

CALENDAR

OCTOBER 1989

- 1-5
Symposium on Simulation and Theory of Evolving Microstructures and Textures, TMS Fall Meeting Indianapolis, IN
M.P. Anderson, Exxon Research and Engineering Co., Rt. 22 East, Annandale, NJ 08801; (201) 730-2756
- 2-4
Second European Conference on Electron and Optical Beam Testing of Integrated Circuits
Duisburg, W. Germany
E. Kubalek and L.J. Balk, Werkstoffe der Elektrotechnik, Universitat Duisburg, Kommandantenstr. 60 D-4100 Duisburg 1, W. Germany; 49-203 3 79 34 06
- 2-6
European Space Power Conference
Madrid, Spain
J.-C. Larue, European Space Research and Technology Centre, XPG, Postbus 299, 2200 AG Noordwijk ZH, Netherlands; 31 (0) 1719 83973; fax 1719 17400

3-6
American Society for Composites: Fourth Technical Conference on Composite Materials
Blacksburg, VA
M.W. Hyer, ESM Dept., Virginia Tech., Blacksburg, VA 24061; (703) 231-5372

9-13
GADEST III: Third International Autumn Meeting on Gettering and Defect Engineering in Semiconductor Technology
Castle Garzau, E. Germany
M. Kittler, Institute of Semiconductor Physics, Academy of Sciences of the GDR, POB 409, Frankfurt 1200, E. Germany

8-11
Fourth Workshop on Organometallic Vapor Phase Epitaxy
Monterey, CA
B. Kamperman, The Minerals, Metals & Materials Society, 420 Commonwealth Dr., Warrendale, PA 15086; (412) 776-9050; fax (412) 776-3770

16-18
International Symposium on the Physical Chemistry of Powdered Metals Production and Processing
St. Mary's, PA
TMS, Meetings Dept., 420 Commonwealth Dr., Warrendale, PA 15086; (412) 776-9050; fax (412) 776-3770

15-20
OSA Annual Meeting
Orlando, FL
Optical Society of America, 1816 Jefferson Pl. NW, Washington, DC 20036; (202) 223-0920

21-24
Soil Dynamics & Earthquake Engineering IV Conference
Mexico City, Mexico
L. Newman, Computational Mechanics Institute, 52 Henstead Rd., Southampton, SO1 2DD, England; 44-703-221398; fax 44-703- 331020

22-28
Second International Conference on Solid State & Integrated Circuit Technology
Beijing, China
Continuing Education in Engineering, University Extension, Univ. of

California, 2223 Fulton St., Berkeley, CA 94720; (415) 642-4151; fax (415) 643-8683
(See related article in Vol. XIII No. 11.)

23-27
36th National Vacuum Symposium
Boston, MA
M. Churchill, American Vacuum Society, 335 E. 45th St., New York, NY 10017; (212) 661-9404

24-29
European Conference on Applications of Surface and Interface Analysis (ECASIA 89)
Antibes, France
J. Fauvet, Societe Francais du Vide, 19 rue du Renard, F-75004 Paris, France

NOVEMBER 1989

27-2
MIRIS Materials Research Society Fall Meeting
Boston Marriott and Westin Hotels/Copley Place, Boston, MA
M. Geil, Materials Research Society, 9800 McKnight Rd., Suite 327, Pittsburgh, PA 15237; (412) 367-3003; fax (412) 367-4373

DECEMBER 1989

14-26
Royal Australian Chemical Institute PAC-Chem 89: International Congress of Pacific Basin Chemical Societies
Hawaii
D.J.T. Hill, Chemistry Dept., Univ. of Queensland, St. Lucia, Queensland, 4067, Australia

MARCH 1990

12-16
American Physical Society Meeting
Anaheim, CA
W.W. Havens, Jr., APS, 335 E. 45th St., New York, NY 10017

APRIL 1990

16-20
MIRIS Materials Research Society Spring Meeting
San Francisco, CA
M. Geil, Materials Research Society, 9800 McKnight Rd., Suite 327, Pittsburgh, PA 15237; (412) 367-3003; fax (412) 367-4373

