

Positions Available

FACULTY POSITION OPENING
Assistant or Associate Professor
(Tenure-Track)
School of
Chemical Engineering and
Materials Science
University of Oklahoma

The University of Oklahoma announces the nationwide search to fill a tenure-track faculty position in chemical engineering and materials science at the assistant or associate professor level. Candidates must have a PhD, outstanding potential for establishing an independent research program, a commitment to both undergraduate and graduate instruction, and a distinguished academic record.

Salary is competitive. Starting date January or August 1991. Send nominations and applications (with resume, statement of research interests, and list of three professional references) to Director, School of Chemical Engineering and Materials Science, University of Oklahoma, 100 East Boyd, Norman, OK 73019. Initial screening of applications will begin in November 1990. Recruiting will continue until the position is filled.

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

POSTDOCTORAL POSITION
Materials Research
California Institute of Technology

A postdoctoral position is immediately available for a qualified individual to join an interdisciplinary effort in the growth and structural characterization of nanometer-scale clusters of III-V compound semiconductor materials for optoelectronic device applications. Candidates should be experienced in structural analysis by transmission electron microscopy and x-ray diffraction. Experience in the growth of III-V compounds by organometallic chemical vapor deposition is also highly desirable. Please send resume, publication list and reference list to: Professor Harry A. Atwater, Applied Physics, M.S. 128-95, Caltech, Pasadena, CA 91125.

Technical Opportunities at TI

We have career opportunities in our Advanced Optical Materials Laboratory within our Defense Systems and Electronics Group for U.S. citizens in the following areas:

Member Technical Staff Responsibilities involve: process development of large area bulk crystal growth of III-V compounds; engineering of optical and electrical properties of materials for specific applications; supporting transfer of technology to manufacturing; and supporting proposal efforts.

You must have a BS/MS in Materials Science or a related field as well as knowledge of: bulk growth of III-V compounds; physics of optical and electrical properties of solids, and semiconductors physics.

Process Engineer Responsibilities include: development of III-IV compounds by chemical vapor deposition (CVD) for optical and electrical applications; development of film growth techniques; characterization of film physical properties and methods to control, predict and tailor physical properties of films.

You must have a BS/MS in Chemical Engineering, Physics, Materials Science or a related field as well as knowledge and experience in (CVD) of III-IV compounds, physical property characterization, semiconductor physics and crystal growth.

Member Technical Staff You will analyze/characterize crystal defects and fundamental material properties (i.e., optical, electrical, mechanical and structural) in diamond and III-V compound materials to support synthesis development and material application development; support optical materials, components and device development; support proposal efforts.

You must have a MS/PhD in Materials Science or a related field with knowledge of: crystal chemistry in ceramics; fundamental materials characterization; physics of optical and electrical properties in solids; and ceramic materials synthesis.

Texas Instruments is a diversified Fortune 100 company with annual revenues of approximately \$6 billion. As one of the world's largest producers of semiconductors, infrared detectors and infrared optical components, our Advanced Optical Materials Laboratory has the opportunity to define state-of-the-art technologies in semiconductor and other infrared materials development areas. This group, located at Texas Instruments' Dallas, TX headquarters, is composed of scientists and engineers involved with research and development of advanced materials for electro-optical devices and optical components.

Contact Us Today! If interested in these opportunities please send your resume to: Steffani Vann/Texas Instruments/P.O. Box 660246, M.S.3186/ Dallas, TX 75266.

An Equal Opportunity Employer, M/F/V/H.



TEXAS INSTRUMENTS

SENIOR FACULTY POSITION
Experimental Condensed
Matter Physics: Superconductivity
Kent State University

KSU invites applications for an appointment at the level of associate or full professor in experimental condensed matter physics. The successful candidate will have a strong record of significant research and the ability to act as leader of a research program in superconductivity; including the recruitment and selection of new faculty. A desire and aptitude for teaching graduate and undergraduate students is essential.

