**Faculty Positions**

**College of Nanoscale Science and Engineering (CNSE)**

As part of its multi-year strategic plan, the College of Nanoscale Science and Engineering (CNSE) at the University at Albany-SUNY seeks applicants for multiple positions at the tenure-track Assistant, Associate and Full Professor levels. Recruitments of individual faculty or clusters of faculty with specific integrated expertise will be considered and are actively sought.

As the first of its kind in the world, CNSE was created to enable the discovery and dissemination of fundamental knowledge and new frontier scientific principles in the emerging interdisciplinary fields of nanotechnology, including nanoscience, nanoelectronics, nanobiotechnology and nanoeconomics.

CNSE is housed within a 750,000 square foot NanoFab megacomplex that includes the only integrated 200mm/300mm wafer facilities in the academic world. Over 85,000 sq. ft. of state-of-the-art, class 1 capable, cleanroom facilities house the most advanced 200mm/300mm wafer device fabrication and integration facilities. These are coupled with an optimized set of tailored design, assembly, and characterization capabilities for new frontier nanoscience, nanoelectronics, nanoeconomics, and nanobiotechnology concepts. Opportunities are available in the following areas within the four cross-disciplinary constellations of CNSE:

- Molecular, optoelectronic, nanobiological, and spintronic materials, devices, and architectures;
- Nanosystems and nanosensors;
- Optical, extreme ultra-violet and e-beam nanolithography;
- 3D hyper-integration of devices and systems;
- Atomic scale materials characterization, analysis reliability, and metrology;
- Nanobiotechnology;
- Nanomedicine.

**Qualifications:** Candidates must have a Ph.D. in a relevant field of physics, chemistry, chemical engineering, materials science, materials engineering, biotechnology, or electrical engineering, from a college or university accredited by a USDOE or internationally recognized accrediting organization. They must possess demonstrated excellence in academic, scientific and scholarly activities and a proven track record in establishing vigorous externally funded research programs in one of the technical areas listed above. Postdoctoral experience is required, with a minimum of two to ten years experience in an aggressive academic, research and development environment. Depending on the level of the position sought, applicants must address their ability to work with culturally diverse populations. Joint appointments in additional academic departments are possible and highly encouraged where appropriate. Candidates will be asked to submit a list of publications related to their research activities.

Please submit three letters of recommendation, summary of research plans and curriculum vitae to:

Ms. Rhonda Haines, ATTN: Faculty Search, College of Nanoscale Science & Engineering, NanoFab East, 257 Fuller Road, Albany, NY 12203, CNSEHR@uamail.albany.edu

**POSTING #:** FC09-17997

**APPLICATION DEADLINE:** Review of applications will begin April 6, 2009 and continue until all positions are filled.

*The University at Albany is an EEO/AA/IRCA/ADA employer*

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**NASA POSTDOCTORAL FELLOWSHIPS**

The NASA Postdoctoral Program (NPP) offers unique research opportunities to highly talented national and international scientists and engineers to engage in ongoing NASA research in space science, earth science, aeronautics, space operations, exploration systems, and astrobiology.

- Approximately 50 Fellowships awarded annually
- One-year appointments, renewable up to three years
- Annual stipends start at $50,000, with supplements for specific degree fields and high cost-of-living areas
- Annual travel budget of $8,000
- Financial assistance for relocation
- Financial supplement for health insurance purchased through the program
- Apply at http://nasa.orau.org/postdoc

