

**Positions Available**

**TENURE-TRACK POSITION  
MECHANICAL PROPERTIES  
OF MATERIALS**

The Department of Mechanical Engineering, University of Pittsburgh, is seeking applicants for a tenure-track, full time faculty position in the area of mechanical properties of materials. The starting date is September 1, 1993. The position requires an earned doctorate in mechanical engineering or a closely related field. Duties include teaching at both the undergraduate and graduate levels and performing research. Successful candidates will be required to develop a funded research program. Current faculty research interests include biomechanics, combustion, composites, control, fluids, heat transfer, non-newtonian fluids, material properties, pneumatic transport, rotating machinery, solid mechanics, tribology, vibrations, and viscoelasticity. Department faculty also participate in a U.S. Government sponsored materials research center located within the School of Engineering. While our primary interest is at the assistant professor level, well-qualified candidates at the associate or full professor levels will be considered. Salary is commensurate with qualifications. Applicants for whom English is not their native language are required by Pennsylvania law to be certified as competent in English prior to appointment. Applications and inquiries should be addressed to: Mechanical Engineering Faculty Research, Mechanical Engineering Department, Benedum Hall, Room 648, University of Pittsburgh, Pittsburgh, PA 15261. In order to receive full consideration, applications must be received by **December 15, 1992**.

*The University of Pittsburgh is an equal employment, affirmative action employer.*

**TEMPORARY POSITIONS  
University of California**

A limited number of temporary positions (research engineers, postdoctoral scholars, lecturers, visiting faculty) may be available in the following areas: materials science, ceramics, composite materials, metallurgy. PhD or equivalent experience. Send resume to: Department of Materials Science and Engineering, 5731 Boelter Hall, University of California, Los Angeles, CA 90024-1595.

*An Equal Opportunity/Affirmative Action Employer.*

**JUNIOR FACULTY POSITION  
COMPUTATIONAL MATERIALS SCIENCE  
Stanford University**



The Departments of Materials Science and Chemical Engineering at Stanford University are pleased to announce new tenure-track faculty position at the Assistant Professor level in **Computational Materials Science**. We hope to fill the position by October 1, 1993. The faculty member is expected to address fundamental physical, chemical and engineering problems in materials research from a microscopic perspective. The faculty member will benefit from, and contribute to, interaction among faculty in the departments of materials science, chemical engineering, applied physics, chemistry and electrical engineering. Stanford has a wide range of multidisciplinary efforts in materials research involving such areas as thin films, interfaces, and defect structures in materials including polymers, magnetic materials, superconductors, semiconductors and opto-electronic materials. An active NSF-sponsored Materials Research Laboratory complements individual department facilities and engenders significant collaboration between scientists from different fields.

Applicants should be seeking a stimu-

ating interdisciplinary environment to pursue fundamental **computationally intensive theoretical research**. Individuals interested in simulations, ranging from atomic to macromolecular computations, and the application of statistical mechanics to multidisciplinary problems in materials science and condensed matter physics and chemistry are encouraged to apply. Responsibilities include undergraduate and graduate teaching to an interdisciplinary student body as well as the development of a strong research program. A PhD or an equivalent degree is required. Tenure line faculty are expected to perform both high quality teaching and research.

Applications should be received by **December 31, 1992**. Candidates should send a resume including research accomplishments, teaching experience, publications and the names of at least three references to:

Professor Alice P. Gast  
c/o Dean's Office Terman 214  
Stanford University  
Stanford, CA 94305-4027

*Stanford University is an equal opportunity/affirmative action employer encouraging applications from women and minority candidates.*

**FACULTY POSITION  
MATERIALS SCIENCE &  
ENGINEERING**

**Northwestern University**

Outstanding candidates with research interests in polymer materials are sought for a tenure track assistant professorship, commencing in September 1993. Responsibilities will include teaching undergraduate and graduate courses and developing a strong program of polymer research within a well-balanced materials science and engineering department. Salary is dependent on experience. Interested persons should send a curriculum vitae, a statement of research goals, a summary of teaching objectives and arrange to have three letters of recommendation submitted to Buckley Crist, Department of Materials Science and Engineering, Northwestern University, Evanston, IL 60208-3108 by **December 18, 1992**.

*Minority and women applicants are especially encouraged; Northwestern University is an Affirmative Action/Equal Opportunity Employer. Hiring is contingent on eligibility to work in the United States.*

**SENIOR FACULTY POSITION  
IN MATERIALS SCIENCE**

**Columbia University**

The Metallurgy and Materials Science Division of the Henry Krumb School of Mines at Columbia University announces the availability of a senior faculty position in materials science. We are seeking an individual with outstanding accomplishments in a research area of advanced materials who can provide leadership to the materials science program at Columbia. Interested persons should send a complete resume, including the names and addresses of persons who could supply letters of reference, to: Professor Arthur S. Nowick, Chairman, Search Committee, 1144 Mudd Building, Columbia University, New York, NY 10027. Phone (212) 854-2921. Applications will be received until the position is filled.