Areas of current strength include liquid crystal physics, critical phenomena, low temperature physics, non-linear optics, computational physics, and medium energy nuclear physics.

Salary is open and commensurate with qualifications. It is understood that substantial institutional support for equipping labs will be provided.

Applicants should send a resume and the names and addresses of references to: Prof. D.L. Johnson, Department of Physics, Kent State University, Kent, OH 44242.

Kent State University is an affirmative action/equal opportunity employer.

SEMICONDUCTOR SCIENTISTS

BANDGAP TECHNOLOGY CORPORATION, a producer of advanced semiconductor materials, has openings for two characterization scientists in its state-of-the-art facility near Boulder, Colorado. These semiconductor scientists will assist with the development and characterization of compound semiconductor films and other advanced materials.

Experience in cross-sectional TEM analysis of thin semiconductor films, lattice imaging, CBED, and EDS is required for the first position. The scientist will utilize and operate a JEOL 2000FX-II LaB₆ STEM equipped with four scanning detectors, a TV camera for TEM lattice imaging, and a light element Link AN10/85S EDS and image analysis system.

An individual with experience in low voltage microscopy, field contract, EBIC, and CL will fill the

second position. This scientist will primarily utilize a Hitachi S-2700 LaB₆ SEM equipped with a light element Link eXL EDS and image analysis system.

As these scientists will be members of an interdisciplinary team, familiarity with other techniques utilized at Bandgap including SIMS, XRD, DLTS, PL, Hall, and epitaxial crystal growth will be considered a plus. A PhD in Physics or Materials Science is preferred, but qualified MS candidates will be considered.

For consideration, send resume, publication lists, and salary history to: **Human Resources Dept.-SCR&D, Bandgap Technology Corporation, 325 Interlocken Pkwy, Broomfield, CO 80021**. Equal Opportunity Employer.

BANDGAP
 Technology Corporation

FACULTY POSITION
Composite Materials and Structures

Rensselaer Polytechnic Institute's Department of Civil Engineering, Materials Engineering and/or Mechanical Engineering, Aeronautical Engineering and Mechanics, invite applications for a tenure-track faculty position in the area of composite materials and structures. Applicants should have a record of research accomplishment in one or more of the following areas: (1) the materials science of composite materials; (2) theoretical/experimental mechanics of mechanical behavior of composite materials, particularly in high temperature environments; (3) mechanics, design and optimization of composite structures; (4) advanced fabrication techniques for composites manufacturing, e.g. CVI, CVD, filament winding and resin transfer molding. In addition, demonstrated interest in applications to materials development and to structural behavior and design which is sufficient to ensure productive collaboration with colleagues performing research in these related subdisciplines is required. Ability to develop a strong teaching and research program and active involvement in the Institute Center for Composite Materials and Structures will be expected. Rank and salary open. An earned Doctorate in an appropriate Engineering discipline is required. Send complete resume and references to the following address: Dr. S.S. Sternstein, Director, Center for Composite Materials and Structures, Rensselaer Polytechnic Institute, Troy, NY 12180-3590; (518) 276-2792. Applications will be accepted until the position is filled.

Equal opportunity/affirmative action employer.

Positions Available

THE UNIVERSITY OF TOLEDO
Announces an Expanded Search for
The Nippon Electric Glass Company, Ltd.
Endowed Chair in Silicate &
Materials Science

The University of Toledo invites nominations and applications for a newly established, endowed faculty chair. The University is seeking an internationally recognized research scholar with a demonstrated record of major levels of external support who will bring a well-recognized program in an area broadly defined as silicate science and/or materials research. The holder of this faculty chair will be expected to interact strongly with University faculty who have related research programs in the Departments of Physics and Astronomy, Chemistry, Geology, and in the College of Engineering. In addition, this person will be encouraged to interact with industrial scientists and engineers in related fields of materials science.

The successful candidate will qualify for a tenured professorship in an appropriate academic department and will be considered for the Directorship of a new, interdisciplinary Materials Science Research Center. In addition, s/he may wish to serve as director of the Eitel Institute for Silicates and Ceramics Research. Other materials science-related organizations at UT include the Thin-Film Research Institute, the Coal Characterization Laboratory, and the Polymer Institute.

