

Positions Available

**ENGINEERING FACULTY POSITION
Polymer/Composite Processing**

The College of Engineering/Materials Institute announces a faculty opening for a Polymer/Composite PhD Engineer/Scientist with background and interest in the processing and fabrication of polymeric composites. The successful candidate would likely have a degree(s) in Chemical, Mechanical or Materials Engineering, although other backgrounds might be considered. Ideally, the successful candidate will have industrial or governmental lab experience in processing polymeric composites. The position requires effective undergraduate/graduate teaching, the development of a strong research program and an attitude amenable to conducting collaborative research in Polymeric Materials, Adhesion Science and Composite Materials/Structures. The successful candidate will be expected to teach suitable courses in the Materials Engineering Department. Assistant professor level is preferred, but all levels will be considered. Applications from minorities or women would be particularly welcome. Please apply by **October 30, 1989** with three reference letters to:

Prof. J.E. McGrath
Director, Materials Institute
Virginia Polytechnic Institute
and State University
Blacksburg, VA 24061

Deadline for Receipt of Applications is October 30, 1989.

Virginia Tech is an Affirmative Action/Equal Opportunity Employer.

**DIAMOND FILM RESEARCH
Materials and Chemical
Sciences Division**

Postdoctoral position for research on low pressure growth of diamond. Experience with computer modeling of CVD reactors and hands-on experience with vacuum systems desired. Contact: Prof. John C. Angus, Chemical Engineering Department, Case Western Reserve University, Cleveland, OH 44106.

Equal Opportunity/Affirmative Action Employer.

**UNIVERSITY OF TORONTO
Professor of Materials
Science and Engineering**

The University of Toronto is seeking applications from suitably qualified individuals for a senior appointment at the rank of Full Professor with tenure in the Department of Metallurgy and Materials Science. The successful candidate must have extensive academic or industrial research experience in a significant branch of materials science and engineering and a continuing strong commitment to excellence in both teaching and research. Materials research in the Department currently includes work on corrosion/surface science, biomaterials, materials joining, nuclear materials, crystal growth, electronic materials and structure-properties-processing studies in metallic, ceramic, polymeric and composite materials. The appointee would be expected to conduct a strong personal research program and to provide coordination and leadership in materials research within the Department and the University, and to interact with other materials research organizations such as the Ontario Centre for Materials Research.

A resume and the names and addresses of three references should be received no later than **December 1, 1989** by:

Prof. W.A. Miller, Chairman
Department of Metallurgy and
Materials Science
University of Toronto
Toronto, Ontario, Canada M5S 1A4
**The preferred appointment date is
July 1, 1990.**

In accordance with Canadian Immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. The University encourages both women and men to apply.

Scientists

**SOLVE REAL-WORLD PROBLEMS
FROM FIRST PRINCIPLES**

Few challenges today come with ready-made answers. Add the complexity of high technology and the possibilities multiply. As the central research facility for Martin Marietta Corporation, Martin Marietta Laboratories is solving some of the toughest problems around in nondestructive evaluation.

**SCIENTISTS—NDE & MATERIALS
ENGINEERING**

Current projects include research in support of the space shuttle program, launch vehicles, satellites, and naval structures.

We seek self-starters to perform applied research in specialized NDE methods for advanced structures in order to develop an increased understanding of their mechanical integrity and properties. Emphasis is on multilayer composite and bonded structures applied to new designs with the goal of improving the reliability of those structures.

Requires PhD (or MS with four years experience) in NDE (ultrasonics/acous-

tics or acoustical microscopy/eddy currents knowledge preferred), materials science/engineering, or fracture mechanics. Proficiency in the use of advanced laboratory instrumentation in NDE and mechanical testing desirable.

We are conveniently located on a campus-like setting between Baltimore, MD and Washington, D.C. Beyond outstanding professional challenge and opportunity, we offer a competitive salary and benefits program including tuition reimbursement for advanced study.

Send resume to:

Beth Snyder Jones
Personnel Recruiter
Martin Marietta Laboratories
1450 South Rolling Road
Baltimore, MD 21227
(301) 247-0700, ext. 2331

EOE. U.S. citizenship is required.

MARTIN MARIETTA

MARTIN MARIETTA LABORATORIES

Positions Available

**MATERIALS SCIENCE DIVISION
Argonne National Laboratory**

The Materials Science Division of the Argonne National Laboratory is a broadly based research unit carrying out fundamental investigations in solid state physics, materials science, and materials chemistry. It is anticipated that a number of positions will become available within the next several months, and applications are invited at both postdoctoral and PhD staff levels. Areas of particular current interest include:

- Neutron scattering
- Studies of superlattices and magnetic thin films
- Theoretical studies (both formal theory and computer intensive methods)
- X-ray scattering
- Electron microscopy (microstructural and analytical techniques)
- Synchrotron-based studies.