**Application Deadlines:** March 1, July 1, and November 1

To obtain more information and to apply for this exciting opportunity, please visit the NPP Web site at http://nasa.orau.org/postdoc.
The U.S. Army Research Office, Research Triangle Park, NC, is seeking a technical expert to serve as the Chief Scientist of the Engineering Sciences Directorate. The Chief Scientist advises the Engineering Sciences Directorate Director and other Army executive management on research opportunities in the general area of Engineering Science (Aerospace Engineering, Electrical Engineering, Material Sciences Engineering, Mechanical Engineering, and related fields) so as to accelerate the development and execution of key scientific opportunities and to enable successful technology transfer, and also conducts fundamental research in his or her specific technical area of the Engineering Sciences. The Chief Scientist works closely with Engineering Science Directorate Program Managers, and across all of the Army Research Laboratory, to identify both extramural and in-house basic research opportunities and to forecast research trends impacting progress in key Army emerging technologies. In these areas he/she will work with scientists from the U.S. Research and Development Engineering Command (RDECOM) laboratories and centers, other U.S. Army and Department of Defense research and development personnel, and scientists outside of the Department of Defense to catalyze scientists to form teams to address new Army-critical basic research challenges in the Engineering Sciences, and to transfer these research results into Army systems. Specific responsibilities of this position are: forecast U.S. Army engineering science research options that maximize the impact of the U.S. Army engineering science research program on the Army’s mission; provide a critical focus on key Army issues impacted by engineering science research; and to promote the technology transfer of engineering science research into the technical community of the Army and industry in support of Army mission requirements.

Possession of a graduate degree, particularly at the doctoral level, is preferred or equivalent experience with substantial background and experience in related research. This position involves Aerospace Engineering, Electrical Engineering, Material Science Engineering, Mechanical Engineering, or related fields, and the demonstrated capability to conduct independent research as indicated by numerous published works in the engineering sciences area, or other indications of national research leadership. Candidates must have polymers and capability to work independently as a research scientist in engineering sciences and have substantial background and experience in leading research.

Applicants must be U.S. citizens, be able to obtain a top-secret clearance, and comply with provisions of the Ethics in Government Act. Interested individuals must apply electronically following instructions at www.usajobs.opm.gov, Vacancy Announcement DA-ST-01-09. Opening date is April 1, 2009 and closing date for this position will be June 12, 2009. If you have questions contact Dianne Hawkins at 301-394-5226.
Positions Available

**Chair (W3) of Materials Synthesis**

Applicants are expected to teach the entire area of Materials Synthesis at the undergraduate and graduate levels of the B.Sc./M.Sc. program “Materials Science”, as well as other science and engineering courses at the University of Stuttgart. The successful candidate should complement and extend current faculty research activities in the field of Materials Science at the University and at the Max-Planck Institutes in Stuttgart. The Chemistry Department has a research focus on Materials and Functional Molecules, and the University as a whole is committed to research on New Materials. Candidates should have a strong record of excellence in research and success in obtaining external funding. Preferred research programs may include, but are not limited to, carbon-based materials, interface-controlled materials, as well as inorganic, bio-inorganic, ceramic materials and hybrid materials. The integration of molecular and nanoscopic components into functional, macroscopic devices is of particular interest.

**Chair (W3) of Materials Physics**

Applicants are expected to teach the entire area of Materials Physics at the undergraduate and graduate levels of the B.Sc./M.Sc. program “Materials Science”, as well as other science and engineering courses at the University of Stuttgart. The successful candidate should complement and extend current faculty research activities in the field of Materials Science at the University and at the Max-Planck Institutes in Stuttgart. The Chemistry Department has a research focus on Materials and Functional Molecules, and the University as a whole is committed to research on New Materials. Candidates should have a strong record of excellence in research and success in obtaining external funding. Preferred research programs may include, but are not limited to, physical properties of different material classes (for instance carbon-based, inorganic, bioorganic, metal-based materials and hybrid materials). The correlation of nanomechanics and electronics with the microstructure and function of macroscopic materials is of particular interest.

The Institute of Materials Science of the University of Stuttgart is located on the campus of the Max-Planck Institutes in Stuttgart. Access to the research facilities of these institutes, including the Centre for Electron Microscopy, will be defined in a cooperation agreement with the Max-Planck Institutes.

The requirements for employment listed in § 47 Baden-Württemberg university law apply; in case of first appointment as professor employment can be limited to three years.

