

Positions Available

FACULTY APPOINTMENTS IN ADVANCED MATERIALS

The University of Massachusetts Lowell has established a Center for Advanced Materials. The focus of the Center is the design, synthesis, processing, characterization, and application of advanced materials in the fields of polymers, polymer-ceramic interfaces, biomaterials, electronics, photonics, and opto-electronics. The Center incorporates an extensive suite of modern, state-of-the-art instrumentation. Currently, the University is establishing a materials science/engineering graduate degree program with participation from a number of academic departments including the departments of chemistry, physics, chemical and nuclear engineering, electrical engineering, and plastics engineering. We are seeking new faculty to participate in the formation of the nucleus of this new graduate program. Applications are sought from investigators with established research programs and expertise in new and emerging areas. Successful candidates will be expected to participate in both the advanced materials research effort and the development of the graduate degree programs. These appointments will be to tenure track positions, with academic rank commensurate with experience.

Specifically, the Department of Physics and Applied Physics is seeking individuals with a demonstrated record of accomplishment in photonics and optoelectronics materials development, characterization, and device design. Specific areas of interest include integrated photonic and optoelectronic devices, surface emitting semiconductor laser diodes and laser arrays, and visible/infrared sources and detectors. An interest in the interaction of ion beams with photonic materials is also desirable. Candidates who are selected will seek external support for and work closely with the University's new MBE-based photonic and optoelectronic device research laboratory. A doctoral degree in physics or a related field is required.

Candidates should submit a curriculum vitae, statement of research interests, reprints of significant publications and names of three references to: Dr. James J. Egan, Department Chair, Department of Physics and Applied Physics, University of Massachusetts Lowell, One University Avenue, Lowell, MA 01854. Candidates are encouraged to submit promptly, but applications will be accepted until the positions are filled. The number of positions is contingent on funding.

The University of Massachusetts Lowell is an equal opportunity/affirmative action, Title IX, H/V, ADA 1990 employer.

ELECTRON OPTICS FACILITY ENGINEER

The Department of Metallurgical and Materials Engineering at Michigan Technological University has an opening for an engineer who will be responsible for operation, maintenance, repair, and supervision of microanalytical instruments in its Electron Optics Facility. This facility includes several scanning electron microscopes, transmission electron microscopes, and an electron microprobe. Successful candidates will have training and experience in operation, maintenance, and repair of similar instruments in a research setting. Duties may include collaboration with faculty and graduate students in preparation of research proposals, development of new microanalytical methods, and publication of research. Interested applicants should send a resume, including names and addresses of three professional references, to the following address:



Chair, Electron Optics Facility Engineer Search Committee
Department of Metallurgical and Materials Engineering
Michigan Technological University, 1400 Townsend Drive, Houghton, MI 49931-1295

Salary range for this position is \$34,261-\$54,818/yr. Starting salary will depend on experience and qualifications. The search committee will begin reviewing applications on **August 1, 1994**. Applications will be accepted until the position is filled.

Michigan Technological University is an equal opportunity employer/educational institution and welcomes applications from all qualified applicants.

PROCESS ENGINEER

Responsible for development of epitaxial deposition process for growth of silicon carbide (SiC), A^{III} -nitrides and silicon carbide/nitride alloy systems. Duties include characterization of same materials, as well as operation, maintenance of systems required for development of these materials. Will use experience in epitaxial deposition, characterization of SiC and nitride epitaxial structures, including deposition of both doped and undoped epilayers and multilayer structures grown on Si, SiC, and sapphire structures. M.S.E.E. (materials science), at least 6 months epitaxial deposition research experience which should include system operation and maintenance and experience in SiC, AlN, GaN heterostructures. 40 hr/wk, \$37,544 yr. Apply to Job Service, 1105 Briggs Ave., Durham, NC 27703 or nearest Job Service Office. JO#NC3033798, DOT 029.081-014. All resumes *must* include SS#.

**FACULTY POSITION
Materials Science and Engineering
Penn State**

The Department of Materials Science and Engineering at Penn State is seeking applicants for a tenure-track position at the assistant professor level in the broad subfield of physical materials science. Preference will be given to candidates with expertise in structure-property-performance relationships in high-temperature materials or expertise in magnetic, electronic, or photonic materials. The successful candidate must have a strong academic record, outstanding potential for independent research and a commitment to teaching undergraduate and graduate students. Applicants should send a curriculum vitae with publications and names of at least three referees by **October 1, 1994**, to:

Faculty Search Committee
Department of Materials Science
and Engineering
Box BMRS, 101 Steidle Building
University Park, PA 16802

*An affirmative action/equal opportunity employer.
Women and minorities are encouraged to apply.*

**POSTDOCTORAL POSITION
Thin-Film Plasma
Processing/Microscopy**

A postdoctoral appointment will be available October 1994 in the Solid State Division of the Oak Ridge National Laboratory (ORNL) in the area of thin-film plasma processing. The position involves the development of advanced electron cyclotron resonance (ECR) plasma sources and the application of ECR sources to dielectric and conducting thin-film deposition. A portion of the work will be conducted under a Cooperative Research and Development Agreement between ORNL and IBM aimed at developing techniques for integrated circuit metallization. The position requires a PhD in engineering or physics, extensive hands-on experimental experience, and excellent written and oral communication skills. Experience in transmission electron microscopy is preferred, and experience in one or more of the following areas is desirable: thin-film processing, gas phase spectroscopy, and plasma diagnostics.

