, in particular within the Rutgers Institute of Advanced Materials, Devices, and Nanotechnology (IAMDN, <http://iamdn.rutgers.edu>) or/ and the National Science Foundation Engineering Research Center for Structured Organic Particle Systems (ERC-SOPS, <http://ercforsops.org>).

Please send your application via mail to Search Committee Chair, Mechanical and Aerospace Engineering Department, Rutgers University, Piscataway, NJ 08854, USA, or email to [maefsearch@jove.rutgers.edu](mailto:maefsearch@jove.rutgers.edu). Applications should include a detailed resume including the name and contact information of at least three references, and a statement of research and teaching interests. Applications will be reviewed until the position is filled.

*Rutgers is an equal opportunity/affirmative action employer.*

# UC DAVIS

UNIVERSITY OF CALIFORNIA

## FACULTY POSITIONS

Department of Electrical and  
Computer Engineering

The Department of Electrical and Computer Engineering at the University of California, Davis invites applications for multiple faculty positions at all levels with a research focus on either: 1) physical electronics related to novel materials, structures, and devices, particularly nanoscale, biomolecular, and self-assembled approaches related to biology/medicine, information processing, and energy; or 2) microwave, millimeter-wave, and terahertz electronics related to devices, circuits, and systems. For the second area we are particularly interested in semiconductor electronic devices, MEMS, electromagnetics, antennas, circuits and systems related to chemical/biological spectroscopy, biomedical imaging/detection, gigabit wireless communications, remote sensing, energy harvesting, and sensors.

Candidates must have a PhD degree or equivalent, a commitment to teaching and service, and a potential for attracting significant extramural research support. For full consideration, applicants should apply by **February 28, 2011**. The positions remain open until filled. Additional information and application instructions can be found at <http://www.ece.ucdavis.edu/>.

*UC Davis is an affirmative action/equal opportunity employer and is dedicated to recruiting a diverse faculty community. We welcome all qualified applicants to apply, including women, minorities, individuals with disabilities, and veterans.*

## ASSISTANT PROFESSOR IN MATERIALS SCIENCE AND ENGINEERING

The Department of Materials Science and Engineering at the University of Toronto invites applications for a tenure-track faculty position at the rank of Assistant Professor, effective on or after July 1, 2011. The successful candidate will show leadership and innovation in research and teaching. Applicants will be expected to be in one of the following areas:

- Energy Related Materials
- Sustainable Materials Processing
- Computational Materials Science
- Biomaterials for Biomedical Applications

Applicants are expected to have a PhD degree or equivalent, demonstrated excellence in research, and excellent teaching skills. Postdoctoral or industrial experience is an asset. The successful candidate will be expected to initiate and lead an independent research program of international caliber, and to teach at the undergraduate and

post-graduate levels. Eligibility to register as a Professional Engineer in Ontario is strongly desirable. Salary will be commensurate with qualifications and experience.

Applications will be accepted until **February 28, 2011**. You must submit your application online using the website: <http://www.jobs.utoronto.ca/faculty.htm>.

Please ensure that you include a current CV, a clear statement of your specific teaching and research interests, and the names of four persons able to provide references in support of your application. For more information about our department, please visit our home page at [www.mse.utoronto.ca](http://www.mse.utoronto.ca). All inquiries about the position should be directed to [mse.chair@utoronto.ca](mailto:mse.chair@utoronto.ca).

*All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from visible minority group members, women, Aboriginal persons, persons with disabilities, members of sexual minority groups, and others who may contribute to the further diversification of ideas.*



Materials Science & Engineering  
UNIVERSITY OF TORONTO



Honda Research Institute USA

## RESEARCH SCIENTIST

Laboratory of Material Science

The Laboratory of Material Science at Honda Research Institute USA, Inc., located in Columbus, OH, seeks a qualified candidate for a research position to begin from April, 2011. The position is open for a two-year appointment, with possible extension at company discretion. Areas of interest include synthesis and processing of carbon nanostructures and related nanoscale characterization techniques. Applicants must possess a PhD degree in a relevant field of materials science, physics, chemistry, and electrical engineering, and have had postdoctoral experience. Knowledge in electrochemistry is preferable. Team work and good communication skills are necessary. Work authorization or Green card is required.

Applicants should forward CV, a list of publications, one-page statement of research interest, and complete contact information for three references via e-mail to [career2011@honda-ri.com](mailto:career2011@honda-ri.com). Refer to the aforementioned **Job Position Number P10T01** in subject line.