Consideration of qualified candidates will begin immediately. Interviews are expected to begin in October with the successful applicant to be identified by January 1991. Interested candidates should send a letter of application, current resume, and three letters of reference to:

Dr. Alvin D. Compaan or Dr. William A. Kneller
 Co-chairs, Search Advisory Committee
 Department of Physics & Astronomy
 The University of Toledo
 Toledo, Ohio 43606
 Facsimile: (419) 537-2723
 Phone: (419) 537-2147, or 537-4787

The University of Toledo is an Affirmative Action and Equal Opportunity Employer.

To Reply to Box Number, Write:

Box _____
 MRS BULLETIN
 9800 McKnight Road
 Pittsburgh, PA 15237

Advertising Contact:
Mary E. Kaufold
MRS BULLETIN
Materials Research Society
9800 McKnight Road
Pittsburgh, PA 15237
(412) 367-3036
Fax (412) 367-4373

MATERIALS SCIENTIST

A major manufacturing company located in the Mid-Atlantic region has an exceptional opportunity for a Materials Scientist to synthesize, test, and characterize advanced materials for multi-faceted applications, as well as devise and test application methods for resistive components on insulative substrates.

The ideal candidate will have a Ph.D and 2+ years of experience in the following areas:

- Application of thin and thick film technology to ceramic or polymeric resistor materials
- Knowledge of ceramic packaging and CVD techniques
- Demonstrated ability in characterizing and applying principles of materials science relative to the construction of practical devices

Ph.D in materials science, solid state physics or ceramic engineering is a must. The ability to formulate a successful research program and communicate results to a diverse technical audience is essential.

In addition to significant challenges, we will provide a competitive compensation package, an impressive array of benefits, and opportunities for career enhancement. Please forward your credentials, in strict confidence to:

Box X5-10 c/o MRS Bulletin

An Equal Opportunity/Affirmative Action Employer

UES Inc:

POSTDOCTORAL/VISITING SCIENTIST POSITIONS

Universal Energy Systems, Inc., a high technology R/D organization has two research openings in the following areas: (a) Modeling of deformation processes in metal or intermetallic matrix composites reinforced by either deformable or non-deformable phases. This position requires an individual skilled in understanding, development, and application of (finite element) modeling techniques and algorithms. The successful candidate should have a solid background in the deformation of metals and intermetallic compounds and must be able to extend this knowledge to the deformation of metal matrix composite systems. (b) Modeling of dislocation behavior in structural intermetallic materials. This position requires an individual with background/interest in the simulation of dislocation nucleation, motion and multiplication and dislocation interactions in controlling the slip character of these materials. Emphasis of this research shall be focused on bridging the results of molecular static and dynamic simulations with continuum behavior of the materials.

Research for both positions to be performed at Wright-Patterson Air Force Materials Laboratory; extensive computational and experimental facilities will be available. Candidates will have an opportunity to interact with a team of scientists active in intermetallic research. University faculty on sabbatical are encouraged to apply. Send resumes, including references to: Personnel Department, Universal Energy Systems, Inc., 4401 Dayton-Xenia Road, Dayton, OH 45432.

KOBE DEVELOPMENT CORPORATION

SATISFY YOUR RESEARCH AMBITIONS IN THE 90'S

KOBE DEVELOPMENT CORPORATION, a subsidiary of Kobe Steel, Ltd. of Japan, is expanding its R & D strategy, in advanced technologies, into the 90's and beyond, with a newly created R & D Center in Palo Alto, CA..

Situated nearby Stanford University, and in conjunction with their Material Science and Engineering Departments, Kobe Development is creating innovative technology using state-of-the-art equipment in the electronics, semiconductor, computer systems, and peripheral equipment industries.

These newly created positions focus on recording media and systems for the data storage technology.