While we seek primarily candidates with experience which parallels these areas, well-documented experience and potential for scientific excellence are the prime criteria for qualification. Please forward resume to: Walter D. McFall, Box J-MSD-2W, ARGONNE NATIONAL LABORATORY, 9700 South Cass Avenue, Argonne, IL 60439.

Argonne is an Equal Opportunity/Affirmative Action Employer.

RESEARCH PHYSICIST

GS-1310-12

Salary Range: \$34,580 to \$44,957

The Naval Surface Warfare Center's Research and Technology Department has a position open for a Research Physicist, GS-12, in the Radiation Division, Nuclear Branch, at the White Oak Laboratory, Silver Spring, Maryland.

The incumbent will conduct experimental research in atomic collision physics and/or ion-beam materials analysis and modification. The accelerator-based research program is divided equally between applied and basic studies. Examples of applied work include high-T, thin-film superconductors, optical coatings, and corrosion-resistant layers. The basic work deals with the fundamental physics of ion-atom collisions such as innershell ionization and stopping power. The Center expects to have a new 3MV, positive-ion tandem facility in operation by the end of 1989.

A bachelor's or higher degree in physics from an accredited college or university with a 4-year professional curriculum is required. At least 1 year of professional experience must have been at a level of difficulty comparable to that of the next lower grade in the Federal Service.

Technical Questions? Contact Dr. Dave Land on (202) 394-2256 [Autovon 290-2256] or Dr. Jack Price on (202) 394-2272 [Autovon 290-2272].

To be considered for this position, please submit a Standard Form 171 (Application for Federal Employment), specifying Announcement No. 504:R41, to the complete address given below. Applications must be postmarked not later than January 31, 1990.



NAVAL SURFACE WARFARE CENTER

Attn: P40 (P. Donoghue [504:R41] MRS)
10901 New Hampshire Avenue
Silver Spring, MD 20903-5000

- U.S. Citizenship Required •
- An Equal Opportunity Employer •

RESEARCH SCIENTIST

Research Scientist sought by company in Golden, Colorado specializing in solar energy research to work in Solid State Research Branch. Design, build and conduct Raman scattering and low-temperature photoluminescence experiments required to investigate the fundamental physical properties of photovoltaic and superconductor materials, such as isotope effect, order-disorder phenomena, and electron-phonon interaction. Theoretically analyze and interpret the optical results on the band structure and lattice dynamics of amorphous materials, ordered pseudobinary alloys, and high-T superconductors.

Requires PhD in Experimental Solid State Physics and two years experience with Raman scattering and low-temperature photoluminescence on photovoltaic and superconductor materials. (Experience may be gained through employment or in educational program.) Also requires demonstrated ability to design and build optical experiments to probe fundamental physical properties of photovoltaic and superconductor materials and analyze results within the framework of many-body physics and group theory. (Ability may be acquired in work experience or in educational program.)

\$40,000/year; 8:30 a.m. - 5:30 p.m., M-F.

Respond by resume to Colorado Department of Labor & Employment, Division of Employment & Training, 600 Grant Street, Suite 900, Denver, CO, ATT: James Shimada, and refer to Job Order No. CO3052672.

SENIOR SCIENTIST - MANAGER

Thin Film Semiconductors

Participate, lead team in development, modification, characterization of industrial scale vapor deposition of SiC thin films for semiconductor applications. Establish SiC thin film deposition processes for the fabrication of all production and R&D devices. Manage entire thin film area including run scheduling, determination, documentation of process procedures, supervision of thin film personnel and inventory control. Serve on team to investigate novel techniques for growth of SiC, other wide bandgap semiconductors. PhD Materials Sci/Eng, 4 yrs/exp. req. in growth/doping of monocrystalline thin films for SiC for semiconductor applications by chemical vapor deposition. Must include exp. in CVD reactor design, growth of 6H-SiC on 6H-SiC, 3C-SiC on 6H-SiC and 3C-SiC on Si, exp. in design of reactors for and growth of CVD thin film diamond and general bulk crystal growth by various methods. Must demonstrate proficiency in the following: TEM (both cross-sectional and planview), SEM, optical microscopy (including Nomarski), SIMS, x-ray diffraction, x-ray topography, precision x-ray orientation, C-V, I-V, Hall effect. Exp. with SiC device fabrication techniques, necessary. Publications in the field will be partially used to judge exp. (May have gained exp. during pre- or postdoctoral training). 40 hrs/wk, \$40,000/yr. Apply to Job Service, 316 N. Mangum St., Durham, NC, or nearest Job Service. JO #NC3090543, DOT 019.061-014.