**Career Research Scientist**  
**Req Number: 25236**  
**Division: Physical Biosciences**

Joint Center for Artificial Photosynthesis (JCAP) is a Solar Fuels Innovation Hub recently funded by the Department of Energy with physical location at the sites of the major partners, Caltech and Berkeley Lab. The Measurement & Synthesis Laboratory (M&S Lab) will house spectroscopic, electrochemical, photoelectrochemical and imaging facilities for determining charge transport efficiencies, pathways and mechanisms across interfaces between the various components of artificial photosynthetic systems. This Lab will play a central role in developing highly efficient and durable component interfaces.

As a Physical Chemist/Spectroscopist, this position will assume significant responsibility for setting up and operating the Measurement section of the M&S Lab of the Interface Project located at JCAP North Site in Berkeley, and offers an opportunity to play a key role at the inception of the Lab and the JCAP research effort towards efficient charge transport interfaces.

For more information about this position and to apply online, visit <http://jobs.lbl.gov/details.asp?jid=25236&p=1> and follow the instructions to complete the application process.



Berkeley Lab is an Affirmative Action/ Equal Opportunity Employer committed to the development of a diverse workforce.



**Career-Track Research Scientist**  
**Req Number: 25237**  
**Division: Physical Biosciences**

Joint Center for Artificial Photosynthesis (JCAP) is a Solar Fuels Innovation Hub recently funded by the Department of Energy with physical location at the sites of the major partners, Caltech and Berkeley Lab. The Measurement & Synthesis Laboratory (M&S Lab) will house an interface synthesis effort and spectroscopic, electrochemical, photoelectrochemical and imaging facilities for determining charge transport efficiencies, pathways and mechanisms across interfaces between the various components of artificial photosynthetic systems. This Lab will play a central role in developing highly efficient and durable component interfaces.

As a Synthetic Chemist, this position offers a unique opportunity for an early career researcher to assume a key role at the inception of the Lab and the JCAP research effort towards efficient charge transport interfaces, and will focus on the development of molecular linkers for efficient charge transport between various components of an artificial photosynthetic system.

For more information about this position and to apply online, visit <http://jobs.lbl.gov/details.asp?jid=25237&p=1> and follow the instructions to complete the application process.



Berkeley Lab is an Affirmative Action/ Equal Opportunity Employer committed to the development of a diverse workforce.

**FACULTY POSITION**  
**Materials Modeling**

The University of North Texas invites applications for a senior (Associate or Full) faculty position in materials modeling. An earned doctorate in Materials Science, Chemistry, Mechanical Engineering, Physics, or a related field is required, and postdoctoral experience is preferred. The senior candidate will have an established national (associate professor) or international (full professor) reputation with an active, externally funded research program. The area of specialization is broadly defined, but we particularly seek candidates who complement existing strengths (see [cascom.unt.edu](http://cascom.unt.edu) for more details).

All applicants must apply by visiting <http://facultyjobs.unt.edu/applicants/Central?quickfind=51067>. Screening begins immediately and will continue until the position is closed.

UNT is an AA/ADA/EOE



**Intel/Charles E. Young Endowed Chair in Nanotechnology**  
**Director Of The Nanoscale Institute For Medical Engineering Technology**



The College of Engineering invites nominations and applications for the endowed position of Intel/Charles E. Young Leadership Chair in Nanotechnology as the Director of the Nanoscale Institute for Medical Engineering Technology. The Intel Foundation established this endowment in the UF Department of Electrical and Computer Engineering to honor Dr. Charles E. Young, who served as president of the University of Florida from 1999-2004. The ideal candidate will be a worldwide recognized scientific leader in nanotechnology with a proven record of excellence in research, education, funded large-scale activities and team building.

This position will be at the full professor level and will be tenured in the Department of Electrical and Computer Engineering. Thus, candidates must have a PhD degree in Electrical and Computer Engineering or in a related discipline and must have a demonstrated record of exemplary achievement in their field of research. Responsibilities will include research, teaching, and service. Successful applicants are expected to be dynamic and visionary and to lead teams of faculty in significant funded research activity. Areas include, but are not limited to, advanced devices and electronic materials; sensors/actuators; and nano/microtechnology for drug delivery, medical imaging, point of care applications, or personalized medicine. Resources include the Nanoscale Research Facility, a new cleanroom fabrication and testing building, and the Major Analytic Instrumentation Center (MAIC), home to advanced characterization tools.

The search committee will begin reviewing applications immediately and will continue to receive applications until the position is filled. To apply please send a pdf of a curriculum vitae, statement of research interests, and contact information for five references via e-mail to [mlaw@eng.ufl.edu](mailto:mlaw@eng.ufl.edu).

