

Positions Available

**PROGRAM DIRECTOR
Materials Research Science and
Engineering Centers
National Science Foundation—
Division of Materials Research**

The National Science Foundation's Division of Materials Research is seeking qualified applicants for the position of Program Director for Materials Research Science and Engineering Centers (MRSECs), a new and strengthened program designed to support interdisciplinary materials research and education of the highest quality while addressing fundamental problems in science and engineering which are important to society. Applicants must hold a PhD or equivalent qualification in materials science and engineering, condensed matter physics, materials chemistry, or a related field of science or engineering; have six or more years of research experience beyond the PhD; be familiar with a broad spectrum of the materials research community; and have a demonstrated interest in interdisciplinary materials research. The appointee may be assigned responsibilities in related interdisciplinary areas of materials research as well as in the MRSECs Program, and must be able to work closely and effectively with colleagues in the MRSECs Program and related areas. The position may be filled on a visiting scientist/temporary basis. The salary range is from \$56,627 to \$88,255 per annum depending on experience and qualifications. Applicants must submit a resume, with current salary, and up to three letters of recommendation to the **National Science Foundation, Staffing and Classification Branch, Room 208, 1800 G Street, NW, Washington, DC 20550, ATTN: Nina Beard**. For information call **202-357-9680**. For technical information, contact **John H. Hopps, Jr.** at **202-357-9794**. Hearing-impaired individuals should call **TDD 202-357-7492**. Qualified individuals who are women, ethnic/racial minorities, and/or persons with disabilities are strongly encouraged to apply. No person shall be discriminated against on the basis of race, color, religion, sex, national origin, age or disability in being hired by the National Science Foundation.

**POSTDOCTORAL POSITION
MATERIALS MODELING AND SIMULATION
Sandia National Laboratories
Albuquerque, New Mexico**

The Physical and Joining Metallurgy Department has a post-doctoral position available in materials modeling and simulation. Job responsibilities include utilizing atomic, mesoscopic, and continuum simulation techniques to study the microstructural evolution of polycrystalline materials. Research emphasis includes nucleation and growth processes, coarsening, diffusion, and dynamic recrystallization.

Candidates must have a PhD in materials science, condensed matter physics, or related field with a solid background in general materials science, modeling and computation. Since this research involves collaboration with industry, academia, and government labs, excellent communication skills are essential. To apply, send a resume, publication list, and names of three references by December 6, 1993 to:

Dr. Elizabeth A. Holm
Department 1831
Sandia National Laboratories
Albuquerque, NM 87185-5800

U.S. Citizenship is required. Sandia National Laboratories is an equal Opportunity/Affirmative Action Employer.

**FACULTY POSITION OPEN
Oklahoma State University
Department of Physics**

Oklahoma State University Department of Physics invites applications for a tenure-track, assistant professor position starting September 1, 1994. The research area of interest is laser spectroscopy of solids with an emphasis on laser and nonlinear optical materials. Applicants must have a doctoral degree in physics with a strong background in solid state physics and extensive experience with experimental techniques. Applicants should have post-doctoral experience and demonstrated ability to establish an independent research program. In addition, applicants should have excellent communication skills and demonstrated ability to teach courses at both the undergraduate and graduate levels. The faculty member will teach courses in the Department of Physics and conduct research in the OSU Center for Laser Research. Salary will be commensurate with qualifications and experience. Please send a statement of professional goals, a resume, and the names of three references before January 15 to:

Prof. J.P. Wicksted, Chair,
Search Committee
Department of Physics
Oklahoma State University
Stillwater, OK 74078

OSU is an Affirmative Action/Equal Opportunity Employer

**TENURE-TRACK
ASSISTANT PROFESSOR
MATERIALS SCIENCE/CONDENSED
MATTER EXPERIMENTALIST
Department of Physics & Astronomy
The University of Toledo**

The Department of Physics & Astronomy at the university anticipates an opening at the tenure-track assistant professor level effective September 1994. The applicant will be expected to have strong commitments to teaching at both graduate and undergraduate levels, to advising MS and PhD student research, and to the vigorous pursuit of external funding for his/her research program. A PhD degree is required and post-doctoral experience is preferred. Faculty research interests currently include: preparation and properties of thin films, photovoltaics, guided wave photonics, multiple quantum wells, nonlinear optics, transport properties, and high-pressure phenomena. Substantial research facilities support these efforts.

Nominations or applications should include a curriculum vitae, a complete list of publications, evidence of teaching skills, a statement of research and teaching interests, and the names and addresses of at least three references. Please send this information to Prof. B.G. Bagley, Search Committee, Dept. of Physics & Astronomy, The University of Toledo, Toledo, OH 43606. Consideration of candidates will begin on December 15, 1993.