Positions Available

Faculty Position

Department of Materials Science and Engineering

The Department of Materials Science and Engineering at SUNY Stony Brook expects to appoint an Assistant or Associate Professor by September 1990.

Candidates should preferably have postdoctoral experience related to polymers, electronic materials or mechanical properties of microcomposites. The Department has excellent characterization facilities (LEED, XPS, AES, EELS, TEM, SEM, X-Ray Diffraction and Topography).

The ability to initiate an independent research program and attract outside funding is of importance in addition to teaching skill. Please send curriculum vitae and names of at least three references to: Professor R.F. Egerton, Chairman, Department of Materials Science and Engineering, SUNY Stony Brook, Stony Brook, NY 11794-2275. SUNY Stony Brook is an Affirmative Action/Equal Opportunity Educator and Employer. AK 211.

Stony Brook

MATERIALS SCIENTIST

\$31,525 - \$45,699

Salary relates to Research Grades

DIVISION OF MATERIALS SCIENCE AND TECHNOLOGY, CLAYTON, VICTORIA

The Division has strong links with Australian and overseas industry and is committed to research in the fields of Solid State Science, Advanced Materials Synthesis, Alloys and Ceramics. It is located in the CSIRO laboratory complex at Clayton, Victoria, adjacent to Monash University. The Division has an excellent range of instrumental facilities together with first class library and support facilities.

We are seeking a materials scientist to undertake research within the Ceramics program.

The research responsibilities include:

- Mechanical properties of ceramic materials.
- Fatigue behaviour of ceramic and metallic materials.
- Microstructural investigation of ceramic materials.
- Fracture mechanics.

Necessary qualifications and qualities:

- a PhD degree or equivalent in physics, metallurgy, materials science/ engineering or mechanical engineering
- sound appreciation of the physics and mechanics of materials
- sound appreciation of fracture mechanics
- familiarity with microstructural aspects of materials and their role in controlling properties.

Prospective applicants are invited to telephone Dr M. V. Swain on (03) 542 2738 for further information.

Appointment will be indefinite with Australian Government Superannuation benefits available. The detailed job description and selection criteria can be obtained from Mr A. Miller on (03) 542 2807 or fax (03) 544 1128.

Application should be submitted by 17 November 1989 and quote Reference No. AA142T.

Applications should include the names of at least two professional referees and be addressed to:

**The Acting Chief,
CSIRO Division of Materials Science and Technology,
Locked Bag 33,
Clayton, Victoria, 3168**

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FULL PROFESSOR IN EXPERIMENTAL PHYSICS Swiss Federal Institute of Technology Lausanne (École Polytechnique Fédérale de Lausanne)

The Swiss Federal Institute of Technology in Lausanne announces several openings for position of full professor in experimental physics in the following areas:

- Physics of electronic materials
 - Physics of semicrystalline solids
 - Surface physics/surface science
 - Physics for biomedical engineering
- Teaching is in French.

Applications deadline: **November 30, 1989.**

Successful candidates are expected to start their activities in summer-fall 1990.

For more information and application, write to: Secrétariat général de l'École Polytechnique Fédérale de Lausanne, CE-Ecublens, CH 1015 Lausanne - Switzerland.

POSTDOCTORAL POSITION Institute for Physical Research & Technology Iowa State University

A research position is available in the area of organosilicon polymer processing. The research involves synthesis and characterization of silicon carbide fibers from polymers. Influence of processing conditions on the chemical, physical and mechanical properties of the fibers will be studied. Candidates holding a PhD in Materials Science, Chemical Engineering or Chemistry with strong background in polymer processing and characterization are encouraged to apply. Familiarity with mechanical testing, and experimental techniques such as: DSC, TGA/DTA, XRD, SEM, GC, MS is desirable. The position is for one year but may be extended depending on the availability of the funds. Send resume and the names of three references to:

Prof. Mufit Akinc
110 Engineering Annex
ISU, Ames, IA 50011

Iowa State University is an Equal Opportunity Employer.

