accuracy and quality of the measurements and to add diagnostics and other intelligence to any type of sensor. Proportional integral derivative control is the basis of many control systems but the newer artificial intelligence approaches of fuzzy logic and neural networks are succinctly covered. Their combination, the text points out, may allow the use of sensors with lower accuracy and therefore lower cost.

Interesting chapters also cover remote sensing and micromechanical systems which include microvalves, micromotors, micropumps, microdynamometers, and micro-optics. Other stimulating topics discuss the future capabilities of semiconductor systems and how much technology will be needed and who is going to supply this technology to the field of smart sensors as well as the latest sensor concepts.

Understandably, given the author's background at Motorola, this book is intended for professional electronic engineers who wish to use the latest technology to integrate sensors into circuits to give an overall control device. However, it is also very useful to materials scientists developing sensors to gain an insight into how their device can be packaged to make a useful contribution to control technology. Without the important chapter on acronyms, the nonengineer would find the text difficult to comprehend.

The book is well-written with plenty of high quality diagrams and photographs of industrial products. The references and index are comprehensive and the book can be strongly recommended to those interested in developing sensor systems or those scientists, who are researching materials for novel sensors, to ascertain the exciting electronic capabilities which exist to enhance their performance.

***Reviewer:*** *Derek Fray is a professor of materials chemistry at the University of Cambridge with research interests in sensors for the control of materials processing.*

## CLASSIFIED

### Positions Available

**TENURE-TRACK POSITION**
**Department of Materials Science and Mineral Engineering**
**University of California, Berkeley**

The College of Engineering at the University of California, Berkeley invites applicants for a tenure-track position in biomaterials with expertise in the response of tissues to engineering materials. The preferred candidate will utilize the Advanced Light Source at the Lawrence Berkeley National Laboratory as part of his/her experimental investigations of the biological and chemical processes occurring at the interfaces between tissues and bioengineering devices. Preference will be given to an appointment at the tenured level, although appointment at the assistant professor level will be considered for a recent PhD degree recipient with exceptionally strong promise.

Appointment in any department with the College of Engineering is possible. An appointment partially within the Department of Materials Science and Mineral Engineering is likely.

The successful candidate will be responsible for teaching undergraduate and graduate courses in the College and must engage in high quality research. A doctoral degree in an appropriate field is required. The position is available in the Spring Semester of 1999.

Interested persons should apply (include resume, statement of interest, copies of publications, names and addresses of references) by **June 1, 1998** to:

Professor Thomas M. Devine, Chair
Department of Materials Science and Mineral Engineering
577 Evans Hall #1760
University of California
Berkeley, CA 94720-1760
Telephone: 510-642-3801
E-mail: devine@socrates.berkeley.edu

*The University of California is an Equal Opportunity/Affirmative Action Employer*

**POSTDOCTORAL RESEARCH POSITIONS**
**Norwegian University of Science and Technology**

A new strategic program in high performance ceramics and heterogeneous materials has been initiated at the Norwegian University of Science and Technology. The program is a collaboration between three research groups at the Department of Inorganic Chemistry (Assoc. Profs. M-A. Einarsrud, T. Grande, K. Wiik) Department of Physics (Prof. R. Høier), and Department of Physical Electronics (Prof. J. Grepstad). The program invites qualified applicants for two postdoctoral research positions in the areas of non-oxide ceramics and perovskite-related oxide materials with mixed conduction properties, respectively.

Successful candidates must have completed a PhD degree in ceramics, material science, solid state physics/ chemistry, or a related field. Demonstrated expertise in several of the following areas is required: scanning/transition electron microscopy, x-ray diffraction, epitaxial thin film growth, and sintering. The positions are for three years starting preferentially July 1, 1998. Annual starting salary: NOK 287,000 (approx. USD 38,000).

Interested candidates should send their résumés including information on availability, the name of three references, current visa status, and copies of selected relevant publications to:

Dr. Mari-Ann Einarsrud, Department of Inorganic Chemistry
Norwegian University of Science and Technology
N-7030 Trondheim, Norway

Applications will be accepted until **May 1, 1998.** Further information can be obtained from Mari-Ann.Einarsrud@chembio.ntnu.no,Ragnvald.Hoier@phys.ntnu.no, or Jostein.Grepstad@fysel.ntnu.no.

**ASSISTANT IN RESEARCH**
**National High Magnetic Field Laboratory**

The National High Magnetic Field Laboratory is recruiting for an Assistant in Research. This is a 12-month, non-tenure earning, research faculty position. This position is responsible for development of magnet technology for insert magnets based on High Tc superconductors as part of the development of a 1 GHz NMR facility. Responsibilities include detailed analysis of the critical properties of materials and products, development of manufacturing methods, construction, extensive testing and analysis of model coils, and publication of results. The position will also a) supervise the facilities for critical current characterization of HTS, assure quality of results, and expand capabilities; b) initiate and sustain collaborations with appropriate industries and research institutions; and c) represent the NHMFL in the multi-national VAMAS program on HTS.

Minimum qualifications include an MS degree or equivalent, three years experience with high temperature superconductor applications development, and a record of publication. Application deadline is **April 30, 1998.** To apply, submit a letter of application (reference position #63814) and vitae to Ms. Jocelyn Clarke, National High Magnetic Field Laboratory, 1800 E. Paul Dirac Drive, Tallahassee, FL 32310.