The University is an Equal Opportunity/Affirmative Action Employer.

Positions Available

BROOKHAVEN NATIONAL LABORATORY

**ASSOCIATE DIRECTOR
BASIC ENERGY SCIENCES**

Brookhaven National Laboratory (BNL) is a multidisciplinary laboratory engaged in a diverse program of basic and applied research. The Laboratory is managed by Associated Universities, Inc., under contract with the U.S. Department of Energy (DOE). We seek an Associate Director for Basic Energy Sciences.

The successful candidate will serve as a member of the Laboratory Directorate, which has executive responsibility for all activities of the Laboratory. S/he will have general oversight and planning responsibility for the research programs supported by the DOE Office of Basic Energy Sciences and carried out within the three BNL departments of Applied Science, Chemistry and Physics; and for research at two major BNL facilities, the National Synchrotron Light Source and the High Flux Beam Reactor. In addition, the successful candidate will have line responsibility for the Chemistry and National Synchrotron Light Source Departments.

We seek candidates with an international reputation in one or more of the relevant fields of research and with substantial experience in administrating research programs.

Brookhaven is situated on 5,000 acres on Eastern Long Island, New York, in the heart of a region with a strong base in university and industrial research. Applications and nominations should be sent by December 1, 1993 to Dr. Victor J. Emery, Chair, Search Committee, Building 510A, Brookhaven National Laboratory, Associated Universities, Inc., P.O. Box 5000, Upton, NY 11973-5000. Equal Opportunity Employer M/F/D/V.



**BROOKHAVEN
NATIONAL LABORATORY**
ASSOCIATED UNIVERSITIES, INC.
on the frontier of science and technology

Services/Equipment

FOR SALE

(1) UHV HV break for isolation to 20 kV, on a 10" flange, 8.75" length. \$2,000 or best offer. (2) HV transformer. Del Electronics Corp. Model 5-TR60-22. Input 240/208-5kVA, output 60 kV. \$2,000 or BO. (3) Sample manipulator: Transfer mechanism for 3" wafers, heating ability to over 1000°C, rotation around transfer axis of 270 deg, 20 pin feedthrough on 4.25" long HV break on 2.75" UHV flange, can be adapted to give rotation around sample normal. \$10,000 or BO. Call Craig at 617-253-3495 or 617-253-1621 for information.

TRANSPARENT CERAMICS

Nanostructured common or custom oxides of any number of uniformly distributed cations. Small to ton quantities. Fax: (301) 627-3676.

Advertising Deadlines:

January issue – Dec. 3, 1993
February issue – Jan. 3, 1994
March issue – Feb. 1, 1994

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

PhD (Metallurgical Engineering, 1982) 11 years industrial experience in structure/property relationships of intermetallics, composites, and Ni-base superalloys. Extensive experience in SEM, AEM, XRD and mechanical testing. 37 publications. Seeking R&D position in academic, industrial, government or independent laboratory, involving collaborative and independent research on advanced materials. **Employers**—Please reply to **Box XVIII, No. 1101.**

Recent PhD from UIUC seeking postdoctoral or industrial employment opportunities. Strengths are in ceramic materials/high Tc superconductors. Backgrounds are in materials sciences, nuclear engineering, and physics. Experience with scanning electron microscopy, energy dispersive x-ray spectroscopy, optical microscopy with digital image analysis, and ion beam techniques. Strong computer skills. **Employers**—Please reply to **Box XVIII, No. 1102.**

PhD (1993, Illinois) in mechanical engineering, BS in physics seeking R&D/engineer position involving materials synthesis/processing and *in situ* diagnostics. Experience in spectroscopic diagnostics (LIF and optical emission), laser-assisted CVD and laser ablation deposition, and thin film growth. **Employers**—Please reply to **Box XVIII, No. 1106.**

PhD in materials science seeks challenging position in industry or academia. Background in magnetism and magnetic materials (ferrites, metallic alloys, thin films for magneto-optic memories). Experience with ceramic and splat cooling technologies, evaporation, r.f. sputtering, MBE, UHV, x-ray, RBS, metallographic microscope, domain structure, Kerr-effect, VSM and Mössbauer-effect. **Employers**—Please reply to **Box XVIII, No. 1105.**

Physicist with 2 yr. postdoc seeking R&D position. Experience in thin-film fabrication (sputtering, pulsed laser ablation, photolithographic patterning) and characterization (RHEED, AFM, XRD, SEM, TEM) as well as electrical and magnetic measurements. Background in interface studies of superconductors and magnetic materials. **Employers**—Please reply to **Box XVIII, No. 1107.**

