

Positions Available

LAWRENCE LIVERMORE NATIONAL LABORATORY

Lawrence Livermore National Laboratory is seeking highly qualified professionals to participate in state-of-the-art research and development of high power lasers for inertial confinement fusion, isotope separation, and defense applications. Positions are available for physicists, engineers, material scientists, chemists and technicians with demonstrated expertise in:

- Lasers: solid state, diodes, dyes, metal vapor
- Materials Science: Metals, Ceramics, and Polymers
 - Laser diagnostics
 - Optical and electro-optical materials
 - Non-linear optics
 - Analytical, Physical and Surface Chemistry
 - Optical systems and lens design

To learn more about these outstanding career positions, write or call collect:

Stephen G. Brieger, Lawrence Livermore National Laboratory
 P. O. Box 5508, L-490, Livermore, CA 94550
 (415) 423-3030



**U.S. citizenship required.
 An Equal Opportunity Employer**

HEAD

**DEPARTMENT OF MATERIALS ENGINEERING
 Virginia Polytechnic Institute and State University**

Applications and nominations are invited for the position of Head of Materials Engineering. A candidate should have a doctorate in the materials area, a proven research record, and educational experience to merit the rank of full professor. Preference will be given to individuals whose background and experience indicates that he or she could provide strong academic leadership in traditional as well as innovative research and teaching programs in Materials Engineering. This position requires an individual who can work constructively with students, faculty, and other materials related faculty groups within the University. Responsibilities include decisions with respect to administrative, budgetary, promotion, and instructional matters of the Department.

The Department currently has 11 state-funded positions, approximately 100 undergraduate students, and approximately 26 graduate students. Current research activi-

ties have a broad range extending from computer modeling of fundamental problems to applied programs with industrial potential.

The College of Engineering is one of the most selective land grant schools in the country, with 10 degree granting departments and a research budget of 20 million. The University is located in Blacksburg, Virginia, southwest of Roanoke, near the Appalachian mountains. There are over 22,000 students on the campus.

Letters of application and nomination should be accompanied by a resume and should be received by **January 15, 1989**.

Dr. F.W. Stephenson
 Associate Dean, College of Engineering
 333 Norris Hall
 Virginia Polytechnic Institute
 and State University
 Blacksburg, VA 24061

An equal opportunity, affirmative action institution.

FACULTY POSITIONS

**Department of
 Materials Science and Engineering
 University of
 Arizona Tucson, Arizona**

The Department of Materials Science and Engineering invites applications for senior-level positions in optical and electronic materials and ceramic processing from established scientists interested in joining a vigorous new materials research effort. The Department and the recently formed Arizona Materials Lab (AML) currently has over a dozen active faculty involved in exciting programs on glass, ceramics, and optoelectronic materials. Excellent opportunities exist for interaction with the Optical Sciences Center and several interdisciplinary research centers. Please send resumes to:

Prof. Subhash H. Risbud
 Arizona Materials Laboratories
 4715 E. Fort Lowell Road
 Tucson, AZ 85712

Positions are open until **December 1, 1988** or when filled.

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

Positions Available

**MATERIALS SCIENCE
FACULTY**

MIT Department of Materials Science and Engineering has searches for tenure track assistant professorships available involving teaching and research in the areas noted below:

- **Electronic Materials**
- **Physical Ceramics**
- **Chemical Synthesis/Processing of Materials**
- **Materials Science and Engineering**

Doctorate required and experience desirable. Salaries and benefits competitive. Positions will be filled only if exceptional candidates are found. Appointment to a more senior position is possible based on experience and accomplishments. **Send resume (including citizenship and/or visa status), publications list and references to Professor Merton C. Flemings, Head, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA 02142. MIT is a non-smoking environment.**

MIT is an equal opportunity/affirmative action employer

A COMMUNITY AT WORK.



FACULTY POSITIONS

**Department of
Materials Science and Engineering
SUNY Stony Brook**

The Department of Materials Science and Engineering at the State University of New York at Stony Brook expects to appoint at least one Assistant or Associate Professor by September 1989.