*The University of Florida is an equal employment opportunity employer. The "government in the sunshine" laws of Florida apply to the search.*

**CORNING INCORPORATED**

**POSTDOCTORAL RESEARCH ASSOCIATE**

Corning Incorporated has an opportunity for a postdoctoral research associate in AFM-based scanning probe microscopy. The AFM Characterization group is responsible for a diverse array of scanning probe-based measurements in support of Corning R&D and Businesses, ranging from Display to Life Sciences. We are seeking a scientist with a deep and broad background in scanning probe microscopy, supported by a strong publication history. The candidate must have demonstrated expertise in AFM (ambient and fluid) imaging and at least one other subset of scanning probe microscopy, such as force spectroscopy, kelvin probe microscopy, or nanoindentation. The candidate must have significant hands-on experience in the laboratory, e.g., modification of AFM probes, sample fabrication, and AFM system maintenance. The ideal candidate should also be comfortable with programming and writing independent data analysis routines. Candidates must possess a PhD degree in Physics, Chemistry, Materials Science, or a closely related discipline.

» Interested candidates should send CVs to: Dr. Ruchi Yongsunthon  
 Corning Incorporated  
 SP-FR1-R1S32D  
 Corning, NY 14831  
[yongsuntr@Corning.com](mailto:yongsuntr@Corning.com)



THAYER SCHOOL OF  
ENGINEERING  
AT DARTMOUTH

Tenure-Track Faculty Position in Engineering

The Thayer School of Engineering at Dartmouth seeks to hire a faculty member who can contribute to a distinctive research and education program addressing innovative technological responses to societal energy challenges. The successful candidate will have a doctorate in engineering or closely related field, will show promise of leading an externally-funded research program targeting transformational advances in energy conversion and/or utilization, and will be a gifted teacher with motivation and expertise that complements the Thayer School's interdisciplinary approach to engineering education. All fields of engineering will be considered, but priority will be given to applicants from chemical, environmental, biological, and materials engineering. Applications of interest include but are not limited to solar electricity generation, energy storage, advanced materials promoting efficient energy conversion and utilization (e.g., in the wind energy or automotive fields), fuel cells, gasification, reforming, and upgrading of fuels, applied catalysis and reactor design enabling large energy benefits, nuclear energy, innovative biologically-based energy conversion processes, and carbon capture and sequestration. A hire at the Assistant Professor rank is anticipated, although outstanding candidates at the Associate Professor level will be considered.

Review of applications will begin immediately, and will continue until the position is filled with interview visits anticipated in March and April of 2011. A complete CV, statement of research and teaching interests, and contact information for three references should be sent to: Prof. Lee R. Lynd, Energy Search Committee Chair, at Thayer School of Engineering at Dartmouth College, 8000 Cummings Hall, Hanover NH 03755-8000 or by email at [energy.faculty.search@dartmouth.edu](mailto:energy.faculty.search@dartmouth.edu).

*Dartmouth is an equal opportunity/affirmative action employer and has a strong commitment to diversity.*

UNIVERSITY OF MICHIGAN-DEARBORN

FACULTY POSITION Biomaterials

The Department of Mechanical Engineering at the University of Michigan–Dearborn invites applications for a tenure-track position at the assistant-professor or senior levels in the area of biomaterials. The position is to support the interdisciplinary undergraduate Bio-engineering program established this year. The successful applicant will receive a tenure-track appointment in the mechanical engineering department. Candidates with a PhD degree in bioengineering, biomedical engineering, materials science, or a closely related field and demonstrated achievements in research and strong interest in teaching are encouraged to apply. Particular areas of specialization include, but are not limited to, tissue engineering, biomaterials, biomolecular engineering, biosensors, and orthopedic-related research. The candidate is expected to commit to undergraduate and graduate teaching, shape the newly established bioengineering program, and develop an active and externally funded research program.

Interested candidates should submit a letter of application, a detailed CV, a statement of professional interests, and contact information for three references to Prof. Pravansu Mohanty, Biomaterials Search Position ([biomat@engin.umd.umich.edu](mailto:biomat@engin.umd.umich.edu)), Department of Mechanical Engineering, The University of Michigan, Dearborn, MI 48128. Review of applications for the position will begin immediately and continue until the position is filled.

