

**Positions Available**

**POSTDOCTORAL POSITION  
PLASMA DEPOSITION AND POLYMERIZATION**

The Engineering Research Center for Plasma-Aided Manufacturing at the University of Wisconsin-Madison invites applications for a postdoctoral research position in the area of plasma deposition and polymerization. Applicants should have a PhD degree in physics, chemistry, chemical engineering, electrical engineering, or materials science and a record of application-oriented research and publications. Experience in plasma physics, plasma chemistry, plasma diagnostics, materials characterization, vacuum technologies, and plasma-aided manufacturing will be useful. Ongoing projects include plasma polymers for photonics, deposition of silicon nitride and silicon oxide, barrier coatings, and treatment of fibrous materials, as well as surface modification of materials.

Emphasis will be placed on fundamental understanding, along with a vision of industrial applications. The successful applicant will be expected to identify and carry out a strong research program aimed at both long- and medium-term future industrial applications through technology transfer. Responsibilities also include industrial interaction. The initial appointment is for one year and is renewable contingent upon performance and funding availability.

The Engineering Research Center for Plasma-Aided Manufacturing is a cross-disciplinary Center funded by the National Science Foundation and a consortium of Industrial Partners. Applications or nominations should be sent to Professor J. Leon Shohet, Director, Engineering Research Center for Plasma-Aided Manufacturing, University of Wisconsin-Madison, 1410 Johnson Drive, Room 101, Madison, WI 53706.

*The University of Wisconsin-Madison is an EO/AA employer.*

**POSTDOCTORAL POSITION  
IN UHV-TEM  
Northwestern University, Evanston**

A postdoctoral position is available working on metal-on-semiconductor systems using a UHV-TEM with an attached multi-chamber surface science system. In addition to TEM, the position will involve assisting in the installation, and exploring the new science available by marrying UHV-TEM with *in-situ* or UHV transfer growth, and UHV transfer to surface analytical tools such as XPS. Applicants must have fairly strong backgrounds in TEM and UHV technology, with an aptitude for mechanical work, and have specialized in either TEM or surface science. The appointment is for one year, renewable by mutual agreement for a total of three years. Interested applicants should send a curriculum vitae and names of three references to Prof. L.D. Marks, Department of Materials Science, Northwestern University, Evanston, IL 60208; email: [ldm@apollo.numis.nwu.edu](mailto:ldm@apollo.numis.nwu.edu) (email preferred).

*Northwestern University is an equal opportunity/affirmative action institution.*

**POSTDOCTORAL POSITIONS  
ETH, Zürich**

We have several postdoctoral positions available at the Swiss Federal Institute of Technology (ETH), starting January 1, 1994, in the area of surface science as applied to tribology, biocompatibility, and catalysis. Applicants must possess a PhD in chemistry, biochemistry, physics, or materials science. Send résumé with the names and telephone numbers of three references to:

Prof. N.D. Spencer, Chair of Surface Technology  
Box M, Departement Werkstoffe, CNB E91  
ETH-Zentrum  
CH-8092 Zürich, Switzerland.

**FACULTY POSITION  
MATERIALS ENGINEERING DEPARTMENT  
Rensselaer Polytechnic Institute**

The Materials Engineering Department of Rensselaer Polytechnic Institute is seeking candidates for a tenure-track faculty position at the assistant professor level with an anticipated starting date of January or July, 1994. Persons with particularly strong credentials will be considered for the associate professor level. Candidates should have research experience in materials processing; areas of particular interest are powder processing of metals and ceramics and polymer processing.

Candidates must hold the PhD degree and have a strong record of accomplishment in research. Potential and dedication for excellent teaching are essential. Responsibilities of the position include teaching undergraduate and graduate courses, supervision of graduate students, scholarly research, and generation of research funding.

Applications for the position will be received until the position is filled. Send inquiries and applications, including a list of publications, and three references to:

Professor Robert H. Doremus  
Materials Engineering Department  
Rensselaer Polytechnic Institute  
Troy, New York 12180-3590  
(518) 276-6373; FAX (518) 276-8554

*Rensselaer Polytechnic Institute is an equal opportunity/affirmative action employer. Applications from women and minorities are especially encouraged.*



THE UNIVERSITY OF AUCKLAND - NEW ZEALAND

**AUCKLAND UNIVERSITY  
RESEARCH COMMITTEE  
POSTDOCTORAL FELLOWSHIPS**

**Vacancy UAC.327**

The Computational Materials Science and Engineering Research Centre has funding for a postdoctoral position for a two-year period. Present research is being carried out at the theoretical, numerical modelling and experimental levels on advanced ceramics, new carbon based materials and heavy element chemistry. We seek support in the computation of the properties of molecules, clusters and bulk materials. Applicants should have completed their PhD and have a strong background in theoretical/computational inorganic chemistry, solid state physics or materials science. For further information please contact: J S McFeaters, P Schwerdtfeger or M Liddell, e-mail: [eme@ccnovl.auckland.ac.nz](mailto:eme@ccnovl.auckland.ac.nz), fax (64) 9 373-7479. More detailed Conditions of Appointment are available on request.