Postdoctoral experience in electron microscopy of ceramics, metals, polymers or electronic materials is desirable, but outstanding candidates with other expertise will be considered. Please send curriculum vitae and names of at least three references to: Prof. R.F. Eger-ton, 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#265.

**MATERIALS SCIENTIST
SUPERCONDUCTIVITY**

Superconductor Technologies Incorporated has an immediate opening for a materials scientist to develop methods for the growth of epitaxial, superconducting oxide films. The successful candidate will participate with solid state physicists, chemists, ceramists, device engineers, and others in the creation of an organization and a technology at a true frontier. The position offers the opportunity for substantial interaction with eminent faculty at the University of California and the Institute for Theoretical Physics. Continuing pioneering research in this field is a requisite of the position. Equity participation is available for key contributors.

Characteristics of the successful applicant will include demonstrated innovative skills, comfort with the relevant chemistry and physics, and a willingness to take risks commensurate with rewards. A PhD or its equivalent in materials science, solid state chemistry, or an allied field is required. A record of outstanding performance will be weighed more heavily than the particulars of the candidate's experience.

Applicants may send resume to:

Dr. Robert B. Hammond
Superconductor Technologies Inc.
460 Ward Drive, Suite F
Santa Barbara, CA 93111-2310

STI is an Equal Opportunity Employer

**SCIENTIFIC
SPECIALIST**

EG&G Idaho, Inc., prime operating contractor for the Department of Energy's Idaho National Engineering Laboratory, has an immediate opening for a Scientific Specialist.

This position will be responsible for leading a basic science research team that will experimentally and theoretically investigate the influence of defects on electrical, magnetic and thermal properties of solids. The position requires a strong theoretical background with respect to defects in solids and solid state properties and a familiarity with state-of-the-art computational methods for predicting those properties. The technical leader must be cognizant of experimental techniques for solid state property determinations and of the utilization of measured and theoretical information to establish a scientific understanding of defect-property relationships. The technical leader should have a demonstrated ability to lead, to provide technical direction in an evolving research effort, to develop new programs, and to establish working relationships with applied programs in a multi-disciplinary approach to ensure technological impact of this research.

A Ph.D. in Material Science or Solid State Physics is desirable with a minimum of 10 years experience in research on defects/solid state properties. The applicant must have a proven record as a leader in defect/solid state property fields substantiated by publications and peer recognition.

The INEL is located in Idaho Falls, a small friendly community in the heart of one of the most scenic recreational areas in the country, including Sun Valley, Jackson Hole, Yellowstone and Teton National Parks.

If interested and qualified, please submit resume with salary requirements to: **Employment Services (WLS-40) EG&G Idaho, Inc., P.O. Box 1625, Idaho Falls, Idaho 83415-3127.** We are an equal opportunity employer. U.S. Citizenship required.



Positions Available

MATERIALS SCIENCE SOLID STATE PHYSICS

Dartmouth College
Thayer School of Engineering

The Thayer School of Engineering at Dartmouth College invites nominations and applications for a tenure track faculty position in materials science or solid state physics. Preference will be given to candidates for appointment at the assistant professor level. Applicants should have a doctorate in engineering, applied physics, or physics, with research interests in the processing or properties of electronic, optical, dielectric or magnetic materials, thin films, or solid state devices. Candidates must be able to teach effectively at both the undergraduate and graduate levels, and develop a strong research program within an inter-disciplinary engineering environment.

Facilities at Dartmouth include a modern electron microscopy center, mechanical testing equipment, materials processing and characterization equipment, and a wide variety of computing facilities. A 900 ft² Class 100/1000 clean room facility for solid state materials and device processing is due for completion in October 1989.

The Thayer School was founded in 1867 and functions as both the Engineering Sciences Department of Dartmouth College and as a graduate professional school. The School is now undergoing a significant expansion in facilities and faculty. The Thayer School offers programs leading to the de-

grees of Master of Engineering, Master of Science, Doctor of Engineering and Doctor of Philosophy. All departments in the Science Division of Dartmouth College offer graduate programs through the PhD degree, and support the needs of engineering students in applied science.