PhD Materials Science (5/93), MS Welding Engineering, B. Tech Metallurgical Eng. seeks postdoctoral or industrial R&D Mat.Sci/Eng/Metallurgy. Extensive research experience in TEM, HRTEM, EDX, SEM, x-ray diffraction, metallography, weld simulation and mechanical testing. Experience in crystal structure analysis, failure analysis, welding metallurgy, corrosion science. Experience with shape-memory alloys, intermetallics, superalloys, ceramics. Strong analytical skills, good publication record and computer proficient. Excellent communication and interpersonal skills. Location & salary are flexible. **Employers**—Please reply to **Box XVIII, No. 1104.**

Materials/Process Engineer. PhD (expected January 1994). Seeking R&D position in materials/metallurgy. Many publications in processing and mechanical testing (tensile, fatigue, fiber pushout, nanoindentation tests) of thin films, metal/ceramic interfaces and metal matrix composites. Hands-on experience in TEM, SEM, AES, XPS, XRD and AFM. Location and salary open. **Employers**—Please reply to **Box XVIII, No. 1103.**

Forthcoming from the Materials Research Society at a special pre-publication price ...

Advanced Engineering Materials Research Profile

The Materials Research Society and Synergistic Technologies, Inc. are in the process of cataloging key materials scientists, their laboratories and their research and will publish this information in both directory and database form as the *Advanced Engineering Materials Research Profile*. It will focus on those in the North American, national laboratory, and federally funded laboratory communities.

Available Spring 1994

Prices:

Directory:	\$156.00	\$195.00	SAVE 20%!
Database (IBM or Macintosh format):	\$476.00	\$595.00	SAVE 20%!
Both:	\$556.00	\$695.00	SAVE 20%!



Save 20% by ordering now! (Pre-publication prices expire March 1, 1994)

Order from: Materials Research Society, Publications Dept., 9800 McKnight Road, Pittsburgh, PA 15237-6006; Phone: (412) 367-3012, FAX (412) 367-4373.

If you are a researcher at a North American university, national laboratory, or federally funded laboratory, and have not yet participated in this survey, please fax your name and address to: Synergistic Technologies, Inc. at (919) 676-0542 to request a survey form. Deadline for completed surveys: Dec. 1, 1993.

POSTERMINARIES

Easy Ethics

The easiest aspect of ethical considerations in science and technology, or for that matter in any human endeavor, is the posing of thorny questions. Finding answers appropriate to particular times, circumstances, and cultures is usually the hard part. Therefore *POSTERMINARIES* will follow the path of least resistance and only ask the questions. Why here? Because other fields, primarily with biomedical leanings, have been stealing the ethics limelight of late, and it's time that we discovered why more materials mischief has not made headlines. We may find it is because only the most saintly aspire to materials research. More likely, it results from an almost automatic built-in self-policing mechanism in the community. Or, we may simply find that nobody cares as much about materials (which, after all, only enhance the quality of life) as they do about biomedicines (which actually save lives).

A heavy caveat: Some unethical behavior leaves no room for debate, and the questions answer themselves. Lest we be seen as insensitive to these questions, we mention them first under the following heading:

Blatant Misconduct

Are theft or deliberate falsification of data, clear plagiarism, sabotaging of competitors' equipment, intentional misrepresentation of results and procedures, or other such heinous deeds acceptable? Reaching a conclusion requires no subtle analysis. When the thankfully rare instances of such transgressions are uncovered, they should spark introspection into the root causes and professional pressures that drive the misguided toward such malicious acts and, one hopes, make their occurrence less likely.

And now for the lighter fare—organized according to *POSTERMINARIES'* own taxonomy:

Publication

Authorship Criteria: Must your co-authors be experts on the whole work? Must they hold rank coordinate to yours? Should technical support personnel be co-authors? Is titular co-authorship for professors and managers appropriate? Is alphabetical order automatically fair, or is it a trivial solution to a difficult problem?

Timing: How and when should pre-

publication of results occur? As abstract? As preprint? As Letter? As press release?

Hyperbole: Where is the line between optimism and overstating the importance and practical consequences of a "break-through"?

Citation: How far back must citations reach? Should Newton, Euclid, Archimedes, or Lavoisier be cited today? How peripheral may citations be? Must one have used the work or merely know of it? Does an exhaustive literature search have to be exhausting?

Errata: Where between an error in punctuation and a completely false report is the trigger for publishing an erratum?

Duality: When may one report essentially the same work in several proceedings and/or journals? Are criteria for reviews different than for original research papers? Is broad dissemination a good reason? Is being permitted to attend a conference a good reason? Is lengthening one's list of publications, particularly if tenure decisions are on the horizon, a good reason?

No-Shows: What are acceptable reasons