22-27
American Chemical Society Meeting
Boston, MA
American Chemical Society, 1155 16th St. NW, Washington, DC 20036; (202) 872-4600

CLASSIFIED

Positions Available

FULL-TIME FACULTY POSITION

Department of Mechanical Engineering Division of Materials Science and Engineering University of California, Davis

The Division of Materials Science and Engineering in the Department of Mechanical Engineering at the University of California, Davis invites applications for a full-time faculty position. The candidate should have a dedicated interest in teaching and in experimental research directed toward the properties, processing and characterization of electronic, optical, or dielectric materials. Qualifications must include an earned doctorate or equivalent degree in materials science and engineering, or a related field, experience in materials research in the stated area(s) and a commitment to teach at both the undergraduate and graduate levels. The level of appointment will be commensurate with the qualifications of the applicant.

The Division offers BS, MS, and PhD degrees in materials science and engineering and has a strong commitment to teaching and research. At present, five faculty, 30 graduate students, and 95 undergraduates participate in the programs of the Division.

Applications must be received by **April 30, 1989**. Send resume, which should include the names, addresses and phone numbers of five references to:

Materials Science Search Committee
c/o Prof. Harry Brandt
Department of Mechanical Engineering
University of California
Davis, CA 95616

Equal Opportunity/Affirmative Action Employer

PART-TIME FACULTY POSITION

Helsinki University of Technology-Finland

Helsinki University of Technology is the oldest and largest university of technology in Finland, having 10,000 students and a teaching and research staff of approximately 1,500 persons. The university is located on a modern campus 10 km west of Helsinki.

The University seeks a candidate for a new part-time professorship in MATERIALS SCIENCE AND ENGINEERING. The salary will be about 80,000 FIM per year, which corresponds to 1/3 of a full professorship. The successful candidate will be expected to spend at least a part of his time each year in Finland in order to initiate and conduct research, supervise postgraduate students and teach postgraduate courses. The contract can be made for a limited time from one to four years. Candidates are sought in all areas of materials science and engineering including preparation and/or processing of metals, electronic materials, polymers, ceramics and composites. Special emphasis will be placed on advanced materials and computer-aided modeling in materials processing. A doctorate in a relevant field and strong background in teaching and/or research are required.

Applicants are encouraged to respond as soon as possible. The position will be filled starting from September 1, 1989. Send a detailed resume with publication list and names of at least two references to Prof. Kaj Lilius, Chairman, Institute of Materials Technology, Helsinki University of Technology, Vuorimiehentie 2 A, 02150 Espoo, Finland; Telephone 3580-4512769, fax 3580-4512660.

Positions Available

RESEARCH POSITIONS

Computer Simulation of Defects in Structural Materials

Universal Energy Systems, Inc., a high technology R/D organization has openings for research positions in the simulation of defects in structural materials with particular interest in intermetallic materials. Research will require applying state-of-the-art techniques to describe materials behavior from interatomic forces. Special emphasis is to be placed on developing methods to approach problems in dislocation dynamics and the variation of dislocation behavior with temperature. Research is to be performed at Wright-Patterson AFB, and the computational and experimental facilities at the AFWAL Materials Laboratory will be available. Candidates will have an opportunity to interact with a team of scientists active in intermetallic research. PhD in physics or materials science is required. Starting date as soon as possible. Two positions are currently available: a one-year visiting scientist position and a two-year position with the possibility for full-time employment. Send resumes and two letters of reference to Universal Energy Systems, Inc., ATTN: Ms. Judy McKinley, 4401 Dayton-Xenia Road, Dayton, OH 45432.