*The University of Michigan–Dearborn is dedicated to the goal of building a culturally diverse and pluralistic faculty committed to teaching and working in a multi-cultural environment and strongly encourages applications from minorities and women. The University of Michigan–Dearborn is a non-discriminatory, Equal Opportunity/Affirmative Action employer.*



California Institute of Technology

Caltech Joint Center for Artificial Photosynthesis (JCAP)  
Energy Innovation Hub

JCAP is searching for persons to fill two senior positions, the **Associate Director** and the **Accelerated Discovery Department Head**. JCAP is sponsored by the U.S. Department of Energy to research, develop, and implement techniques and devices to produce chemical fuels from sunlight, water, and carbon dioxide. For more information see the laboratory web site at <http://www.jcap.caltech.edu/>

The Associate Director will reside at the Caltech site and will report directly to the Director of JCAP. He/she will have significant responsibilities for management of the JCAP project as well as for the long-term operation of the Caltech (South) Site of JCAP. The JCAP Associate Director functions as a leading research colleague team member and manager for the purpose of developing and implementing the research agenda of the Joint Center for Artificial Photosynthesis. Qualifications include: familiarity with the national and international solar fuels research communities; expert level, deep understanding and knowledge of many aspects of nanoscience; chemistry; chemical engineering and the technology involved with the production of fuels from sunlight.

The Accelerated Discovery Department Head reports to the Associate Director of JCAP and has significant scientific and technical oversight responsibilities for: strategic planning, formulation, and direction of scientific programs and projects to enhance the growth of JCAP as a national resource; direct participation in selected JCAP research projects and providing oversight and management of JCAP Caltech site operations, infrastructure, and administrative functions including staff, space, facilities planning, and EH&S activities. Qualifications include: deep world recognized expertise in solar fuels research; understanding and knowledge of many aspects of nanoscience; chemistry; chemical engineering and the technology involved with the production of fuels from sunlight.

For detailed job descriptions and to apply on-line, go to:

<http://apptrkr.com/173352> and click on "California"

Caltech is an Affirmative Action/Equal Opportunity Employer.  
Women, Minorities, Veterans, and Disabled Persons are encouraged to apply.



Professor/Associate Professor/Assistant Professor  
Department of Physics and Materials Science [Ref. A/626/23]

The Department of Physics and Materials Science was formed in 1993 as the first of its kind in Hong Kong, and already excels in several fields. Being one of eight departments in the College of Science and Engineering, the Department has internationally recognized experimental and theoretical experts embracing advanced fields which address the world's most pressing challenges with science and technology, including, but not limited to: nanoscience and nanotechnology, functional and biomaterials, polymers and composites, organic and superhard materials, surface science and superconductivity, optoelectronics and spintronics, photonics and metamaterials, electroluminescence and organic light emitting diodes, laser and solid state physics, radiation physics and biophysics, medical physics and biointerfaces. Further information can be found at <http://www.cityu.edu.hk/cityu/dpt-acad/fse-ap.htm>.

The Department seeks outstanding candidates in emerging fields that strengthen and expand its existing areas of focus. Particularly strong candidates are welcome in any field.

**Requirements :** A PhD in related disciplines with a promising research record and a strong teaching ability. Successful candidates are expected to develop new research directions and courses.

**Salary and Conditions of Service :** Remuneration package will be driven by market competitiveness and individual performance. Excellent fringe benefits include gratuity, leave, medical and dental schemes, and relocation assistance (where applicable). Initial appointment will be made on a fixed-term contract.

**Information and Application :** Further information on the posts and the University is available at <http://www.cityu.edu.hk>, or from the Human Resources Office, City University of Hong Kong, Tat Chee Avenue, Kowloon, Hong Kong [Fax : (852) 2788 1154 or (852) 3442 0311/email : [hroj@cityu.edu.hk](mailto:hroj@cityu.edu.hk)]. Please send the nomination or application enclosing a current CV with evidence of teaching ability in English, and a concise (up to one page) statement of research interests and teaching philosophy to [aphead@cityu.edu.hk](mailto:aphead@cityu.edu.hk). **Applications will be considered until the positions are filled.** Please quote the reference of the post in the application. The University reserves the right to consider late applications and nominations, and not to fill the positions. Personal data provided by applicants will be used for recruitment and other employment-related purposes.

City University of Hong Kong is an equal opportunity employer and we are committed to the principle of diversity. We encourage applications from all qualified candidates, especially those who will enhance the diversity of our staff.