Please submit your application to Prof. Dr. H.-J. Werner, Dekan der Fakultät Chemie, Universität Stuttgart, Pfaffenwaldring 55, 70569 Stuttgart, Germany. To ensure full consideration of your application, all documents (CV, academic certificates, short presentation of the scientific and teaching career; structured list of publications with up to three reprints, track record of research grants and a short statement on current and future research) should be received by May 29th, 2009.

Universität Stuttgart wishes to increase the share of female academic staff and especially welcomes applications from women. Handicapped persons will be given preference in case of equal qualification.

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**DIRECTOR, RESEARCH AND DEVELOPMENT**

**Process Technology Group**

**Carpenter Technology Corporation**

Due to the growth of our business, Carpenter Technology Corporation, a global leader in the manufacture and distribution of specialty materials, seeks an innovative and aggressive leader for their R&D Process Technology Group headquartered in Reading, PA. The results-oriented professional we select must have world class experience in materials characterization including microstructure and both mechanical and physical metallurgy. The Director R&D will manage a department of 20 professionals that technically supports Carpenter on a global basis.

In this important role, you will:

- Evaluate and pilot next generation processing for mill operations.
- Lead the development of nondestructive evaluation technologies for coil, wire, bar, and forged bar products.
- Lead the development of control strategies for mill equipment.
- Ensure thorough characterization for new and existing alloys.
- Bring thought leadership in scientific development and innovation.
- Manage an organization involving the staffing, mentoring, and development of its multi-cultural personnel.
- Demonstrate strong business and financial acumen.
- Understand the use of technology as a competitive differentiator.
- Bring experience with utilizing outside technology sources.

A PhD degree in Metallurgical Engineering or related discipline and ten or more years of R&D experience including at least five years in a management role is required; a background in stainless steels or nickel-based alloys is desirable. Comprehensive knowledge of metallurgical principles, standards, methods, practices, and equipment required. Experience in the management and administration of a scientific facility is desirable. Additional requirements include excellent problem solving, decision-making, and strong prioritization skills. Self-motivation, self-discipline, and high energy are critical to your success.

We offer a competitive compensation package and challenging growth opportunities. Qualified candidates will be eligible for relocation assistance. For consideration, please send a cover letter along with your resume and salary requirements to:

Carpenter Technology Corporation
Attn: Employment Building 137
P.O. Box 14662; Reading, PA 19612-4662
Email: madasczik@cartech.com
www.cartech.com

An Equal Opportunity Employer M/F/D/V.

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**POSTDOCTORAL RESEARCH ASSOCIATES**

**Institute for Shock Physics**

**Washington State University**

The Applied Sciences Laboratory of the Institute for Shock Physics at WSU has immediate openings for postdoctoral research associates to conduct research in the development of advanced metallic alloys and composites, and the synthesis and characterization of optical materials. For more information and application procedures, please see [http://www.asl.wsu.edu/site/careers.html](http://www.asl.wsu.edu/site/careers.html).

EEO/AA/ADA
Positions Available

**Assistant Professor Multiscale Modeling**

The University at Buffalo (SUNY) seeks a tenure-track assistant professor in the broad area of multiscale modeling of the production, assembly, and properties of engineered nanoscale materials, structures, or devices. Appointment at higher rank is possible in exceptional cases.

**Example research areas of interest include, but are not limited to:** modeling energy transport in materials and devices for thermoelectric, photovoltaic, and photocatalytic applications; modeling of nanoscale devices in the regime of strong quantum effects; coarse-graining or multiscale modeling strategies that link quantum chemistry and atomistic molecular simulations to the nano, micro, and macro scales; and simulation of the transport of natural and human-made nanostructures in biological environments. This position is associated with the UB2020 Strategic Strength in Integrated Nanostructured Systems (www.nano.buffalo.edu), one of eight areas of scholarly activity identified for strategic investment at UB.

The home department of the successful candidate will be determined by mutual agreement at the time of hiring, and could be Chemical and Biological Engineering, Mechanical and Aerospace Engineering, or Electrical Engineering.