**ASSISTANT PROFESSOR
Metallurgy/Materials Science**

Montana College of Mineral Science and Technology is seeking an individual trained in metallurgy/materials science with a BS and doctorate degree in discipline. Industrial or research experience in an area such as ceramics processing, joining mechanical behavior, solidification processing or electronic materials is desirable. Successful candidate should be resourceful, hands-on experimentalist. Written and oral communication skills appropos to a teaching position are essential and experience with grant proposals is desirable. Duties include teaching junior, senior, and MS level in accredited 4-year metallurgical engineering program with materials option, and supervision of MS thesis work. Establishment of a research program would be expected. This position is dependent on funding and the appointment will be at the rank of assistant professor, nine-month contract, tenure-track. Review of applications will commence **April 15, 1989** but will be accepted up until the position is filled. Please send a letter of application, resume, and a list of three references to Ted Jordan, Metallurgy Department, Montana Tech, West Park, Butte, MT 59701.

An EEO/AAE.

**FACULTY POSITION
IN X-RAY LITHOGRAPHY
Louisiana State University**

The Department of Electrical and Computer Engineering at LSU invites applications for anticipated tenured or tenure-track faculty position available August 1989 in the area of x-ray lithography. Ideally the person should have experience in optical lithography, electron beam techniques, and x-ray lithography including beam-line technology. A background and working knowledge of semiconductor devices and fabrication technology is highly desirable. Research in x-ray lithography would be conducted with the Center for Advanced Microstructures and Devices (CAMD). The central research tool at CAMD will be an electron storage ring optimized for x-ray lithography and materials research. A PhD or equivalent is necessary. Rank is open. Salary is competitive and commensurate with qualifications and experience. Release time and resources are provided in order to enhance the development of a quality research program. Opportunities for summer support are available. Send resume, names of three references, a statement of teaching and research interests, and verification of employment eligibility in compliance with the Immigration Reform and Control Act of 1986 to: Alan H. Marshak, Chairman, Electrical and Computer Engineering, Louisiana State University, Baton Rouge, LA 70803-5901.

LSU is an Equal Opportunity Employer.

**POSTDOCTORAL POSITION
IN MECHANICAL PROPERTIES
Materials and Chemical
Sciences Division**

Washington State University has an opening for a postdoctoral position in mechanical property studies. The work will focus on strength, ductility and toughness of intermetallic compounds in both bulk and thin film form. A special capability in fracture mechanics and related areas is required.

Send resume and the names of three references to Prof. J.P. Hirth, Mechanical and Materials Engineering Department, Washington State University, Pullman, WA 99164-2920.

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

MATERIALS SCIENCE

Rice University is seeking candidates for a tenure-track position in materials science at the rank of Assistant or Associate Professor. Qualified candidates should have demonstrated abilities in the area of the mechanical properties of materials such as ceramics and composites, with emphasis on structure-property relations. The desired starting date is July 1, 1989. A resume (including citizenship and/or visa status), publication list and names of potential references should be sent to Dr. Ed Akin, Chairman, Department of Mechanical Engineering and Materials Science, Rice University, P.O. Box 1892, Houston, TX 77251, no later than **May 15, 1989**.

Rice University is an equal opportunity,
Affirmative Action Employer-M/F/H/V.

**MATERIALS SCIENCE
FACULTY**

MIT Department of Materials Science and Engineering has searches for tenure track assistant professorships available involving teaching and research in the areas noted below:

- **Electronic Materials**
- **Physical Ceramics**
- **Chemical Synthesis/Processing of Materials**
- **Materials Science and Engineering**

Doctorate required and experience desirable. Salaries and benefits competitive. Positions will be filled only if exceptional candidates are found. Appointment to a more senior position is possible based on experience and accomplishments. **Send resume (including citizenship and/or visa status), publications list and references to Professor Merton C. Flemings, Head, Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA 02142. MIT is a non-smoking environment.**

MIT is an equal opportunity/
affirmative action employer

A COMMUNITY AT WORK.