*Columbia University is an equal opportunity, affirmative action employer and welcomes applications from qualified minorities and women.*

Positions Available

**Supervisory Research  
Physicist, GM-15  
\$64,233 to \$83,502**

(salary dependent on qualifications)

The Center for Bio/Molecular Science and Engineering, Naval Research Laboratory seeks Ph.D. (or equivalent experience) in physics who will be responsible for coordinating, managing, and performing research in the areas of self-assembly, molecular materials, ferroelectric displays, pyroelectric detectors, non-linear optic systems, and structural studies. Specialized experience required in: liquid crystals, ferroelectric polymers, critical phenomena and phase transitions, two dimensional systems, magnetic tubule composites, self-assembly of organic and biological materials, order/ disorder phenomena, re-entrant phenomena in condensed matter, and incommensurate lattices. Demonstrated skill in the following techniques required: high pressure calorimeter, optical and x-ray diffraction, dielectric techniques applied to material systems, x-ray scattering light correlation spectroscopy, and surface tension measuring techniques. Call (202) 767-3030 to request a copy of Vacancy Announcement #61-0166-91 before submitting Application for Federal Employment (SF-171). Applications must be received by 30 November 1992. **the Naval Research Laboratory is an Equal Opportunity Employer US citizenship required**

Positions Wanted

**Materials Engineering/Metallurgist:** PhD Materials, BS Metallurgy. Seeking R&D position in materials/metallurgy. Research: fracture mechanics, failure analysis, STEM, SEM, EDS, XRD, metallography, solidification, welding, corrosion, FEA, Al-Cu-Li alloys, lead-acid batteries, powder metallurgy and HSLA steels. Publications. Computer and teaching experience. Excellent communication and written skills. Location open. Please reply to **Box No. 104.**

**Electron Microscopy Scientist:** PhD 1991, China resident, seeks Postdoctoral or visiting scholar position in USA for one or two years. Specializes in HRTEM, CTEM, EDS, XRD. Experienced in surface atomic profile imaging and HRTEM (TEM) studies of the ultra-microstructure of ultrafine ceramic powders; ceramic whiskers; metal matrix composites (interfaces). Published more than twenty scientific papers. Please reply to **Box No. 103.**

**TO REPLY TO BOX NUMBER, WRITE:**

Box No. \_\_\_\_\_, c/o MRS Bulletin, Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237

POSTERMINARIES

**Mother Nature Makes the Best Materials**

There are some things in this world that are beyond our control. I suppose this helps us keep our perspective on life. In my case, I have to live with the fact that Mother Nature makes better materials than I do.

I accept as a motivating principle the idea that new materials with unique properties can lead to new technologies. In my lifetime, the unique properties of pure elemental silicon have been exploited to give us toasters that talk, watches that beep in chorus to signal to seminar speakers that their time is up, and calculators that are cheaper than a six-pack of beer, freeing us to forget everything we ever knew about addition and multiplication. More exotic materials, like the alloy superconductor Nb-Ti, have allowed our medical doctor friends to take remarkable pictures of the insides of our bodies without making any holes. New materials have truly changed the world.

The continued contribution of new materials to progress requires that we explore the properties of a wide variety of materials of suitable size and quality to figure out if they can do something of value. Now, measures of sample quality are quite subjective; when considering size, what is "large" to the eye of the grower of high T<sub>c</sub> cuprates is "nonexistent" to the eye of the grower of silicon.

Yet, the best efforts of the most accomplished materials person pale in compari-

son to the work of Mother Nature. Certainly, the comparison is not quite fair. Mother Nature has bigger ovens (volcanos, for example) and more time (years to decades instead of days to weeks) than I can manage, and she mostly stays within a limited subset of the periodic table for her phase equilibria studies. (I keep wishing that the periodic table contained a few more entries such as an alkaline earth, intermediate in size between magnesium and calcium).

I try to be inspired by the materials Mother Nature has prepared. The quartz swords from Brazil that are bigger than I am, take my breath away. Recent reports from the former Soviet Union indicate that Mother Nature was indeed the first to make buckyballs (C<sub>60</sub>) in bulk.<sup>2</sup> I don't mind admitting that I am in awe of Mother Nature's abilities. Still, I hope to be able to make a useful contribution in this materials business. I console myself with the realization that experience counts for a lot and that Mother Nature has been at it a couple of billion years longer than I have. (And, as far as I know, she hasn't made any cuprate superconductors yet.)

L.F. SCHNEEMEYER

**References**

1. *Rocks and Minerals*, C.A. Sorrell (Golden Press, New York, 1973).
2. P.R. Buseck, S.J. Tsipursky, and R. Hettich, *Science* 257 (1992), p. 215. □

**1993  
MRS  
Spring Meeting  
San Francisco,  
California  
April 12-16, 1993**

