Walter L. Brown, head of the Radiation Physics Department, AT&T Bell Laboratories, was the 1984 Von Hippel Award recipient. He has demonstrated an extensive record of achievement in the field of semiconductor science and technology and leadership in university-industry collaboration. His early experiments with Brattain, Schockley, and Fletcher laid the foundation of understanding of surface states and inversion layers in silicon and germanium and made possible the developments of MOSFET technology. His interest in semiconductors led to the design of solid state radiation detectors that were flown in the first Telstar experimental communications satellite and were used to determine the nature of the particles that are trapped in the Van Allen belts.

His interest in particle detectors and high energy particle damage led to his involvement in the organization of the Rutgers-Bell Labs Accelerator Program which has served as a model for industry-university collaboration. Brown nurtured an early research program on particle channeling that proved to be an important adjunct to the development of ion implantation doping of semiconductors. His research in sputtering similarly led to significant contributions to application in chemical analysis.

Brown received his PhD from Harvard University, and began his career with Bell Laboratories in 1950.

John W. Cahn, the 1985 Von Hippel recipient, is a senior fellow at the Center of Materials Science, National Bureau of Standards. He joined the NBS staff in 1978 after 14 years as professor of materials science at Massachusetts Institute of Technology. Cahn's contributions have affected every area of materials science and have strongly influenced statistical physics as well. His initial interest in interfaces and their role in phase transformations began in 1954, when he joined the Hollomon Metallurgy and Ceramics group of the G.E. Research Laboratory as a member of the Chemical Metallurgy section headed by David Turnbull. Cahn derived the conditions under which solid-state transformation kinetics should be dominated by nucleation at the boundaries, edges, or corners of grains. He also developed the quantitative theory for preferential nucleation of incoherent phases on dislocations. The Cahn-Hilliard equation for the free energy of non-uniform systems is often the starting point of statistical physical treatments of a variety of interfacial phenomena, and Cahn's theory for the coherent spinodal has illuminated the understanding of the dependence of magnetic and mechanical properties on interphase morphology and has provided valuable guidance for alloy design. Cahn's most recent contribution has been his involvement, with D. Schectman and others, in the discovery of quasicrystalline phases.

MRS

Graduate Student Awards Announced for 1986 MRS Fall Meeting

The Materials Research Society Awards Committee has selected 14 recipients of Graduate Student Awards to be presented at the 1986 Fall Meeting in Boston. The students receive a commemorative plaque, a waived meeting registration fee, and a cash prize. They will be recognized at the Awards Ceremony on Wednesday, December 3, 1986 at 6:00 p.m. in the Grand Ballroom of the Boston Marriott/Copley Place Hotel.

Students were judged on the originality, cogency, quality, and impact of their work in a field related to one of the symposia at the 1986 Fall Meeting. The students were also judged on the independence they displayed in their research and on their promise for future accomplishments in materials research.

In selecting recipients, the Awards Committee relies on the application material submitted by the student, on the evaluation of that material by the relevant symposium chairs, and on a supporting letter from the student's faculty advisor. Many more deserving candidates applied this year than could receive the limited number of awards available. According to Awards Committee Chairman, Elton N. Kaufmann (Lawrence Livermore National Laboratory), "Congratulations are really due to all the applicants—their work is quite impressive. It would be nice if we could find awards for all of these excellent students."

The following students will receive awards:

Lisa Parechanian Allen, Materials Science and Engineering, University of California at Berkeley, "Surface Faceting of (110) GaAs: Analysis and Elimination" (Symposium I)

Harry A. Atwater, Electrical Engineering and Computer Science, Massachusetts Institute of Technology, "Ion Beam Enhanced Grain Growth in Thin Films" (Symposium A)

Robert N. Bicknell, Physics, North Carolina State University, "Controlled Substitutional Doping of CdTe Films" (Symposia Q and R)

Yang-Tse Cheng, Applied Physics, California Institute of Technology, "Studies of a Phenomenological Model of Ion Mixing in Metals" (Symposium A)

Charles Michael Greenlief, Chemistry, University of Texas at Austin, "Potassium Adsorption on Pt(111) and Its Effect on CO Chemisorption" (Symposium J)