Positions Available

TENURE-TRACK FACULTY POSITIONS

**Department of Physics
Texas Center for Superconductivity
at the University of Houston**

The University of Houston Department of Physics invites applications for a number of positions working on various aspects of superconductivity and materials science research in the Texas Center for Superconductivity at the University of Houston (TCSUH). Among these are three tenure-track positions, immediately available for physicists with expertise in (1) device physics, (2) microstructure, and (3) optics. Ranks of these positions will be commensurate with experience and expertise. We are seeking candidates with these specialties for research in the broad problem areas of the physics of high temperature superconducting (HTSC) and related materials. Specific research topics include the search for new HTSC material, development of existing material for applications, bulk and film material synthesis and characterization, device fabrication and development, etc. Research funding will be provided for laboratory start-up and initial summer salary. New researchers will set up their own research programs and should be working closely with the present Center staff of over 80 researchers in physics, chemistry and engineering. The Center is expanding and will be moving into a new 48,000 sq. ft. research building in 1990/91. TCSUH was established by an Act of the Texas State Legislature in June 1987. It is a multidisciplinary research consortium dedicated to basic and applied research, technology development and transfer, and advanced education in the field of HTSC and materials science. The consortium will consist of other universities, industry, and government laboratories. TCSUH currently is funded by federal, state, University of Houston, and private sources with a multimillion dollar annual budget. Applications should be sent to Prof. Paul Chu, Director, TCSUH, University of Houston, Houston, TX 77204-5506. Inquiries can be made to Dr. Wei-Kan Chu, Dr. Pei Hor, or Ms. Barbara N. Brown at (713) 749-3906.

TCSUH is an Affirmative Action/Equal Opportunity Employer.

MATERIALS SCIENTIST

Bandgap Technology Corporation, a Colorado-based producer of epitaxial materials grown by OMVPE, MBE/CBE, and VPE, has an opening for a materials scientist. The individual filling this position will assist in the characterization of III-V semiconductor films and other advanced materials by SIMS, double crystal X-ray diffraction/topography and STEM.

The most appropriate candidate for this position will have experience in the operation of a state-of-the-art VG quadrupole SIMSLAB-3 equipped for static, dynamic and imaging SIMS analysis. However, individuals knowledgeable in cross sectional STEM analysis of III-V films, specifically utilizing a JEOL 2000FX STEM will be considered. The individual filling this position must have an MS (PhD preferred) in Materials Science, Surface Chemistry, or its equivalent.

Qualified individuals are invited to send resumes and salary history to:

Bandgap Technology Corporation, Personnel Department, 891 Interlocken Parkway, Broomfield, Colorado 80020.

BANDGAP
Technology Corporation

MATERIALS SCIENCE POSITIONS

University of North Texas

The Center for Materials Characterization at UNT is soliciting applications for three positions in materials science. X-ray analysis, scanning tunneling microscopy, and composites materials are of particular interest. Salary and rank are dependent upon the qualifications of the candidates. Applicants should send a vita, a list of publications, a statement of research and teaching interests, and a list of references to Search Committee, Center for Materials Characterization, P.O. Box 5371, University of North Texas, Denton, TX 76203-5371. Telephone inquiries may be directed to members of the search committee at (817) 565-3260.

The University of North Texas is an emerging national research institution in the vibrant and rapidly expanding Dallas-Fort Worth metropolitan area with over 24,000 students (one-third graduate students).

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

FACULTY POSITIONS

The University of Michigan

Two tenure-track faculty positions at the assistant, associate or full professor level are available in the Department of Materials Science and Engineering at the University of Michigan. Applicants must have a PhD degree, be qualified to teach undergraduate and graduate materials science courses, and should wish to develop independent and cooperative research programs. A demonstrated research potential or record is required. Preference will be given to candidates with expertise involving electron microscopy, surface science and materials physics or chemistry.

Send resume and a list of references to:

Prof. Ronald Gibala, Chairman
Department of Materials Science
and Engineering
The University of Michigan
2300 Hayward Street
Ann Arbor, MI 48109-2136

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MATERIALS SCIENTIST

Cement/Ceramics

CEMCOM Corporation, a small growing R&D company specializing in chemically bonded ceramic (CBC) materials, is seeking to hire a materials scientist with cement and/or ceramic materials expertise. The primary job responsibility will be to develop new products based upon CBC materials. This will involve all phases of project management from conception through implementation and production.

