

Positions Available

**RESEARCH SPECIALIST**  
**NanoFAB Center**  
**Texas A&M University**

The Center for Nanostructure Materials and Quantum Device Fabrication invites applications for a Research Specialist position in ultrahigh vacuum techniques, molecular beam epitaxial growth, and materials processing. Additional experience in electronics, computer interfacing, UNIX, DOS, C+ programming, and cryogenics is desirable. The Center has two MBE machines, electron-beam lithography, low-temperature laboratories, and fabrication facilities in ISSE. Individuals with an advanced degree in Physics or Electrical Engineering and/or experience in applied research with strong technical orientation are encouraged to apply. Send to: Dr. Wiley P. Kirk, NanoFAB Center, Engineering-Physics Building, Texas A&M University, College Station, Texas 77843-4242.

*Texas A&M University is an Affirmative Action/Equal Opportunity Employer and encourages applications from women and minorities.*

**Solid-State Electrochemist**

Well-funded start-up seeking enthusiastic creative individual to join our close-knit team. You will work directly with the V.P., R&D advancing the company's proprietary solid-state electrochromic thin-film technology for commercial applications. Ph.D. or Masters degree with at least four years experience in design and analysis of solid-state electrochemical systems required. The attractive compensation package includes competitive salary, benefits and stock option. Send confidential resume to:

**EYEONICS CORPORATION**  
 Attn: Personnel  
 9400 SW Tualatin-Sherwood Rd.  
 Tualatin, OR 97062

**Oak Ridge National Laboratory**

**Materials Engineer/Scientist**  
**Residual Stress Analysis**

**High Temperature Materials User Program**

Oak Ridge National Laboratory (ORNL) has recently established the Residual Stress User Center within the High Temperature Materials Laboratory (HTML) User Facility. This program is involved with assisting US industries, universities, and ORNL to conduct research leading to improved high temperature structural materials for energy conservation. The HTML, a recognized national focal point for characterization of structural ceramics, consists of six User Centers: Materials Analysis, X-Ray Diffraction, Physical Properties, Mechanical Properties, Ceramic Specimen Preparation, and Residual Stress. Applicants are expected to have a PhD in ceramic or materials science/engineering with special knowledge in measurement of residual stress by diffraction methods. Knowledge of finite element modeling is also desired.

General knowledge of X-ray diffraction and computer data acquisition systems is necessary. Communications, oral and written, are important attributes as this position requires maintaining strong interaction with industrial and academic representatives, publication of research results, and developing program plans for the Department of Energy. Activities include maintaining the X-ray diffraction facilities, training of users, and assisting users in research design, data acquisition, and interpretation in terms of materials processing and engineering mechanics. Applicants should send a complete resume to Dr. Camden Hubbard, Oak Ridge National Laboratory, Dept. BCS, P.O. Box 2008, Oak Ridge, TN 37831-6064.

ORNL, managed by Martin Marietta Energy Systems, Inc., for the U.S. Department of Energy, is an equal opportunity employer.



**RESEARCH SCIENTIST**

Performs surface studies with emphasis on structure determination and characterization by electron scattering techniques such as Reflection High Energy Electron Diffraction (RHEED) and Low Energy Electron Diffraction (LEED). Develops simulation software related to surface and interface epitaxial growth. Investigates growth mechanism of metal-semiconductor epitaxial thin films. Requires PhD degree in physics, plus 6 months' experience in related occupation as Research Associate. \$28,000/yr. 40 hrs/wk. Apply at Texas Employment Commission, Houston, Texas, or send resume to Texas Employment Commission, TEC Building, Austin, Texas 78778, J.O. #6449089.

*Ad Paid By An Equal Employment Opportunity Employer.*

**Positions Available**

**Carnegie Mellon University**

**Department of Materials Science and Engineering**

The Department of Materials Science and Engineering has a tenure-track faculty opening at the assistant, associate or full professor level, for a person specialized in atomic resolution transmission electron microscopy of materials. Applicant should have a Ph.D., a demonstrated interest in solid state phase transformations, or mechanical behavior, be interested in developing a strong research program, and be enthusiastic and qualified to teach.