Dartmouth College, a highly selective university composed of the undergraduate liberal arts college and graduate and professional programs, is located in a small New England town at the junction of the Connecticut River and the Appalachian Trail, in an area noted for excellent outdoor recreational opportunities. Cultural activities revolve around the Hopkins Center for the Performing Arts, the Hood Museum of Art, and numerous local music and theater groups. Hanover is served by a local airport with service to Boston and New York, and by interstate highways, rail and bus lines.

Interested persons should submit a resume and names/addresses of three referents to:

Dr. Carol B. Muller, Assistant Dean
Thayer School of Engineering
Dartmouth College
Hanover, New Hampshire 03755

Review of applications will begin November 15, 1988.

Dartmouth is an equal opportunity Affirmative Action employer and encourages applications from women and members of minority groups.

**POSTDOCTORAL RESEARCH
Si MBE AND SURFACE ANALYSIS**

Naval Research Laboratory

The National Research Council and the Office of Naval Technology are accepting applications for the 1989 Postdoctoral Research Associateship Program. Under the aegis of this program the Electronic Science and Technology Division of the Naval Research Laboratory has opportunities for research in homo- and heteroepitaxy of silicon by Molecular Beam Epitaxy. The research focuses on the fabrication of hetero-junctions, quantum wells, and strained layer superlattices for potential advanced optoelectronic, nanoelectronic, or microelectronic applications. Examining fundamental properties of growth kinetics of silicon in pseudomorphic systems and the characteristics of the heterojunction interfaces is emphasized. The research investigates substrate preparation, characterization, and the study of the physical properties of the substrate and the epilayer. In-situ diagnostics include electron diffraction, mass spectroscopy, and photoelectron spectroscopy. The laboratory is equipped with a Si MBE system which is a synergism of the VG Semicon V80 Si MBE system and a VG Instruments ESCALAB Mk II. Familiarity with ultra-high vacuum techniques, thin film deposition or MBE techniques, and photoelectron spectroscopy is desirable. For further information concerning this research contact: Joseph M. Killiany, Naval Research Laboratory, Code 6810, Washington, DC 20375-5000; (202) 767-2524.

Either Program is open to U.S. citizens who have had their PhD for no more than five years. Application deadlines are **January 15** and **April 15** for the NRC Associateship and **January 1**, **April 1**, and **July 1** for the ONT fellowship. For further information on application procedures, and for application materials, write to:

Associateship Programs
National Research Council
2101 Constitution Avenue NW
Attn: Code JH608, Washington, DC
20418
Tel. (202) 767-3865

ASEE Projects Office
Eleven Dupont Circle
Suite 200
Washington, DC 20036
Tel. (202) 767-7080

**FACULTY POSITIONS
IN CRYSTAL GROWTH**

Center for Research in
Electro-Optics and Lasers (CREOL)
University of Central Florida (UCF)

CREOL announces the availability of tenure earning faculty positions and technical staff positions in the areas of the growth and characterization of laser host and nonlinear optical materials and related technologies. Ongoing programs in CREOL include Laser Spectroscopy, Thin Film Optics, Optical Processing, Nonlinear Optics, Ultra-Fast Phenomena, Laser-Induced Damage, Laser Propagation and others.

Applicants should send a resume, statement of research interest and three letters of reference to:

Screening Committee: Laser Host
and NLO Materials
CREOL/UCF
12424 Research Parkway
Orlando, FL 32826

UCF is an equal opportunity employer.

**POSTDOCTORAL AND GRADUATE
STUDENT OPPORTUNITIES**

Drexel University

The Plasma Processing Laboratory of Drexel University's Materials Engineering Department invites applications to study and conduct research in an exciting growth area of materials processing. Research is being conducted in plasma spray forming, coatings, melt processing and synthesis using thermal plasmas. Successful candidates would have opportunities for research in processing, modeling and/or intelligent process control. Please send resume and qualifications to:

Dr. Ronald W. Smith
Director, Plasma Processing
Laboratory
Dept. of Materials Engineering
Drexel University
32nd & Chestnut Sts.
Philadelphia, PA 19104
Tel. (215) 895-1974 or 2323

Positions Available

MATERIALS SCIENTIST

The Tennessee Valley Authority's National Fertilizer Development Center, Muscle Shoals, Alabama, is seeking a Materials Scientist with an advanced degree in chemistry, materials science, geology, or other physical science. Our selected candidate will conduct materials characterization research independently, in support of other TVA research projects, and as required for outside contract work in the areas of environmental research, fertilizer/product process improvement, and industrial by-product utilization.

