

Positions Available

**FACULTY POSITION
University of Missouri-Rolla
Department of Ceramic Engineering**

The Department of Ceramic Engineering at the University of Missouri-Rolla has an opening for an Assistant/Associate Professor (tenure track) commencing in January, 1991. Candidates with expertise in structural ceramics, electrical properties of ceramics, ceramic processing, x-ray and crystal structure analysis, crystal chemistry, and glass are of special interest.

Applicants for the position must have an earned PhD in Materials Science/Engineering, Ceramic Science/Engineering, or a related field. The successful applicant will be expected to develop independently funded research programs, teach undergraduate and graduate courses in ceramic engineering, direct graduate student research, and interact effectively with faculty, staff, and students.

All academic and visa requirements must be satisfied prior to appointment to the position, which may be as early as January 1991. Screening of applications will begin November 1, 1990 and continue until the position has been filled.

Interested persons should submit resumes and three references to:

Professor Douglas M. Mattox
Department Chairman
Department of Ceramic Engineering
University of Missouri-Rolla
Rolla, MO 65401
(314) 341-4401

The University of Missouri-Rolla is an Equal Opportunity/Affirmative Action Employer.

**MICROFABRICATION
POSTDOCTORAL
RESEARCH POSITION
University of Cincinnati**

The Nanoelectronics Laboratory of the University of Cincinnati invites applications for a postdoctoral research position in materials characterization of nanoelectronic thin films. A PhD degree with a strong experimental background in semiconductor technology and good knowledge of characterization equipment (XTEM, STM, Hall Effect, photoluminescence, FTIR, AES, etc.) is required. The research involves analysis of Column IV and III-V semiconductors and high T_c superconducting thin films.

Please submit a resume and professional references to:

Professor Andrew J. Steckl
Electrical and Computer
Engineering Department
899 Rhodes Hall, ML 30
University of Cincinnati
Cincinnati, OH 45221-0030

Affirmative Action/Equal Opportunity Employer

**RESEARCH ASSISTANT
PROFESSOR
Oregon State University**

The Department of Mechanical Engineering and the Center for the Advanced Materials Research at Oregon State University has an immediate opening for a Research Assistant Professor to perform research and planning of experiments in the areas of thin coatings, multilayers, and deformed metals. Principal activities will be materials characterization using transmission electron microscopy (TEM). Knowledge of HREM and microanalysis techniques are considered very desirable. Requirements include completion of a PhD thesis using TEM, the ability to successfully direct and interact with graduate students, and a potential for laboratory and classroom instruction. Send letter of inquiry, vitae, and three references to Dr. Gordon M. Reistad, Head, Department of Mechanical Engineering, Oregon State University, Corvallis, OR 97331, telephone (503) 737-3441, by October 15, 1990.

OSU is an AA/EEO employer and has a policy of being responsive to the needs of dual-career couples.

SENIOR RESEARCH SCIENTIST

The Department of Civil Engineering of the University of Illinois at Urbana-Champaign is seeking a Senior Research Scientist for a non-tenured academic professional position to manage the laboratory facilities of the Center for Cement Composite Materials. The Center administers an interdisciplinary research program devoted to the study of advanced cement-based materials involving approximately 40 faculty and students. The Center is affiliated with the NSF Center for Advanced Cement-Based Materials. The laboratory facilities are also used by other faculty and students on campus.

Principal duties include, but are not limited to, the following: (1) coordinating maintenance and repair of a variety of computer-controlled instruments; (2) training and supervising students and research personnel; (3) maintaining records regarding facility use and billing of facility charges; (4) working with faculty and students from (other) institutions participating in the NSF Center for Advanced Cement-Based Materials (and its Industrial Affiliates); (5) advising the Director on facility needs and acquisition of new instruments; and (6) supervising advanced laboratory-oriented course work. Participation in student and faculty research projects is possible and encouraged, as permitted by the fulfillment of the above duties.

Requirements are a PhD in a physical science or engineering discipline in a field related to the study of materials, and at least 5 years experience involving electron microscopy, surface area and pore structure analysis, x-ray diffraction, thermal analysis, and mechanical testing. Familiarity with the science and properties of cementitious materials is highly desirable. Additional experience with computer hardware and software and with electronics would be an advantage. The successful candidate should be able to communicate effectively with a variety of individuals.

Applicants should forward a resume, including names and addresses of three or more references to: Professor William J. Hall, Head of Civil Engineering, University of Illinois, 1114 Newmark CE Laboratory, 205 N. Matthews Avenue, Urbana, Illinois 61801-2397; telephone: (217) 333-3927; FAX: (217) 333-9464. The position is available on November 20, 1990; priority will be given to those applications received by October 31, 1990.

The University of Illinois at Urbana-Champaign is an Affirmative Action/Equal Opportunity Employer.

Ad Closings

October 4, 1990 for the November issue
November 6, 1990 for the December issue

Call (412) 367-3036 today!

DIRECTOR, MATERIALS SCIENCE

CARBOMEDICS, the world leader in mechanical heart valve technologies, is currently seeking a Director to sustain continued growth in Materials Science. Our leading edge technology environment combined with work setting, excellent compensation and benefit packages will challenge and reward you.

