

Positions Available

Materials Scientist Position at the National Fertilizer Development Center, Tennessee Valley Authority

The Tennessee Valley Authority's (TVA) National Fertilizer Development Center (NFDC), Muscle Shoals, Alabama, is seeking a Materials Scientist with an advanced degree in chemistry, materials science, geology, or other physical science. We are seeking an individual with 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. Knowledge of other materials characterization techniques such as Fourier transform infrared spectroscopy, X-ray diffraction, scanning electron microscopy/energy-dispersive X-ray analysis, 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. The individual 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.

This is a prepermanent full-time annual position with a salary range from \$32,430 to \$54,645 depending on qualifications. If you are qualified and eager to contribute to this vital program, please send your resume along with social security number and proof of citizenship to:



**Tennessee Valley Authority
Human Resource Services
NFD 2T 230J
Muscle Shoals, Alabama 35661**

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.

THEORETICAL PHYSICIST

Theoretical physicist for research on materials reliability. Must have demonstrated ability in applying advanced mathematical techniques, including both continuum and discrete modeling, to the solution of problems in each of the following fields of materials research: fracture mechanics, nondestructive evaluation, composite materials, and electronic packaging. PhD or equivalent in physics or materials science required. U.S. citizenship required. Send resumes to: Department of Commerce, MASC-Personnel Department, Attention: Floyd Powell, 325 Broadway, Boulder, CO 80303-3328.

An equal opportunity/affirmative action employer.

RESEARCH ENGINEER

Neutron scattering PRT at Brookhaven seeks creative self-starter with excellent interpersonal skills to supervise and maintain a triple-axis diffractometer, coordinate user schedules, help train new users and initiate upgrades. BS (MS preferred) in science or engineering; 2-5 years experience in computer hardware and software, mechanical systems and design, data analysis, scattering/diffraction and electronics. Current PRT members include Penn, Exxon, Du Pont, Ohio State, IBM and BNL. Send resume to: J.E. Fischer, MSE Dept., University of Pennsylvania, 3231 Walnut Street, Philadelphia, PA 19104; or E-Mail FISCHER@SOL1.RSM.UPENN.EDU.

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Positions Available

MATERIALS DEPARTMENT

University of California, Santa Barbara

The Department of Materials at the University of California, Santa Barbara, invites applications for a faculty position, available July 1, 1989, in the area of inorganic and crystal chemistry as applied to the field of high temperature superconductors. The Materials Department has a multidisciplinary focus on such areas as electronic materials, macromolecules, structural composites, materials processing. Applicants should have a desire to pursue multidisciplinary research within the framework of the Department and, in part, in the context of high temperature superconductors. Individuals are encouraged to apply who have interests and expertise in such areas as crystal chemistry, crystallography, phase equilibria, inorganic materials preparation, superconductivity, and transport phenomena.

Responsibilities include teaching both undergraduate and graduate courses and developing a strong research program. A PhD or equivalent degree and evidence of excellent teaching and research are required. The rank of the appointment will depend on qualification and experience. Senior level appointment with tenure can be made based on an outstanding record of research. Joint appointments with other departments at U.C.S.B. are possible.

To ensure full consideration, applications should be received by the Department by **July 31, 1989**. Candidates should send a resume containing teaching and research accomplishments and the names of at least three references to:

Prof. Fred F. Lange, Materials Department
University of California, Santa Barbara, CA 93106

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).

FACULTY POSITIONS

**Department of Materials Science and Engineering
University of Illinois at Urbana-Champaign**

The Materials Science and Engineering Department at the University of Illinois at Urbana-Champaign seeks qualified candidates for tenure and tenure-track faculty positions, available August 21, 1989. The Department encompasses a broad range of materials interests including ceramic, electronic, metallic and polymeric materials. We seek candidates with an earned doctorate degree and demonstrated achievement or potential for distinction in research and sincere interest in teaching at both the undergraduate and graduate levels. While we do not specify the research areas we seek candidates able to couple development of their research specialty to the broader interests of the materials community and the University.

Salaries are very competitive and depend on the qualifications of the candidates and on the level of the position. The University of Illinois is an equal opportunity employer and welcomes applications from all qualified candidates. For full consideration applicants should submit curriculum vitae, a list of publications and the names of at least three suitable references by **July 15, 1989** to:

Prof. J. Economy, Head
Department of Materials Science
and Engineering
University of Illinois
1304 W. Green Street
Urbana, IL 61801
(217) 333-1440

The University of Illinois at Urbana/Champaign is an affirmative action/equal opportunity employer.