## Positions Available

### TENURE-TRACK FACULTY APPOINTMENT
### Institute of Materials Science
### Department of Metallurgy and Materials Engineering
### University of Connecticut

The Institute of Materials Science at the University of Connecticut is accepting applications for a tenure-track faculty appointment in the Department of Metallurgy and Materials Engineering at the Assistant Professor level. The successful candidate will have a doctorate degree, with research experience and interest in the area of electron-probe microscopy/spectroscopy of ceramics and/or metals. The candidate will teach appropriate undergraduate and graduate students, leading to the development of a nationally recognized research program. We expect the successful candidate to join us by January 1999.

An application, including curriculum vitae, list of references, and supporting materials should be sent to: MMAT Search Committee, University of Connecticut, Institute of Materials Science, 97 North Eagleville Road, Storrs, CT 06269-3136. The search will continue until the position is filled. For more information about the Institute of Materials Science and the Department of Metallurgy and Materials Engineering, please contact http://www.ims.uconn. edu on the Internet. We encourage applications from under-represented groups including minorities, women and people with disabilities. (Search #98A327)

### FACULTY POSITION
### Oregon Graduate Institute of Science and Technology

The Department of Materials Science and Engineering at the Oregon Graduate Institute of Science and Technology desires to increase its presence in the electronic materials area. The Department utilizes microscopy and finite element analysis in its studies of electronic materials and packaging. Microscopy facilities include SEM, STEM, and FIB. We have an opening for a faculty person who can develop a robust electronic materials research program and enhance our graduate education program. A senior faculty person is preferred, but qualified junior level people will also be considered. The successful candidate will carry out research and education activities in the electronic materials area in cooperation with the Electrical and Computer Engineering Department which has strengths in semiconductor, VLSI and ULSI engineering, speech recognition, image processing, and neural network technology. Candidates must have an earned PhD degree and must have demonstrated a strong capability for grantsmanship and independent, publishable research in the field of electronic materials. Our graduate education program provides a valuable resource to local industry. A search for a Department Head is expected to be initiated in the near future and candidates should indicate if they wish to be considered for that vacant position.

The Oregon Graduate Institute is located in the heart of Oregon's Silicon Forest and is near several high technology companies including Intel, HP, Sharp, Fujitsu, Tektronix, Sequent, Mentor Graphics, TriQuint, Planar Systems, and SEH America. Oregon is Intel's largest site and is the home of the Intel semiconductor process and transistor development activities that are the basis of its manufacturing leadership. The Oregon Graduate Institute (http://www.ogi.edu) is dynamic and entrepreneurial. We seek applicants who are equally dynamic and entrepreneurial. Join us in building a world class institution in the great Pacific Northwest.

Applicants should send a complete resume to the Department Recruiting Committee, Department of Materials Science and Engineering, Oregon Graduate Institute of Science and Technology, P.O. Box 91000, Portland, Oregon 97291-1000 USA, or email to search@mse.ogi.edu. We strongly encourage application by women and minority candidates.

*The Oregon Graduate Institute is an equal opportunity employer.*

### TENURE-TRACK ASSISTANT PROFESSOR POSITION
### Department of Chemistry and
### Department Of Physics & Astronomy
### McMaster University

The Department of Chemistry and the Department of Physics & Astronomy at McMaster University jointly invite applications for a tenure-track appointment at the Assistant Professor level.

The successful candidate will have a PhD degree related to the science of macromolecules, such as polymers, membranes, biomembranes, and proteins. This position is associated with the development of a new initiative collaboratively developed by the Faculties of Science and Engineering at McMaster. We are looking for an individual who is able to lead an independent research program that leverages existing research strengths in areas related to macromolecular systems throughout the two faculties. She or he will be responsible for creation and leadership of a strong research group involving graduate students, and have an interest in innovative approaches to undergraduate education in chemistry and/or physics.

The position will commence July 1, 1998. Salary will depend on qualifications and experience. Applications, including curriculum vitae and the names of three referees, should be submitted by **April 15, 1998** to: Joint Selection Committee, (Departments of Physics & Astronomy and Chemistry) ABB-428, McMaster University, 1280 Main Street West, Hamilton, Ontario L8S 4M1, Canada. E-mail and FAX applications will not be accepted.

In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents.

*McMaster University is committed to employment equity and encourages applications from all qualified candidates, including aboriginal peoples, persons with disabilities, members of visible minorities and women.*

### GROUP LEADER
### The Division of Materials Science and Technology
### CSIR

The CSIR is a uniquely South African organization committed to innovation. The Division of Materials Science and Technology (MATTEK), one of CSIR's strategic units, develops, transfers, and applies new, improved or adapted scientific and technological expertise in different classes of materials and chemical processes. We currently have a vacancy for a:

### GROUP LEADER
### Materials and Molecular Modelling

The post will involve the development of MATTEK's new Atomistic and Molecular Modelling group and integrate it into our research projects across a broad range of materials (e.g., metals, ceramics, and polymers) and chemical processes by:

- evaluating current projects for molecular modelling potential
- leading and supervising ongoing modelling activities
- promoting the group's activities internally and externally (industrial prospects)
- working collaboratively with the Materials Modelling Centre, University of the North

Applicants should have a PhD degree in chemistry (chemical engineering), physics, or materials science plus at least three years experience preferably in industry (e.g., force-field and quantum mechanical methods). The position focuses on applying the range of computational techniques in solving industrial problems. Strong leadership, good communication skills (fluency in English), initiative, and vision are required qualities.

This position is based at CSIR's Scientiae site, Pretoria (South Africa). Applicants who meet the stated requirements should send a comprehensive CV to:

Mrs. Nonnie Brauckmann, CSIR - MATTEK, P. O. Box 395, PRETORIA 0001, South Africa

Fax: +27 12 841-3287; E-mail: nbrauck@csir.co.za

The review process will begin on **March 13, 1998.**