Requirements include a PhD with 8 years experience or an MS plus 10 years minimum specializing in materials science of ceramics and/or polymers. Responsibilities include identification of significant technical issues, planning resource utilization, carrying out experimental plans, providing critical technical review of experimental data, literature and customer requirements. Will also create/contribute to the technical literature and provide interface to senior company management.

CarboMedics offers an array of fringe benefits. Qualified applicants should forward a resume, including salary requirements, to:

CarboMedics Recrt
N 182-78 MatSci
1300-B East Anderson Lane
Austin, TX 78752

EOE/AAP
Principals only, please.



UES

Universal Energy Systems, Inc. (UES), a rapidly growing high tech R&D company in Dayton, Ohio, is seeking a tribologist with a minimum MS degree (PhD acceptable) in mechanical engineering. The position requires a minimum of five years tribology experience related to characterization of physical properties (viscosity, density, film thickness, fraction, fatigue resistance etc.) of high temperature liquid and solid lubricants, evaluation techniques for bearings and gears and materials for wear in high temperature applications. Knowledge of mechanical systems in gas turbine engines and machine design is a plus. The candidate must have excellent oral and written communication skills and the ability to lead a small group in a multidisciplinary team environment.

Salary will be commensurate with qualifications and experience. UES offers excellent compensations and a comprehensive benefit package. No-smoking environment.

Send resume if you are a U.S. Citizen/Permanent resident to:
Ms. Marty Barker
Universal Energy Systems, Inc.
Materials Research Division
4401 Dayton-Xenia Division
Dayton, OH 45432

FACULTY POSITION IN ION BEAM ANALYSIS

Université de Montréal
Département de physique

The Physics Department of the Université de Montréal has an opening for a professorship for its research group in ion beam physics. This research program makes use of ion beams delivered by two accelerators, an EN Tandem of 6 MV and a 4 MV Dynamitron. Current activities are high energy implantation studies with accelerator beams, surface characterization of various materials by ERD, RBS, channeling, and PIXE.

The successful candidate will exercise leadership qualities within a group of several physicists, students, and technicians. Activities will also include teaching responsibilities and supervision of students at the undergraduate and graduate levels. Professor will have considerable experience with ion beam physics and will work closely with the Thin Film Group of the Université de Montréal and Ecole Polytechnique de Montréal. This group comprises condensed matter physicists of both institutions.

The present activity of the group is in fundamental and applied physics. Industrial linkage is pursued through research contracts.

The suggested starting date is June 1, 1991.

The level of the appointment will be determined according to the qualifications of the successful candidate and is subject to budget approval. The candidates must have obtained a doctorate.

Applications should be sent with a curriculum vitae, three letters of recommendation, and copies of reprints of the last publications by November 1, 1990 at the latest, to:

Dr. Jean-Robert Derome, Chairman
Département de physique
Université de Montréal
C.P. 6128, succursale A
Montréal (Québec)
Canada
H3C 3J7

In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada.

FACULTY POSITION Department of Materials Engineering Drexel University Philadelphia, PA 19104

The Department of Materials Engineering at Drexel University is seeking qualified candidates for a tenure track position in Ceramics, available September 1, 1990. The position will be at the Assistant or Associate professorial level. The Department's interest encompasses a broad range of materials including ceramic, metallic, polymeric, and composite materials. We seek candidates with an earned doctorate degree and demonstrated achievement or potential for distinction in research and teaching at both the undergraduate and graduate levels. Of special interest are candidates with expertise in processing and characterization of structural ceramic materials and/or electronic ceramics. Candidates must demonstrate an ability or potential to develop an externally funded research program in their area of expertise. Salaries are competitive and are commensurate with the qualifications of the candidate. Drexel University welcomes applications from all qualified candidates. For full consideration candidates should submit curriculum vitae, a list of publications, and at least three suitable references by September 30, 1990, to:

Professor M. Barsoum
Search Committee Chairman
Materials Engineering Department
Drexel University
LeBow Building, 31st & Market Street
Philadelphia, PA 19104
(215) 895-2338

Drexel University is an affirmative action/equal opportunity employer. Women and minorities are encouraged to apply.

Positions Available

MATERIALS RESEARCH

THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY (formerly the National Bureau of Standards) seeks materials scientists and/or physicists to conduct research in the following fields:

- Composite Materials: Failure Mechanisms
- Electronics Packaging: Mechanical Behavior of Thin Films
- Nondestructive Evaluation: Sensors/Physical Measurements
- Physical Metallurgy: Thermomechanical Processing
- Welding: Arc Physics

Candidates should possess a PhD degree (or equivalent) in physics or materials science. Candidates with an MS degree and outstanding academic records will also be considered. Up to four positions are available: two permanent positions for experienced researchers with strong publication records, and two postdoctoral positions for two-year terms.