Applicants should submit a curriculum vita, statements of teaching and research plans, and names of three references via the UBJobs system, at www.jobs.buffalo.edu, referencing posting number 0990080.

The University at Buffalo is an Equal Opportunity/Affirmative Action Employer/Recruiter.

**NanoEngineering Constellation College of Nanoscale Science and Engineering (CNSE)**

As part of its multi-year strategic plan, the College of Nanoscale Science and Engineering (CNSE) of the University at Albany-SUNY invites applications for two tenure track positions at the assistant professor level in its NanoEngineering Constellation.

Opportunities are available for individuals with expertise in the areas of: (i) nanoelectronics devices and architectures; (ii) nanoscale engineering for energy and environmental applications; (iii) nanosystems engineering for materials, devices, and architectures; (iv) nanolithography, such as ultra-violet, e-beam, and/or molecular imprint lithography; (v) emerging nanomaterials and device engineering.

The CNSE NanoEngineering Constellation is a “think tank” of scholarly excellence in research and education that is designed to catalyze and encourage cross-disciplinary innovation and pedagogy, as driven by the fundamental intellectual underpinnings of nanotechnology. As part of its portfolio, the CNSE NanoEngineering Constellation is implementing a graduate (doctoral and Masters) degree in nanoengineering that provides a comprehensive education in the application of nanoscience principles to practical applications, such as the atomic scale design, manufacture, and operation of efficient and functional structures, machines, processes, and systems.

Candidates must have a Ph.D. in an appropriate concentration in materials engineering, chemical engineering, materials science, mechanical engineering, electrical engineering, physics, chemistry or equivalent from a college or university accredited by a USDOE or internationally recognized accrediting organization. The candidates must also have a strong publication record and must possess demonstrated excellence in academic, scientific and scholarly activities, and proven ability to establish vigorous externally funded research programs in one of the technical areas listed above. Applicants must address in their applications their abilities to work with and instruct a culturally diverse population. Joint appointments in the other CNSE constellations are possible and highly encouraged where appropriate. Candidates will be asked to submit a list of publications related to their research activities.

The College of Nanoscale Science and Engineering of the University at Albany-State University of New York is the first college in the world dedicated to the education, research, development and deployment of innovative nanoscience, nanoelectronics, nanobiotechnology and nanoeconomics concepts. In May 2007, CNSE was ranked by Small Times magazine as the world’s number one college for nanotechnology and microtechnology. CNSE’s Albany NanoTech Complex is the most advanced research facility of its kind at any university in the world: a $4.5 billion, 800,000-square-foot megaplex that attracts corporate partners from around the world and offers students a one-of-a-kind academic experience.

The UAlbany NanoCollege houses the only fully-integrated, 300nm wafer, computer chip pilot prototyping and demonstration line within 65,000 square feet of Class 1 capable cleanrooms. More than 2,000 scientists, researchers, engineers, students, and faculty work on site at CNSE’s Albany NanoTech Complex, from companies including IBM, AMD, SEMATECH, Toshiba, ASML, Applied Materials, Tokyo Electron, Vistec Lithography and Freescale, among many others. CNSE has more than 250 U.S. and worldwide partners, including many of the world’s leading nanoelectronics companies and organizations. For more information, visit the CNSE Web site at http://cnse.albany.edu.

Please submit a minimum of three letters of recommendation, statement of research interests, statement of teaching interests, and curriculum vitae to: Ms. Christy Spadaro, 257 Fuller Rd., Albany, NY 12203, CNSEHR@uamail.albany.edu.

Posting #: P09-18233

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**POSTDOCTORAL POSITION Materials Sciences and Engineering Ames Laboratory**

The Division of Materials Sciences and Engineering in the Ames Laboratory is seeking a PhD scientist with expertise in computer simulation and a background in either materials science or condensed matter physics for a postdoctoral position to perform molecular dynamics simulation of solidification and liquid-glass transition processes. The candidate is required to be experienced in running MD codes using parallel processors (experience with LAMMPS is desirable). Applications will be accepted until position is filled.