The ideal candidate should have a Masters or PhD in an appropriate field of study, good conceptual thinking skills, excellent written and verbal communication skills, and the ability to put ideas and concepts into practice. U.S. citizenship and some industrial experience is desirable.

Competitive salary, excellent benefits. Please send resume to Genny Pomatto, 10123 Senate Drive, Lanham, MD 20706.

Positions Available

DIRECTOR OF APPLIED SCIENCE

William and Mary

William and Mary invites nominations and applications for the CSX Endowed Professorship in Applied Science. The successful candidate will direct a new PhD program in applied science to be inaugurated in 1990. The university is seeking an individual who has a record of scholarly accomplishments in applied science and has demonstrated the leadership and administrative skills to serve as Program Director. The position will become available August 16, 1989, with the expectation that it will be filled before August 16, 1990.

Initially the Applied Science Program will have special strengths in accelerator science, polymers, quantitative materials characterization, and surface science. Students will perform thesis research at William and Mary and in the nearby laboratories of the NASA Langley Research Center (LaRC) and the Continuous Electron Beam Accelerator Facility (CEBAF). The Program will have ca. 25 faculty including members of the Chemistry, Computer Science, Mathematics, and Physics Departments, scientists and engineers at CEBAF and LaRC, and new faculty to be hired for the program.

William and Mary, a state university, has 1,600 graduate and professional students in addition to its 5,200 undergraduates. It offers PhD degrees in physics, computer science and marine science, and masters degrees in biology, chemistry, and mathematics. LaRC employs 2,800 science and engineering professionals and support staff who engage in a broad spectrum of aeronautical and space-related research activities. CEBAF, when completed in 1993, will be the only accelerator to produce continuous high-intensity beams of 4-GeV electrons. Funded by the Department of Energy and managed by the Southeastern Universities Research Association, it will employ 350 physicists, engineers, and support staff.

Nominations and applications should be sent to Prof. Robert A. Orwoll, Department of Chemistry, College of William and Mary, Williamsburg, VA 23185. Each application should include a curriculum vitae and the names of four persons who can serve as references. The review of applications and nominations will begin **May 15, 1989**, and continue until the successful applicant has been identified.

AA/EOE. Minorities and women are encouraged to apply.

PENNSTATE



University Park
Campus

**DIRECTOR
MATERIALS RESEARCH LABORATORY**

The Materials Research Laboratory is an interdisciplinary facility which is administratively located in The Pennsylvania State University Intercollege Research Programs (IRP) operations. The students and faculty associated with the MRL represent a broad range of disciplines. The laboratory specializes in inorganic non-metallic materials and the main areas of research are electronic ceramics, thin films including CVD diamonds, cement and related chemically-bonded ceramics, and the characterization of related materials. MRL is currently based in a 70,000 sq. ft. building built in 1969. The MRL unit has been in existence for 26 years. More than 230 faculty, staff and students are associated with MRL. MRL research expenditures amounted to 9.4M in 1987/88. The laboratory has been a leader in industry-university coupling since it started and currently receives 35% of its research expenditures from industrial sources. The laboratory is in a growth phase. External grants and contracts have increased dramatically over the last several years and the number of personnel has increased, including tenure track core faculty.

The candidate should have the following qualifications:

An established international reputation in areas of research related to materials science and engineering.

A proven record of significant and sustained research and productivity, and funding.

Administrative and organizational skills necessary for directing and sustaining, a highly interactive interdisciplinary research team and laboratory.

Ability to work effectively with MRL faculty from diverse areas, department heads of related areas, and the University administration.

The MRL Director will have tenure in an academic department and will have the opportunity to teach. The Director will report to the Office of the Senior Vice President for Research and Dean of the Graduate School.

Screening of applications will begin on March 15, 1989, but applications will be accepted until the position is filled.

Send letter of application, resume, and names of at least three references to:

Professor Russell Messier • Chair, Selection Committee
The Pennsylvania State University
c/o Employment Division • Box M-007
120 South Burrowes Street • University Park, PA 16801

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