The positions are with the Materials Reliability Division of NIST in Boulder, Colorado. Competitive salaries commensurate with experience will be offered in the range of \$40,000 to \$65,000. U.S. Citizenship is required. Interested candidates should send resumes to U.S. Department of Commerce, MASC-Personnel Div., ATTN: Floyd Powell, MC 23, 325 Broadway, Boulder, CO 80303.

NIST is an EEO Employer.

CHEMIST

Physical and Solid State Chemistry

The Office of Naval Research (ONR) is seeking a highly qualified individual to plan and manage an external grants research program in physical and solid state chemistry. The research sponsored is conducted principally at universities and government laboratories. This is a Civil Service position at the GM-13/14/15 level (\$42,601 to \$76,982), depending on qualifications. In addition to salary, the selectee is eligible to compete for performance awards.

This position offers a unique opportunity for managing the emerging science and exciting developments in the fundamental areas of the synthesis, physical/chemical characterization and processing of new compounds, solid state reactions, nanoscale and surface structures, and the chemistry of these materials. The responsibilities for managing the program include conceiving, organizing and directing the R&D programs, identifying new research opportunities, communicating ONR interest to the scientific community, evaluating and selecting research proposals for funding, managing available resources, and representing the program to Navy management. This position provides the opportunity to have a creative and significant impact on the direction and quality of research conducted at the national level. Additionally, the opportunity exists to establish or maintain an individual research program.

Applicants must have at least one year of specialized experience although a Ph.D. or equivalent doctoral degree in chemistry and one year of specialized experience is preferred. To be qualifying, this experience must be at a level of difficulty and responsibility equivalent to that of the next lower level in the Federal Service. Demonstrated research experience in physical and solid state chemistry and the ability to interact with scientific and managerial officials is preferred.

Interested persons should submit a resume, a list of publications, and a Standard Form 171, Application for Federal Employment (available at Federal Job Information Centers or from the following address), to: **Office of the Chief of Naval Research, Civilian Personnel Division, Code 01242P, Attn: Announcement #90-24 (MRS), 800 North Quincy Street, Arlington, Virginia 22217-5000.**

Applications will be accepted through 23 October 1990 and must be received by that date. Applicants are requested to complete the appropriate supplemental forms. For further information, a copy of the detailed vacancy announcement and the supplemental forms, please call (202) 696-4705.

U.S. Citizenship Required

An Equal Opportunity Employer

**DIRECTOR OF ACCELERATOR
LABORATORY**

**Institute for Materials Research
McMaster University**

Applications and nominations are sought for the position of Director of the McMaster Accelerator Laboratory.

This laboratory has a well-equipped FN (11.5 MV terminal) tandem accelerator, a KN-4000 Van de Graaf and a 150-kV ion implanter with associated beam lines, goniometer facilities, etc. for a wide range of accelerator-based research studies in solid state, atomic and molecular physics and in materials science and engineering. It is associated with McMaster's Institute for Materials Research which supports a comprehensive program of interdisciplinary materials research.

We are seeking a senior scientist or engineer with an active, internationally recognized research program utilizing accelerator-based techniques in one or more of the above areas of science and engineering.

The Director of the Accelerator Laboratory will be expected to hold a senior faculty position in an appropriate department within either the Faculty of Science or the Faculty of Engineering. The Director will oversee a broad program of accelerator-based research and will be responsible for coordinating proposals for funding support of the accelerator. With the imminent retirement of the present director, the successful candidate will have a unique opportunity to expand the accelerator-based research program into new areas of interest.

The appointment is to be filled as soon as possible with a starting date no later than July 1, 1991.

Nominations and applications, together with a detailed curriculum vitae and the names of three referees, should be sent to:

Dr. R.F. Childs
Vice President (Research)
Gilmour Hall-113
McMaster University
Hamilton, Ontario, Canada
L8S 4L8

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

DEPARTMENT HEAD

**Metallurgical Engineering and
Materials Science
Carnegie Mellon University
Pittsburgh, PA**

Applications and nominations are now being accepted for this position. Candidates must have a commitment to education, a distinguished record of research and a willingness to deal with managerial issues. We seek a leader of vision with a broad view of materials science and engineering who can coordinate and strengthen programs in metallurgy, ceramics, electronic and magnetic materials. Applications should be sent to:

Prof. W.W. Mullins
Department of Metallurgical
Engineering and Materials Science
Carnegie Mellon University
Pittsburgh, PA 15213-3890

ASSOCIATE RESEARCH ENGINEER

Candidate will conduct significant theoretical & experimental research on deformation and fracture of high performance composite materials and thin films. Develop required analytical capability for guiding the development of high performance composite materials. \$4,133.33/mo. Requirements are a PhD or its equivalent in ME; 3 years in job offered or 3 years in fracture mechanics research; strong background in theoretical/applied mechanics and materials science with special emphasis on composite and thin films; and distinguished record in research—published articles on subject matter. Job and interview in Santa Barbara, CA. Send ad and resume to Attn: Shirley Luna, Materials Department, UCSB, CA 93106.

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Advertising Contact: Mary E. Kaufold, Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237; telephone (412) 367-3036; FAX (412) 367-4373.