CENTER FOR SUPERCONDUCTIVITY RESEARCH University of Maryland

The Maryland Center for Superconductivity Research seeks candidates for experimental faculty positions at the Assistant Professor level (tenure track) and for the faculty position of Assistant Research Scientist (a non-tenured research position). Applicants with experience in any area of superconductivity research are invited to apply. Of particular interest is materials-related research, thin film and single-crystal preparation/characterization and superconducting electronics. The appointments in the Center will be joint with either the Physics, EE or Materials Department. Substantial start-up funds are available. Women and minorities are encouraged to apply. Applicants should send a resume, list of publications and names of at least three references to Search Committee Chairman, Center for Superconductivity Research, Department of Physics, University of Maryland, College Park, Maryland 20742-4111.

Positions Available

**DIRECTOR
SOLID STATE DIVISION
Oak Ridge National Laboratory**

The Oak Ridge National Laboratory (ORNL) invites nominations and applications for the position of Director of the Solid State Division. This division is engaged primarily in fundamental research sponsored by the Division of Materials Sciences of the Office of Basic Energy Sciences, Office of Energy Research, U.S. Department of Energy, but small amounts of both fundamental and applied research are undertaken for other organizations. The present program of the division involves excellent research in a wide variety of areas, which include neutron scattering, x-ray and synchrotron radiation scattering, ion beam implantation and scattering, electron microscopy, surface physics and chemistry, ceramics, semiconductor physics, synthesis and characterization of novel materials, and solid state theory. The Solid State Division also has several user or collaborative research centers that interface on a regular basis with outside collaborators from university, industry, and government laboratories. The Division Director is responsible for initiation and coordination of the research and for the development of important interdisciplinary research programs with other divisions of ORNL. Candidates should be U.S. citizens, should have strong records of fundamental research in the solid state sciences, and should have demonstrated management and leadership abilities. A Solid State Division Search Committee has been appointed and will begin its review of applicants on December 1, 1989, but applications will be accepted until the position is filled. Applicants should send a complete resume with names and contact information on three references to Dr. Michael K. Wilkinson, Chairman, Solid State Division Search Committee, Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, TN 37831-6024.

ORNL, which is operated by Martin Marietta Energy Systems, Inc., for the U.S. Department of Energy, is an Equal Opportunity Employer.

Advertising Contact

Mary E. Kaufold
MRS BULLETIN
Materials Research Society
9800 McKnight Road
Pittsburgh, PA 15237
(412) 367-3036
Fax: (412) 367-4373

**FACULTY POSITION
Materials Department
University of California,
Santa Barbara**

The Materials Department at the University of California, Santa Barbara, invites applications for a tenure-track faculty position in the area of materials characterization with emphasis on transmission electron microscopy and microanalysis techniques, effective July 1, 1990.

The Materials Department has a multidisciplinary focus on such areas as: electronics materials, macromolecules, structural composites and materials processing. The applicant should have the desire to pursue multidisciplinary research with the other groups in the department. A proven record of expertise in high resolution Transmission Electron Microscopy and TEM-based microanalysis is expected. Applicants with expertise in the fields of diffraction physics and electron-matter interactions are encouraged to apply.

The UCSB electron microscopy facility is equipped with four transmission electron microscopes and two scanning electron microscopes. The analytical laboratory is a shared facility with a full-time staff engineer for maintenance, development and student instruction.

Responsibilities include teaching and developing strong research programs. A PhD or equivalent degree and evidence of excellent research and teaching expertise are required. Joint appointments with other departments at UCSB are possible. Salary and rank dependent on qualifications.

To ensure full consideration, applications should be received by the department before **November 15, 1989**. Candidates should send a resume containing teaching and research accomplishments to:

Prof. Pierre Petroff
Materials Department
University of California
Santa Barbara, CA 93106

The University of California is an Equal Opportunity/Affirmative Action Employer. Proof of U.S. citizenship or eligibility for U.S. Employment will be required prior to employment. (Immigration Reform and Control Act of 1986).

Editorial Contact

Gail A. Oare
MRS BULLETIN
Materials Research Society
9800 McKnight Road
Pittsburgh, PA 15237
(412) 367-3036
Fax: (412) 367-4373

Positions Wanted

**CRYSTAL GROWER AND
THIN FILMS PREPARATIONIST**

Considerable experience in the growth of inorganic crystals. Single crystals were grown to study their optical, magnetic, and superconducting properties. Thin films were prepared for superconducting studies and ion implantation. Thin film devices have been fabricated by photolithography. Considerable experience in cryogenic techniques. L.H. Peirce, 914 Abbiegail Dr., Tallahassee, Florida 32303.

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