

**FACULTY POSITION:
ELECTRONIC MATERIALS
The Ohio State University**

A tenure-track position at the Assistant Professor level (exceptional persons will be considered at the Associate Professor level) is available in the Department of Metallurgical Engineering. This is part of an expanding, interdisciplinary program with emphasis on interface phenomena in thin film electronic materials. Applicants must have a PhD in a materials related field, and demonstrated ability to do original research. Appointees will be expected to initiate research in electronic materials as well as teach at the undergraduate and graduate level.

The Ohio State University is an equal opportunity employer.

Send resume with names of three references to Professor G. R. St. Pierre, Chairman, Dept. Metallurgical Engineering, 116 W. 19th Avenue, Columbus, OH 43210, telephone (614) 422-2491.

**ENDOWED CHAIR IN MATERIALS
SCIENCE AND ENGINEERING**

Applications are invited for appointment to The Racheff Chair of Materials Science and Engineering at The University of Tennessee, Knoxville. This tenure-track position is an exceptional opportunity for a highly qualified candidate with expertise in materials and processes for electronic devices and electronic package fabrication. Duties will include development of new courses, undergraduate and graduate teaching, and development of a major research program in the above area. Salary and rank commensurate with experience and accomplishments. Send letter of application, resume and three letters of recommendation to Search Committee, Department of Materials Science and Engineering, The University of Tennessee, Knoxville, TN 37996-2200.

The University of Tennessee is an EEO/Title IX/Section 504 Employer.

**DIRECTOR, CENTER FOR
MATERIALS PROCESSING**

The College of Engineering at The University of Tennessee is seeking a director for The Center for Materials Processing. The Center was created by the State of Tennessee through its Center of Excellence program. It is a University of Tennessee/Industry Research and Technology Venture whose purpose is to develop excellence in materials processing research and education at the UT Knoxville campus. Qualifications required include a broad knowledge of materials processing activities in ceramics, metals and polymers, prior experience in materials processing research, ability to manage the research and other activities of the Center. The position carries the administrative and leadership responsibilities of the Center for Materials Processing. Send letter of application and resume to Joseph E. Spruiell, Materials Science and Engineering, The University of Tennessee, Knoxville, TN 37996-2200.

The University of Tennessee is an EEO/Title IX/Section 504 Employer.

FACULTY POSITION IN MATERIALS SCIENCE AND ENGINEERING

Applications are invited for a tenure-track faculty position for an individual with expertise in ceramic materials and ceramic processing. Duties will include development of new courses, undergraduate and graduate teaching, and development of an active research program in this area. Salary and rank commensurate with qualifications. Send letter of application, resume and three letters of recommendation to Search Committee, Department of Materials Science and Engineering, The University of Tennessee, Knoxville, TN 37996-2200. *An EEO/Title IX/Section 504 Employer.*

**PHYSICAL CHEMISTRY DEPARTMENT
has current openings for Basic and Applied Research in...**

■ **COMBUSTION** — Chemical kinetics and dynamics of reactions important in flame ignition, propagation, and extinction and in the formation and destruction of solid and gaseous pollutants.

Ph.D. in Physical Chemistry, Physics, or engineering and graduate, post-doctoral, or other experience in Combustion Chemistry is required.

■ **CERAMICS** — Formation and growth kinetics of colloidal ceramic powders and gels from inorganic and organometallic precursors and control of the dispersion of fine ceramic powders, the rheology of the dispersions, and the evolution of microstructure in ceramic compacts and coatings.

Ph.D. in Ceramics, Materials Science, or Physical Chemistry required.

■ **METASTABLE SURFACE STRUCTURES** — Preparation, characterization and investigation of the corrosion and catalytic properties of metastable metal surface morphologies and compositions.

Ph.D. in Applied Physics, Materials Science, or Physical Chemistry required.

INTERESTED CANDIDATES SHOULD WRITE TO:

**Dr. Kathleen C. Taylor, Head
Physical Chemistry Department
General Motors Research Laboratories
Warren, MI 48090-9055**

An Equal Opportunity Employer

United Technologies Research Center is in the forefront of new-generation technologies. We're intensifying our research efforts in a variety of composite metals, polymers and ceramics in the development of high temperature composites and coatings. We are also expanding our present GaAs technology base into advanced microwave, analog and integrated circuit applications.

The transfer of our research and technology among many disciplines offers you broad-scoped involvement and technical challenge. If you're ready to build wide professional recognition, consider one of the following key roles:

Research Scientist—Materials Testing

You will direct programs for the development of mechanical testing capabilities and materials evaluations at elevated temperatures (1000 to 1950°C) in a

variety of environments. Involves diverse methodologies for mechanical testing of materials.

Position requires an MS or a PhD in Engineering backed by experience in Financial/Personnel Management, the use of computers and closed-loop servohydraulic testing machines.

Senior Research Scientist—Materials Characterization

You will perform state-of-the-art analytical electron microscopy characterization studies of various materials, including super alloys, semiconductors and composites; provide materials characterization expertise; and supervise technicians, aides and other scientists. Involves angstrom-level characterization studies of Ni-base superalloy second phase(s), thin foil investigations; and planar/transverse cross-section studies of alumina materials.

Position requires advanced degree(s) in Physical Science, preferably materials-related; five or more years of experience in Materials Characterization related areas; and extensive experience in Analytical Electron Microscopy. Additional experience with Microprobe, X-ray diffraction, Auger, SEM, SIMS and XPS would be highly desirable.

Scientists—Advanced Composite Materials

You will create advanced composites having metal, glass and ceramic matrices and

reinforcements chosen from a wide range of fibers, whiskers and particulates. Will synthesize advanced glass and ceramic matrices, using both melting and sol gel techniques; and synthesize composites and coatings utilizing chemical vapor deposition techniques. Involves R&D of fiber reinforced metals, glasses and ceramics, as well as carbon-carbon and advanced high temperature coatings.

Requires a Doctorate in Ceramics or Materials Science with or without additional related experience, and the ability to initiate and carry out research projects and actively participate in the laboratory and the technical community at large.

Materials Scientists—Plasma Spray Research

You will define relationships between spray process variables, materials microstructure, and material behavior; and develop advanced process diagnostics and control. Involves fundamental investigations of microstructural effects and development of coatings for thermal protection, erosion resistance and simple structural parts.

Requires an MS or PhD in Materials Science and 0-3 years of relevant experience.

GaAs Device & Process Researcher

You will develop advanced GaAs/AlGaAs heterojunction bipolar and FET structures using existing MBE, OMCVD and ion implantation facilities. Will pursue advanced heterojunction device process technologies and novel device structure.

Position requires a PhD in a related field with experience in GaAs or AlGaAs materials and a minimum of 5 years of industrial experience or equivalent with a recognized reputation and achievement record.

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An Equal Opportunity Employer
U.S. Citizenship Required

Research Professionals

Shape new advances in structural and electronic materials research