FACULTY POSITIONS

**University of Missouri-Rolla
Department of Ceramic Engineering**

The Department of Ceramic Engineering at the University of Missouri-Rolla has openings at the Assistant/Associate Professor (tenure-track) and Visiting Professor (one-year appointment) levels. Although we are open to any outstanding individuals, special attention will be given to those with expertise in x-ray and crystal structure analysis, crystal chemistry, ceramic processing, electrical and dielectric properties, and glass and structural properties.

Applicants for all positions must have an earned degree in Materials Science/Engineering, Ceramic Science/Engineering or a related field. Applicants for the tenure-track position will be expected to develop independently funded research programs, teach undergraduate and graduate courses and interact effectively with others.

Interested persons should submit resume and a list of three references to:

Prof. Harlan U. Anderson
Department of Ceramic Engineering
278 McNutt Hall
University of Missouri-Rolla
Rolla, MO 65401

**Director: Materials
Science and
Engineering Program**

Responsible for initiation and coordination of research and for development of interdisciplinary graduate curriculum in materials science and engineering. Successful applicant will hold faculty rank and work with chairpersons, faculty, and industry. He/she will be expected to integrate his/her research with NJIT Microelectronics Center, NJIT Center for Manufacturing Engineering Systems, New Jersey Consortium for Engineered Surfaces, and cooperative activities with AT&T Bell Laboratories, Bellcore, David Sarnoff Research Center, and other New Jersey industrial laboratories. Qualifications: doctorate in relevant area of science or engineering with significant publications record. Preference given to candidate with exp. in solid-state inorganic materials. Faculty positions available.

NJIT does not discriminate on the basis of sex, race, color, handicap, religion, national or ethnic origin or age in employment.

Send applications and nominations to:
Personnel Box: DME

NJIT New Jersey
Institute of Technology
Newark, New Jersey 07102

**PENN STATE
University Park Campus**



**ASSISTANT PROFESSOR
Ceramic Science and Engineering**

The Materials Science and Engineering Department at Penn State University invites applications for a tenure-track, Assistant Professor position effective in the 1989-90 academic year.

The successful candidate will have expertise in one of the following areas: (1) electron microscopy, (2) microanalytical techniques or (3) electronic, ionic or mass transport, and is expected to develop an independent research program. The position also involves developing and teaching courses at the undergraduate and graduate levels.

A PhD in ceramics, materials science or related fields is a requirement.

Please submit curriculum vita and references by August 1, 1989 to:

Prof. Gary L. Messing
Chairman of the Search Committee
Pennsylvania State University
119 Steidle Building
University Park, PA 16802

*Penn State is an equal opportunity/
affirmative action employer.*

Positions Available

Careers in
R&D

The mission of the Alberta Research Council is to advance the economy of the province by promoting technology development, performing applied research and providing expert advice, technical information and scientific infrastructure that is responsive to the needs of the private sector and supports activities in the public sector.

Advanced Materials Specialist

Our Materials and Testing Department is seeking a Materials Scientist with demonstrated expertise in advanced materials to establish an advanced ceramics program, incorporating efficient mechanisms for technology transfer to the Alberta industrial sector.

Areas for advanced ceramics research include ceramic membranes; sol/gel technology of alumina, zirconia and other oxide ceramics for wear and thermal applications; slip casting; and the study of ceramic wear and corrosion-resistant coatings applied by plasma arc spray technology.

Working closely with a multidisciplinary team of research staff, you will also network with industry, universities and non-profit research organizations to provide knowledge in advanced materials for Alberta and Canada.

Candidates require university training in Ceramic Science and/or Ceramic Engineering, preferably at the Ph.D. level, current knowledge of ceramic engineering technology, quality control, slip casting, sol/gel and plasma spray as well as excellent interpersonal and communication skills. Salary will be commensurate with qualifications. This competition will remain open until a suitable candidate is chosen.

Please apply in writing quoting Competition No. ARC-1232 preferably before July 7, 1989 to:

**ALBERTA
RESEARCH
COUNCIL**

Human Resources Department
Alberta Research Council
P.O. Box 8330, Station F
Edmonton, Alberta T6H 5X2

WE OFFER A RESTRICTED SMOKING ENVIRONMENT

UNIVERSITY OF ALABAMA

The University of Alabama invites applications from persons with experience in chemistry, metallurgy, materials science, materials engineering, or physics for a faculty position as an assistant professor in a chemistry, metallurgy/materials engineering, or physics department. The successful applicant will be in a tenure-track position in one of the above departments, and will also become a faculty member in an interdisciplinary materials science program. Current theoretical and experimental research activities on this campus include materials structure and properties, materials synthesis and processing, and mechanical behavior studies of macromolecular, electronic, optical and magnetic materials. Applicants should send their resume and the names and telephone numbers of four references to: Dr. Chester Alexander, Materials Science Coordinator, Box 870324, The University of Alabama, Tuscaloosa, AL 35487-0324.

