

### Applied Diamond Conference 1995 to Focus on Improved Processing Technology for Commercial Diamond Applications

The 3rd International Conference on the Applications of Diamond Films and Related Materials will be held August 21–24, 1995 at the National Institute of Standards and Technology (NIST), Gaithersburg, Maryland. The meeting is sponsored by NIST and cosponsored by the Materials Research Society and the American Physical Society. Cooperating societies are: American Carbon Society, American Ceramic Society, ASM International®, IEEE—Electron Devices Society, Japan New Diamond Forum, and SPIE.

With the objective of identifying technical barriers that hinder large-scale commercial diamond applications, as well as research strategies for overcoming these barriers, this biennial conference brings manufacturers and end-users of diamond and related technologies together with scientific researchers in the field. This year, the focus will be on new developments and advances in diamond process-

ing technologies, including major mechanical, thermal, optical, electronic, medical, and chemical applications of diamond, diamondlike carbon, cubic boron nitride, C-N compounds, and related wide-bandgap superhard materials.

Papers are solicited on topics covering both practical applications and basic science, including but not limited to:

- Cutting Tools,
- Sensors,
- Wear-Resistant Surfaces,
- Biomedical Implants,
- Bearings,
- Deposition Process Optimization,
- Protective Coatings,
- Scale-Up,
- Polishing,
- Oriented Growth,
- Heat Management,
- Low-Temperature Growth,
- Electronic Packaging,
- Fabrication Process,
- Active Electronics,

- Process Monitoring,
- Optoelectronics,
- Performance Evaluation,
- Windows, Lenses, Domes,
- Economic Analyses, and
- Acoustics.

Contributing authors must submit five copies of an abstract (up to one page long) by **January 30, 1995**. Manuscripts will be published in the Conference Proceedings, to be distributed at the conference.

Demonstrations of products, processing equipment, and prototype specimens that show progress in the development of applications are encouraged, but sales promotions are not permitted at NIST.

For further information, please contact the conference chairman: Albert Feldman, Chairman ADC '95, National Institute of Standards and Technology, A329 Materials Building, Gaithersburg, MD 20899; fax: (301) 990-8729; e-mail: feldman@micf.nist.gov. □

## EDUCATION EXCHANGE

### “The Material World”: Making the World of Science Materialize for Kids

Three years ago, the University of Rochester formed its chapter of the Materials Research Society (URCMRS). Since then, our membership has expanded to more than 60 members (graduate students, postdocs, and faculty) spanning eight different departments within the University: Chemical Engineering, Chemistry, the Science and Technology Center, Electrical Engineering, Laboratory for Laser Energetics, Mechanical Engineering, Institute of Optics, and Physics. Our activities include conducting an annual symposium, sponsoring invited speakers, distributing newsletters and abstracts, hosting happy hours, holding general meetings, and conducting grassroots education activities for local students and educators. This year we have made great strides in the area of grassroots education and would like to share some of our experiences.

#### A Science Day for Scouts

On March 12, URCMRS hosted 50 minority members of the Girl Scouts of

America for a science day entitled “The Material World.” The event—sponsored through a collaboration between URCMRS, the Society of Hispanic Professional Engineers, and the Girl Scouts of Genesee Valley—was designed for children in the sixth through eighth grades. We treated our guests to a series of science demonstrations, a forum on women in science, and a hands-on experiment.

I began the program by welcoming the girl scouts to the university campus, handing out a program of the day's events, and explaining some of the aspects of materials research. I pointed to the major issues in choosing materials for a given task, or to creating new materials, then reviewed these issues in the context of the upcoming demonstrations, to give the young visitors a more critical perspective and increase the depth of their experience.

Four half-hour-long demonstrations, conducted in succession, facilitated the presentation of different elements of

materials research and science. To introduce the properties of polymers, Anita Alanko (graduate student, Chemical Engineering) and Robin Henderson (postdoc, Chemistry) explained the synthesis and properties of nylon and slime. This was the scouts' favorite demonstration, probably because Robin handed out chewing gum and explained that it was also a polymer. The girls got really excited about touching the slime, and all of them wanted to take it home. Although they were unfamiliar with the term “polymer,” they all recognized everyday materials made of polymers, such as styrofoam cups, pantyhose, and spandex.

Eileen Korenic and Marie Inman (graduate students, Optics) then introduced the concepts of optics, materials, and light. They discussed such issues as polarization and color. This demonstration was perhaps too advanced. The scouts enjoyed seeing rainbows on the ceiling, but I think the concept of polarization was too difficult. Next, the scouts observed Paul Rodney and Leon Waxer