Cornell University Chapter Participates in Engineering Day for Children

The Cornell University Chapter of the Materials Research Society recently participated in an educational program for children at Pyramid Mall to encourage their interest and excitement about engineering.

The University Chapter's demonstrations included a superconductor, shape-memory metals, and a ceramic hammer. Piezoelectric polymer film in a balloon acted as a speaker playing music to surprised and delighted mall shoppers. A compact disk lay under a microscope while a nearby disassembled CD player showed an application of materials engineering in everyday life. A display of silicon-based devices illustrated the steps in producing a completed device from silicon wafer.

Using memory circuits from the 1960s, 1970s, and 1980s, Cornell University Chapter members depicted the dramatic increase in memory density and decrease in cost of these devices. University Chapter members also explained how a Kevlar-wrapped metal sphere provided a light-weight high-pressure vessel for fuel storage in space. Several examples of composites, a model showing the length of a polymer chain, and demonstrations of glass transitions of polymers completed the display. Other campus engineering groups also showed applications of chemical, electrical, mechanical, industrial, and agricultural engineering.

MRS University Chapter member Hope Ishii helps youngsters get a closer view of the CDs they see every day.

University Chapter adviser Mike Thompson said that he was impressed with the students' work and that the group plans to participate in the educational program again next year.

For information about the Cornell University Chapter and its activities contact: Paul Braun, MRS University Chapter President, Cornell University, Department of Materials Science and Engineering, Bard Hall, Ithaca, NY 14853; phone (607) 255-6684; fax (607) 255-2365.

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Washington/Baltimore Section Hosts Meeting

The Washington/Baltimore Section of the Materials Research Society hosted a meeting June 10, 1993, at the Catholic University of America. The agenda featured a guest speaker, a poster session, and a social hour.

Steve Freiman of NIST's Ceramic Division in Gaithersburg, Maryland, spoke about "Test Selections for Brittle Materials." He used crack-growth-resistance parameters, strength, and susceptibility to moisture-enhanced crack extension to show that a chosen test procedure should be based on the end use of the data. For example, the data needed to understand the mechanism of moisture-enhanced crack growth are much more detailed and require more complex testing than those needed for quality assurance. One must, said Freiman, weigh the economic, technical, and psychological benefits to be gained in collecting certain data against the cost in time and materials needed to perform the tests.

Poster presentations covered the following topics:

Microstructure and Fluoride Concentration in Fernald Waste Glasses, by E. Wang et al., Catholic University.

Modeling Viscosity and dc Conductivity for Fernald Mixed Waste Glasses, by Y. Guo, Catholic University.

Trapping and Luminescence Mechanism Studies in SrS:Eu^{2+},SM^{3+} Thin Films at Various Temperatures, by Z. Hua et al., University of Maryland and Quantex Corporation.

Microsctructure of Laser-Deposited Superconducting $Nd_{1.85}Ce_{0.15}CuO_{4-y}$, by D.P. Beesabathina et al., University of Maryland.

For information about the Washington/Baltimore Section and its activities, contact: Hamid Hojaji, MRS Section President, Catholic University, 400 Hannan Hall, Washington, DC 20064. Phone (202) 319-6705; fax (202) 319-4469.

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