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

POSTDOCTORAL POSITION

**Mechanical Properties
of Biopolymers
Clairol Research Laboratories**

A Lawrence M. Gelb Fellowship is available for research in mechanical properties and structure of keratin and related biopolymers. The research objective is to understand the effects of environmental conditions and chemical treatment on mechanical properties of keratin fibers. Molecular motion and phase transitions in the fiber components will be studied employing such techniques as torsional pendulum, thermally stimulated creep and wave propagation. The position is available for two years. Candidates holding a PhD in Chemistry, Physics, Polymer Science or Materials Science, with some background in polymer physics are encouraged to apply. Familiarity with electronics and computing is desirable. Send resume and the names of three references to: Dr. Marek Zielinski, Clairol Research Laboratories, 2, Blachley Road, Stamford, CT 06922.

**Materials
Science**

We are currently assisting clients throughout the United States in staffing various positions in research and development. Openings are primarily at the Ph.D. level; several require supervisory experience; some are suitable for new graduates or postdocs. Typical areas of interest include:

Ceramics

Electronic/structural – materials preparation, characterization, processing and testing.

Electronic Materials

Semiconductors – materials/processing/devices; crystal growth; thin films – sputtering/CVD/PVD; molecular beam epitaxy; photolithography; ion implantation.

Polymers

Characterization/morphology/structures/property relationships; composites.

Physics

Surface science; magnetism; optical properties; photoconductivity; non-destructive testing; composite materials; fiber optics; lasers; electro-optics.

For confidential consideration, please submit a current resume, including salary history, to Dr. David P. Parker (Sc.D. in Metallurgy, M.I.T.). Our client companies assume all fees.

D.P. Parker

and Associates, Incorporated
40 William St., Wellesley, MA 02181
Telephone (617) 237-1220

Our clients are equal opportunity employers

Positions Available

**FACULTY POSITION
CERAMICS/MATERIALS SCIENCE**

The Department of Metallurgy and Materials Science at Polytechnic University is seeking a ceramics/materials scientist at the associate or full professor level on a tenure track. The post would involve teaching at the undergraduate and graduate level, and research in the area of ceramics. Applicants should have an established research reputation, and compensation will be commensurate with experience. The post is available for the Fall 1989 semester. Currently, the Department is active in composite, superconductor and electronic materials research. Interested persons should submit a resume and three references to:

Prof. Harold Margolin
Chairman of Search Committee
Metallurgy & Materials Science
Polytechnic University
333 Jay Street
Brooklyn, NY 11201

Equal Opportunity Employer/M/F/H/V

**VISITING PROFESSOR
KYOTO UNIVERSITY
Ion Beam Engineering
Experimental Laboratory**

This position is to be filled for up to one year by a professor having extensive experience in low or medium energy ion beam physics or engineering related to thin film deposition, surface modification, and surface analysis. Positions at all academic levels will be considered. Emphasis will be on ionized cluster beam deposition, ion beam deposition and modification of organic and inorganic thin films. A wide range of equipment is available for research, including a 400 kV ion implanter, UHV ionized cluster beam deposition systems, AES, XPS, RHEED, SEM, TEM, RBS, x-ray diffraction, ellipsometry, etc. Assistance in finding suitable housing will be given. All faculty and most students in this laboratory speak English. This position will remain open until a suitable candidate is found. Salary will be based on Japanese government standards for visiting professors according to experience. Send letter, resume and the names of three references to:

Prof. Isao Yamada, Director
Ion Beam Engineering
Experimental Laboratory
Kyoto University
Sakyo, Kyoto 606, Japan
Telephone 075-753-5951
Fax 075-751-6774

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1/2	495	480	460	440
1/3 island	420	410	395	385
1/3	375	365	350	340
1/4	360	355	340	330
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Metallic 2nd Color add \$400, Four Color Process add \$600

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1/4	3-7/16"	4-3/8"
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Advertising Contact: Mary E. Kaufold, MRS BULLETIN, Materials Research Society, 9800 McKnight Road, Suite 327, Pittsburgh, PA 15237; telephone: (412) 367-3036, fax: (412) 367-4373.