Please send resumé and have three letters of recommendation sent to:

Professor David E. Laughlin  
 Chair of Faculty Search Committee  
 Department of Materials Science and Engineering  
 Carnegie Mellon University, Pittsburgh, PA 15213  
 (412) 268-2706

*Equal Opportunity/Affirmative Action Employer*

**GLASS SCIENTIST OR MINERALOGIST  
 (with practical knowledge of materials science)**

The Fraunhofer-Gesellschaft is looking for a postdoctoral position to start immediately in the Institute for Silicate Research in Würzburg/Germany.

We offer a versatile working environment, with independence and professional recognition. We are the leading research society for the support of applied research and development in the Federal Republic of Germany. We employ approximately 8,000 co-workers in 45 research establishments, and collaborate closely with industries and the state. The Institute for Silicate Research employs approximately 110 co-workers in the areas of glass, ceramics, inorganic-organic polymers (ORMOCERs), and analysis.

The forefront of your main activity will be in the extension of practical research in the areas of glass or analysis, and will involve a large degree of self-responsibility. In order to fill this part you should hold a PhD awarded within the last five years. We offer very favorable working conditions in the shape of excellent equipment and team spirit. The remuneration is in accordance with BAT IIa, combined with social benefits equivalent to those in public service. Please apply in writing within 3 weeks of publication of this advertisement, enclosing a full CV.

Please send your full application to:

Fraunhofer Institut  
 für Silicattforschung  
 Prof. Dr. U. Schubert  
 Neunerplatz 2  
 D-8700 Würzburg  
 GERMANY



**RESEARCH ASSOCIATE**

Institute engaged in renewable energy resource research seeks Research Associate to analyze deep levels in compound semiconductors and silicon which are used for photovoltaic devices. Establish defect models and relate the electronic effects of the defects on the properties of the heterojunction and homojunction photovoltaic devices which, in turn, affect the efficiency of solar cells. Perform quantitative analysis and qualitative characterization of photovoltaic devices by utilizing Deep Level Transient Spectroscopy (DLTS) apparatus and other characterization instrumentation, such as frequency-dependent Capacitance-Voltage (C-V) apparatus and van der Pauw Hall apparatus. Develop computer software for data analysis and instrumentation interfacing. Use Fortran, C, UNIX/Shell. Implement theoretical analysis and create computer simulations. Report results to Device Development Group, and work with group scientists to optimize the solar cell fabrication and device processing to increase solar cell performance and efficiency. Requires master's in electrical engineering; 1 year research experience in characterization, analysis, and modeling of deep levels in compound semiconductors and silicon, using DLTS; expertise in PV device fabrication and characterization. Experience and expertise may be gained in employment or in educational program. \$27,000/year; 8:00 am-5:00 pm, M-F. Respond by resume no later than July 14, 1992 to Colorado Department of Labor & Employment, Division of Employment & Training, 600 Grant, Suite 900, Denver, CO 80203, ATT: James Shimada, and refer to Job Order No. CO3773946.

**MATERIALS RESEARCH FACILITY MANAGER**

The Center for Materials Research and Analysis (CMRA) is seeking applications for the Materials Research Facility Manager position. The successful candidate will be responsible for characterizing microstructure of materials by optical metallography, mechanical testing and related techniques, designing new techniques and equipment, upgrade and maintain equipment for related thermo-mechanical processing, daily operation of the electron microscopy facility. Master's plus two years materials research laboratory experience required, equivalency considered. Experience in transmission and scanning electron microscopy required. Background in optical metallography, mechanical testing and related specimen preparation necessary. Excellent communication and computer skills necessary. X-ray diffraction. STEM, EDX, EELS, sample preparation, image analysis, servo hydraulic systems, instrumented impact testing, experimental stress analysis and clean high vacuum systems experience desirable. Submit letter of application, resume and the name, address and telephone number of three professional references post-marked by July 13 to: Dr. Brian Robertson, CMRA, 225 WSEC, University of Nebraska-Lincoln, Lincoln, NE 68588-0656.

*AA/EOE.*