Emolument will be NZ\$35,000 per annum, plus NZ\$4,000 toward airfares.

Two copies of applications, in the form of a detailed curriculum vitae (including any relevant reprints) and the names and contact details of two or more independent referees should be forwarded to reach the Registrar, University of Auckland, Private Bag 92019, Auckland, New Zealand, by 29 October 1993.

Please quote Vacancy UAC.327 in all correspondence.

W B NICOLL, REGISTRAR

*The University has an EEO policy and welcomes applications from all qualified persons*

## Positions Wanted

The following advertisements are from MRS members seeking employment in materials research and development.

**Prospective Employers—**  
To correspond confidentially with the applicant, REPLY TO THE APPROPRIATE BOX NUMBER, AS FOLLOWS:

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

**Postdoc in materials science and engineering** seeks industrial/academic research position. PhD (1992) in solid-state physics. Expertise in ion implantation, synthesis and characterization of SIMOX structures. Background in electronic materials processing. Instrumentation: TEM, SEM, SIMS, XPS, Raman, RBS/Channeling, and C/V measurements.  
**Employers—Please reply to Box XVIII, No. 1001.**

**PhD in solid-state physics**, to be completed in November 1993. Experienced in measuring GaAs-(Ga,Al)As heterostructures and Er implanted in Si with luminescence, ellipsometry, and other optical techniques. My address is: V. Bellani, Bellani Vittorio, Dipartimento di Fisica, Via Bassi 6, I-27100 Pavia (Italy).  
**Employers—Please reply to Box XVIII, No. 1005.**

**Materials processing researcher** seeks position in industrial/academic R&D, process engineering & manufacturing. PhD in ME, specialized in materials science. Six years experience in thin-film coating and with vacuum roll/web coating equipment for electrical/electronic components, connectors, semiconductors. Five years industrial experience. Background in tribological analysis, autoCAD, modeling and simulation; also SEM, TEM, XRF, x-ray diffractometry. U.S. patent holder.  
**Employers—Please reply to Box XVIII, No. 1004.**

**Industrial R&D/manufacturing position:** PhD in ceramic science. Research experience in processing and characterization of ultrafine powders and films. Skilled in chemical powder processing and spray pyrolysis. Industrial experience in refractory manufacturing and development. Adept at electron microscopy, x-ray diffraction, thermal analysis, and particle-size, size distribution, and surface area measurement. Excellent communication and interpersonal skills.  
**Employers—Please reply to Box XVIII, No. 1002.**

**Skilled PhD materials scientist** with extensive experience in thin-film growth, characterization, and surface science. Background includes MBE of metals, oxides, semiconductors; electron spectroscopy (XPS, AES), diffraction (RHEED, LEED), and imaging (HRTEM); and all aspects of semiconductor processing. Excellent organizational and communication abilities. Seeking position in an innovative development environment.  
**Employers—Please reply to Box XVIII, No. 1003.**

*Current MRS Members are eligible for one (1) free "Position Wanted" classified ad per year in the MRS Bulletin. Ad length: up to 50 words; one-time insertion. Ad must be reserved no later than the 1st of the month prior to the month of publication. (For example, to place an ad in the January issue, space must be reserved by December 1.) For information, contact Mary E. Kaufold, MRS Bulletin Advertising, 9800 McKnight Rd., Pittsburgh, PA 15237; (412) 367-3036.*

## MRS 1993 FALL MEETING

### SYMPOSIUM Ca: INTERFACE CONTROL OF ELECTRICAL, CHEMICAL, AND MECHANICAL PROPERTIES

In a special session on Thursday, December 2, T. Seidel, SEMATECH, will describe SEMATECH's road map; T. Ohmi, Tohoku University, will give a Japanese view of materials issues in semiconductor technology.

## COMING IN NOVEMBER

*Guest Editor Willard H. Sutton, United Technologies Research Center, will focus on Microwave Processing of Materials. Articles will include:*

**Computer Modeling and Numerical Simulation of Microwave Heating Systems**, by Magdy F. Iskander, University of Utah.

**Recent Developments in the Microwave Processing of Polymers**, by David A. Lewis and Jane M. Shaw, IBM.

**Recent Developments in the Microwave Processing of Ceramics**, by David E. Clark, D.C. Folz, R.L. Schulz, Z. Fathi, and A.D. Cozzi, University of Florida.

**Recent Developments in Microwave Joining**, by Richard Silbergliitt, FM Technologies; Iftikhar Ahmad, Technology Assessment & Transfer, Inc.; W. Murray Black, George Mason University; and Joel D. Katz, Los Alamos National Laboratory.

**Microwave Processing of Metallorganics to Form Powders, Compacts, and Functional Gradient Materials**, by Monika A. Willert-Porada, University of Dortmund, Germany.

**Gyrotron Processing of Materials**, by Boris E. Paton and Vladislav E. Sklyarevich, E.O. Paton Electric Welding Institute, Ukraine; and Marko M.G. Slusarczuk, USP Holdings.



Ad closings for the *MRS Bulletin*:  
November 1 for December '93 issue, December 3 for January '94 issue.

**To place your ad, call Mary E. Kaufold at (412) 367-3036 today!**