City University of Hong Kong was ranked the 129<sup>th</sup> among the world's top universities and the 15<sup>th</sup> in Asia according to the *Quacquarelli Symonds* 2010 surveys.  
<http://www.cityu.edu.hk>



**RESEARCH ASSOCIATE**  
Nitride Semiconductor  
Optoelectronics



— U.S. Army Research Laboratory —

The Nitride Semiconductor Optoelectronics team at the U.S. Army Research Laboratory in Adelphi, MD in the Washington, DC metro area has two openings for a research associate. The positions involve development of nitride semiconductor-based optoelectronic materials and devices operating from the ultraviolet through terahertz range. One position includes optical studies of carrier dynamics and other fundamental properties in III-nitride material. Candidates for this position with a strong background in semiconductors physics and experimental optics are highly desired. The other position involves studies and processing of III-nitride optoelectronic devices. Candidates for this position with a strong background in device physics and processing are highly desired. U.S. citizenship is required. A PhD degree, Masters or extensive experience in relevant fields is preferred.

Please send CV and/ or questions to Dr. Grace Metcalfe at [grace.metcalfe@us.army.mil](mailto:grace.metcalfe@us.army.mil) or Dr. Michael Wraback at [michael.wraback@us.army.mil](mailto:michael.wraback@us.army.mil)

# Carnegie Mellon

**POSTDOCTORAL RESEARCH ASSOCIATE** Department of Materials Science and Engineering

The Department of Materials Science and Engineering at Carnegie Mellon University has an immediate opening for a postdoctoral research associate to carry out nano- and micro-structural investigations of ceramic thin film coatings and bulk materials using electron microscopy methods. The research associate will work in close collaboration with industrial, academic, and national laboratory collaborators interested in developing a better understanding of the relationship between local microstructure and performance of ceramic hard coatings and solid-oxide fuel cells. Specimens will be characterized using various electron microscopy (EM) methods, including transmission (TEM) and scanning transmission (STEM) and scanning (SEM) electron microscopy, as well as related techniques, such as energy dispersive spectroscopy (EDS). Finally, the research associate will prepare written and oral reports for collaborators and will disseminate their findings to the broader scientific audience.

A successful candidate will have a PhD degree in materials science and engineering, physics, chemistry, or a related field of study, and will have experience in materials characterization using TEM, STEM, and SEM techniques. A successful applicant will be proficient in many, though not necessarily all, of the following techniques: TEM sample preparation by conventional methods and by focused ion beam (FIB) lift-out, high-resolution chemical compositional analysis using energy x-ray spectroscopy (EDS), structural analysis by high resolution TEM and selected area electron diffraction, and orientation imaging microscopy (OIM) for grain size/orientation mapping in SEM and TEM. The applicant must have excellent communication skills, a willingness to work in a collaborative environment, and a track-record for solving materials problems independently and disseminating results to scientific audiences.

Applicants should submit a cover letter, CV, and list of three references to [ypicard@cmu.edu](mailto:ypicard@cmu.edu).

*Carnegie Mellon University, an Equal Opportunity/Affirmative Action Employer, encourages applications from women, under-represented minorities, individuals with disabilities, and veterans.*

# CAREER CENTER

## 2011 SPRING MEETING

### Meet Your Next Employer ...

Show off your talents to the world's most prestigious universities, laboratories and high-tech firms. FREE of charge to all MRS Members, the Career Center provides targeted employment opportunities to candidates seeking positions in the scientific community.

- Review open positions tailored to the materials research industry
- Interview with prospective employers
- Visit on-site recruitment booths and network with technical staff

### Location & Hours

Moscone West • Exhibit Hall (Level 1)

**Monday, April 25** (Registration only)  
1:00 pm – 4:00 pm

**Tuesday, April 26**  
11:00 am – 2:00 pm  
4:30 pm – 6:30 pm

**Wednesday, April 27**  
11:00 am – 5:00 pm

**Thursday, April 28**  
10:00 am – 1:30 pm

For additional information, visit [www.mrs.org](http://www.mrs.org)



Do the research to advance your career...visit the MRS Career Center in San Francisco!

### GLASS MATERIALS SCIENTIST IRflex Corporation

Located in Danville, VA, IRflex Corporation is a high-tech company developing and manufacturing innovative fiber-optic devices for mid-infrared applications. We are seeking a Chief Materials Scientist in Mid-IR glass, who is a specialty glass expert, responsible for the company glass fabrication. Candidates will have a PhD degree in glass ceramics, materials science, or equivalent. Excellent knowledge of Mid-IR glass (chalcogenide) development and production. Position is open only to US Citizens or Permanent Residents. View detailed requirements and company benefits at [www.irflex.com](http://www.irflex.com). Please send your CV to [hr@irflex.com](mailto:hr@irflex.com)