Specialized knowledge of the principles of optical crystallography, the optical crystallographic properties of solid substances, and the theory and application of chemical microscopy techniques for the analysis and characterization of materials is required. Knowledge of other materials characterization techniques, such as FTIR, XRD, SEM/EDX, the scientific principles involved, and some background and experience in mineralogy and optical mineralogy is highly desirable. Skill in both written and verbal communication and in establishing and following guidelines is essential.

This is a permanent full-time annual position with a salary range from \$31,795 to \$45,185, depending on qualifications. If you are qualified and eager to contribute to this vital program, please send resume along with social security number and citizenship to:

TVA Tennessee Valley Authority
Human Resource Services
T230 NFDC
Muscle Shoals, AL 35660

TVA is an equal opportunity employer. Selections will be made on the basis of merit and efficiency as set out in the TVA Act and applicable laws prohibiting discrimination in Federal employment.

DIRECTOR
Electron Microscopy Facility

Qualified PhD physical sciences electron microscopist sought to fill staff position as director of a new electron microscopy facility at the University of Minnesota. This facility, part of the NSF Engineering Research Center on Interfacial Engineering and the Center for Science and Application of Superconductivity, will include a new high resolution intermediate voltage TEM with EDS and EELS.

The Director will participate in federally sponsored research, will train and supervise graduate students in electron microscopy, will direct the technical support staff, and will be responsible for the management of the electron microscopy center and its facilities. Salary commensurate with experience.

Minimum qualifications include a PhD degree and four years experience in transmission electron microscopy (may include PhD experience).

Interested persons should send their curriculum vitae and the names of three references by **December 31, 1988**, to:

Martha L. Mecartney
Department of Chemical Engineering
and Materials Science
University of Minnesota
421 Washington Avenue SE
151 Amundson Hall
Minneapolis, MN 55455

The University of Minnesota is an equal opportunity educator and employer and specifically invites and encourages applications from women and minorities.

DISTINGUISHED VISITORS PROGRAM
High Resolution Electron Microscopy

The ASU Facility for High Resolution Electron Microscopy has funds to support distinguished visitors to the Facility. The objective is to facilitate the interaction of ASU Faculty and Staff with U.S. leaders in those areas of science where the special techniques available in the Facility have known, or potential, impact so that research projects in the Facility will be more clearly directed towards the major current problems in research on materials. The visitors, though not necessarily electron microscopists themselves, should be aware of the value of electron microscopy as a research tool and be interested in the application of the advanced techniques available in the Facility to problems in current science or technology.

Distinguished visitors may be supported for a few weeks or months or obtain a supplement for a sabbatical leave.

Expressions of interest in participation in this program should be addressed to: John M. Cowley, Director, ASU Facility for HREM, Center for Solid State Science, Arizona State University, Tempe, AZ 85287-1704.

FACULTY POSITION
MATERIALS SCIENCE AND ENGINEERING
The Johns Hopkins University

The Materials Science and Engineering Department at The Johns Hopkins University is seeking applicants to fill positions at all academic ranks. Candidates in all areas of Materials Science and Engineering will be considered. Those appointed at the tenured rank of Professor must be internationally recognized leaders of well-supported research programs in the field of materials science and engineering.

The applicants selected will be expected to teach at both the undergraduate and graduate levels as well as to develop innovative and imaginative research programs.

The Johns Hopkins University is an equal opportunity, affirmative action employer.

Genuine commitment to excellence in teaching and supervision of graduate student research is cardinal. Candidates should submit a resume which includes professional achievements as well as the names, addresses and telephone numbers of at least three references. Applications should be submitted no later than **January 15, 1989** to:

Prof. M. Rosen, Chairman
Department of Materials Science
and Engineering
The Johns Hopkins University
Baltimore, Maryland 21218

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