R & D RESEARCHER – MAGNETIC THIN FILM

REF # TF1

The goal is to initially focus on research through experimentation and testing and lead the development of an advanced recording media and data storage capabilities.

Responsibilities would include to evaluate the sputtering deposition, structural and magnetic-optical characterizations and optimization of the entire sputtering process, along with assessing the utilization of related thin films.

A MS with a PhD preferred, in Material Science or Physics, with a minimum of 3 years direct experience in a magnetic thin film , vacuum technology environment.

R & D RESEARCHER – MAGNETIC RECORDING

REF # MR1

The goal is to initially focus on research by certifying magnetic recording media, the analysis and optimization of media properties and media/head interfaces for high density magnetic recording, with the subsequent development of advanced high density magnetic recording devices.

A MS with PhD preferred in Electronics Engineering or Physics, with a minimum of 3 years direct experience in a magnetic recording technology or comparable data storage environment with analyzing and designing electrical equipment.

PROCESS R & D ENGINEER

REF # PE1

Responsible for the operation and maintenance of our R & D facility equipment with emphasis on sputtering equipment and magnetometer.

Supports the design, installation and operation of various equipment used in advancing the data storage technology, including their maintenance and that of other test equipment.

Requires a BS or EE with MS/ME preferred with a minimum of 2 years direct experience in a vacuum equipment operation environment.

Forward or FAX your resume, with salary history, to our affiliate company, Kobe Precision, Inc. for immediate consideration with the reference # indicated. Expand your research ambitions with unique opportunities found at Kobe Development, a company of tradition and success.

KOBE PRECISION, INC.

31031 HUNTWOOD AVE.

HAYWARD, CA 94544

FAX# : 415-487-9550

EOE

Positions Available

**POSTDOCTORAL RESEARCH
ASSOCIATE
MATERIALS SCIENCE AND
ENGINEERING
Cornell University**

A position is available for research using transmission electron microscopy. It requires experience in a wide range of experimental and computational techniques (details available on request). Familiarity with dislocations, grain boundaries and phase boundaries in ceramic materials and semiconductors, and the intercalation of layer materials essential. Proficiency in use of computers for processing and simulating microscope images is required. Applicants must have a Ph.D. in Physics or Materials Science, with 3 years postdoctoral experience. Salary will be \$25,000 per year or higher. Send applications to Carol M. Farkas, Materials Science & Engineering, Bard Hall, Cornell University, Ithaca, NY 14853.

**MATERIALS SCIENCE
AND ENGINEERING
Washington State University**

Academic year, tenure-track faculty position available for August 1991 at the assistant professor level. PhD in materials science or a closely related academic area is required. Special consideration will be given to candidates with background and experience in one or more of the areas of: electronic materials, ceramic materials, kinetics, processing and physical properties of materials. Duties include developing and conducting externally funded research, publish in refereed journals and present papers at meetings and symposia, teaching graduate and undergraduate courses, and supervising and advising graduate and undergraduate students. The department offers BS, MS and PhD degrees. Letters of application, resumes, and names of four references should be sent to: Chair, Search Committee (MSE), Department of Mechanical and Materials Engineering, Washington State University, Pullman, WA 99164-2920. The closing date is December 15, 1990 or until the position is filled.

WSU is an EO/AA educator and employer. Protected group members are encouraged to apply.

**FUTURE
MRS
MEETINGS**

■ **Fall Meetings** ■

1990 November 26-December 1
Boston, Massachusetts

1991 December 2-7
Boston, Massachusetts

1992 November 30-December 5
Boston, Massachusetts

1993 November 29-December 4
Boston, Massachusetts

1994 November 28-December 3
Boston, Massachusetts

1995 November 27-December 2
Boston, Massachusetts

■ **Spring Meetings** ■

1991 April 28-May 3
Anaheim, California

1992 April 27-May 2
San Francisco, California

1993 May 17-22
Anaheim, California

1994 April 11-16
San Francisco, California

1995 To Be Announced

1996 April 22-27
San Francisco, California

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