To apply, send a resume and the names of three references to: Plasma Processing Group, Solid State Division, Oak Ridge National Laboratory, P.O. Box 2008, Oak Ridge, TN 37831-6057. ORNL is managed by Martin Marietta Energy Systems, Inc., for the U.S. Department of Energy.

ORNL is an equal opportunity employer committed to building and maintaining a diverse workforce. U.S. citizenship is required for this position.

**RESEARCH POSITION IN COMPOUND SEMICONDUCTOR
EPITAXY AND PHOTONICS**

**Materials Science and Engineering
University of Washington, Seattle, Washington**

A postdoctoral research associate position is available for a scientist or engineer in the area of the design and synthesis of high performance photonic devices using molecular-beam epitaxy for use in an advanced virtual reality display. Research responsibilities include the design and growth of high-speed visible electroluminescent devices. Candidates with direct experience in MBE growth are preferred. This is a non-tenure-track full-time research position. The position is fully funded for five years. However, continued funding beyond year one is subject to review of results. The department has operational growth facilities that include MBE, CBE, and MOCVD reactors. This appointment can also be made at the research assistant professor level for candidates with appropriate credentials and experience.

Applications for this position will be received until the position is filled. Please send inquiries and applications (including resume, list of publications and two letters of reference) to:

Prof. Thomas P. Pearsall
Department of Materials Science and Engineering
University of Washington, FB-10, Seattle, WA 98195

The University of Washington is an equal opportunity/affirmative action employer.

**Comisión Nacional de Energía Atómica (CNEA)
CENTRO ATOMICO BARILOCHE (CAB)
ARGENTINA**

The Centro Atómico Bariloche Applied Research Department expects to have an opening for a Research Associate position in the field of ceramic materials.

Requires PhD in physics with a strong background in ceramic materials, superconductivity, and usual characterization techniques: ceramography, SEM, EDS, WDS, optical microscopy, DTA, TGA, phase diagrams and cermet experience. Candidates must have experience in the preparation and characterization of high- T_c ceramic superconductors, knowledge of usual superconductor characterization measurement techniques (transport properties, magnetization and ac susceptibility), automated data acquisition systems and fabrication of high- T_c superconductor wires.

Responsibilities will include the development of high- T_c superconducting wires and related topics.

Knowledge of Spanish is required.

The Research Contract will be annually renewed, and is subjected to final confirmation by CNEA. Salary will depend on qualifications, in accordance with the CNEA salary scheme.

Applications should include resume, list of publications, names of three references, and copies of the three most relevant publications in the field of interest. **Closing date: October 10, 1994.**

Centro Atómico Bariloche
Oficina de Personal
8400-San Carlos de Bariloche, Rio Negro, Argentina
Fax: 54-944-61006; Tel: 54-944-61001; Tlx: 80723 CAB AR

AD CLOSING DEADLINES

October 3, 1994 for the November Issue

November 1, 1994 for the December Issue

December 1, 1994 for the January 1995 Issue

**TO PLACE YOUR AD,
CALL MARY E. KAUFOLD TODAY!
(412) 367-3036**

Positions Wanted

The following advertisements are from MRS members seeking employment in materials research and development.

PROSPECTIVE EMPLOYERS—
To correspond confidentially with the applicant,

**REPLY TO THE APPROPRIATE
BOX NUMBER, AS FOLLOWS:**

Box _____, No. _____,
c/o MRS Bulletin
Materials Research Society
9800 McKnight Road
Pittsburgh, PA 15237-6006

Material scientist (PhD '92, MS'84) seeks R&D position in mechanical behavior of materials. Knowledge in kinetics of deformation, fracture and phase transformation (creep, creep-fatigue, thermal fatigue, fracture and heat treatment). Expertise in electronic interconnection reliability and alloys development such as Pb-free/solders and thick films. Extensive experience in Instrons, MTS, SEM/EDX, TEM, x-ray, DTA/DSC, oscilloscopes, etc. 28 publications. **Employers—Please reply to Box XIX, 903.**

Materials/mechanical engineer, MS, Mat. Engrg., BS Mech. Engrg., seeks industrial R&D or manufacturing position. Extensive experience in sensor head processing, micromachining and micromechanics. Expertise in IC fabrication, anodic bonding of Si and pyrex, wet etching (KOH, HNA, EDP), problem solving and team work. Location and salary open. **Employers—Please reply to Box XIX, 904.**

PhD in chemistry with three years of academic/industrial postdoctoral experience seeks position in industry. Creative in materials synthesis and processing, and developing new chemical products. Expertise in polymers, catalysts (oxidation, HDS and emission control), electronic, structural and bio-materials, intermetallics, nanosize materials, oxidation resistant carbon matrix. Various characterization skills. Excellent communication and interpersonal skills. **Employers—Please reply to Box XIX, 901.**

PhD with postdoctoral experience seeks R&D position. Background in processing and characterization of semiconducting, ferroelectric, and superconducting materials; experience in XRD, SEM, TEM, EDS, WDS, RBS and various optical and electrical characterizations; good publication record and a patent; knowledge of instrument-computer interfacing; good aptitude in writing articles and proposals. **Employers—Please reply to Box XIX, 902.**

PhD in condensed matter experimental physics seeks industrial position. Familiar with thin film technology (MBE, sputtering, CVD, electron beam), semiconductor and superconductor thin film/superlattice/multilayers, UHV, photolithography and reactive ion etching processing micron-size device, cryogenics, material analysis (XRD, SEM, AFM, EDX, ICP, FTIR, XPS, SIMS, ellipsometry), electrical transport measurement, computers. **Employers—Please reply to Box XIX, 905.**