Please send a cover letter detailing specific instrument experience, curriculum vita, and have at least two letters of reference sent to Dr. Mikhail Mendelev, 207 Metals Development Bldg., Division of Materials Science and Engineering, Ames Laboratory (US DOE), Ames, IA 50011.
Positions Available

**Research Group Leader positions at the International Iberian Nanotechnology Laboratory (INL)**

The International Iberian Nanotechnology Laboratory, a recently formed international research organization registered in the UN, is seeking strongly motivated Research Group Leaders, both at Senior level (Principal Investigator, Associate or Full professor level), or at Junior level (tenured track, assistant professor level), to join its new facility in Braga, North of Portugal (www.inl.int). INL central lab facilities are presently being built (€100 M investment for an expected research community of around 400 people at full operation), and will open in late 2009.

INL is recruiting scientists in the following research areas:

- Nanomedicine: drug delivery systems, molecular diagnosis systems, cell therapy and tissue engineering.
- Nanotechnology: applied to food industry, food safety and environment control.
- Nanomanipulation: molecular devices, using biomolecules as building blocks for nanodevices.
- Nanoelectronics: Nano/microelectronics, NEMS, MEMS, and other nanotechnologies used to build nanodevices and system platforms to support the previous research topics.

Candidates with outstanding CVs in these and related areas will be considered. INL welcomes applicants with previous industrial laboratory experience, and an interdisciplinary research track. INL will offer an exciting, and highly competitive research environment. The remuneration scheme is in line with those offered by other international organizations (IO). Group leaders will be offered substantial starting funds (both for capital equipment and research personnel) to help them jump start their research activities.

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**Senior Level: Principal Investigator, Associate or Full Professor Level**

**Junior Level: Tenured track positions, Assistant Professor Level**

INL facilities will open in late 2009, and are located in Braga (150,000 inhabitants with a high quality and attractive living environment), 30min drive from Porto International Sá Carneiro Airport, 30min drive from the North Atlantic coast, and about 45min drive to the Portuguese-Spanish border and Geres National Park.

Interested applicants should submit a cover letter, curriculum vitae, research statement, and two reference letters (Junior level candidates) to our recruitment website www.inl.int

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**Electron Microscopists Staff Scientists**

The National Center for Electron Microscopy (NCEM) at Berkeley Lab is a DOE scientific user facility for electron beam microcharacterization of materials. NCEM conducts fundamental research on the relationship between structure and properties of materials by developing and utilizing techniques for materials imaging and analysis with electrons. The facility offers a unique array of advanced electron microscopes and leads the TEAM project, a collaborative effort to develop the next generation electron microscope: http://ncem.lbl.gov/

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**FACULTY POSITIONS College of Engineering and Computing University of South Carolina**

The College of Engineering and Computing at the University of South Carolina invites applications for two tenure-track faculty members to be part of an existing cluster of faculty with research and teaching expertise in the area of Solid Oxide Fuel Cells (SOFCs). Applicants with technical expertise that relates to SOFC science, engineering, and technology are welcome. Areas of special interest include, but are not limited to synthetic and natural fuels; fuel reforming; high temperature electrolysis (of water and carbon dioxide); infiltration, ceramic processing, and manufacturing; multi-scale and multi-physics modeling; solid-state electrochemistry and electrochemical characterization; surface science and interface modeling; high temperature corrosion; CO2 sequestration technologies; energy system-level modeling and optimization; and nanostructure design of heterogeneous functional material systems.

Duties are to develop a strong educational and externally funded research program in collaboration with the Director of the SOFC Fuel Cell Program (Reifsnider@cec.sc.edu). Candidates should submit an application letter, professional vita, future research plans, teaching interests, and names of three references to: SOFC Search Committee, Mechanical Engineering Department, University of South Carolina, Columbia, SC 29208; or email to odonnemc@engr.sc.edu. Review of applications begins immediately until the position is filled.

The University of South Carolina is an Equal Opportunity/Affirmative Action Employer. Minorities and women are encouraged to apply.