Harald Heinecke, Electrical Engineering, Technical University Aachen, "Plasma Stimulated Growth of InP from TEI and PH_3" (Symposium B)

Karen Holloway, Materials Science and Engineering, Stanford University, "Interfacial Reactions in Titanium-Silicon Multilayers" (Symposium D)

Andre Yan-Jyh Lee, Materials Science, University of Illinois at Urbana-Champaign, "Matrix Effect on the Relaxation of Uniaxially Strained Linear Polymer Melts" (Symposium F)

Matthew R. Libera, Materials Science and Engineering, Massachusetts Institute of Technology, "Metal Nucleation in Atomized Droplets Catalyzed by Spherically-Shaped Substrate Particles" (Symposium G)

Kevin P. McAlea, Chemical Engineering, University of Delaware, "Small Angle Neutron Scattering Studies of Polyethylene Terephthalate" (Symposium F)

Paul F. Miceli, Physics, University of Illinois at Urbana-Champaign, "Critical Behavior of Hydrogen in Nb/Ta Superlattices" (Symposium T)

Scott M. Schlorholtz, Civil Engineering, Iowa State University, "Variability and Trends in Iowa Fly Ashes" (Symposium N)

David William Susnitzky, Materials Science and Engineering, Cornell University, "Surface Morphology of Single Crystal Ceramics" (Symposium I)

Gang Xiao, Physics and Astronomy, The Johns Hopkins University, "Cu/Ni Superlattices with [100] Texture" (Symposium D)
"Temperature Dependence of the Spontaneous Magnetization of the Fe Particles in Fe-SiO_2 Granular Solids" (Symposium V)

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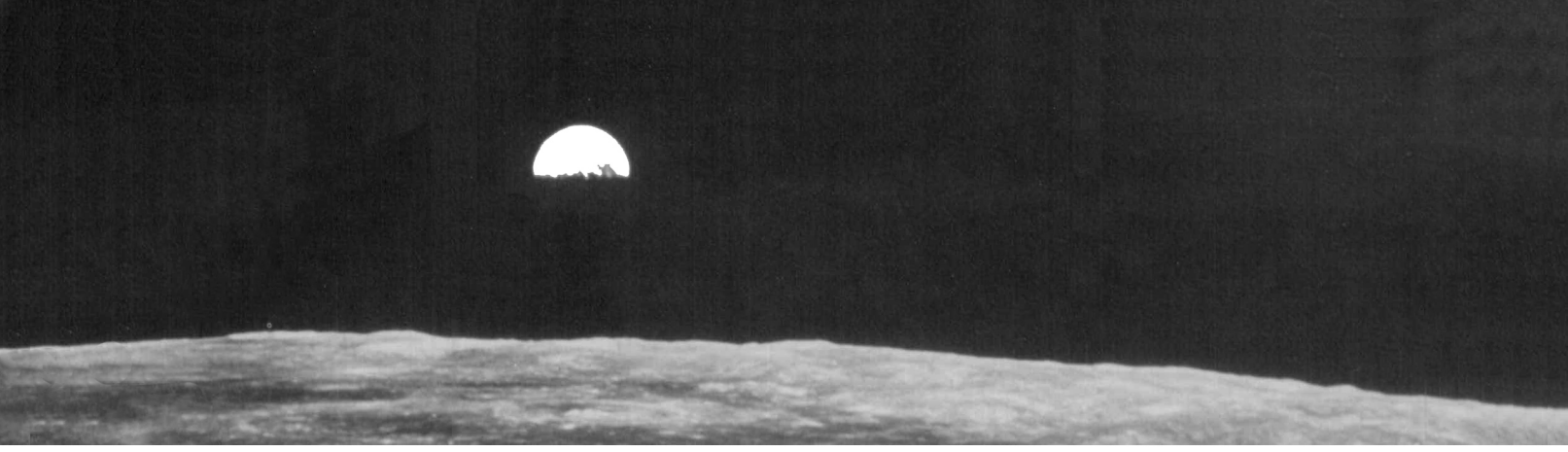

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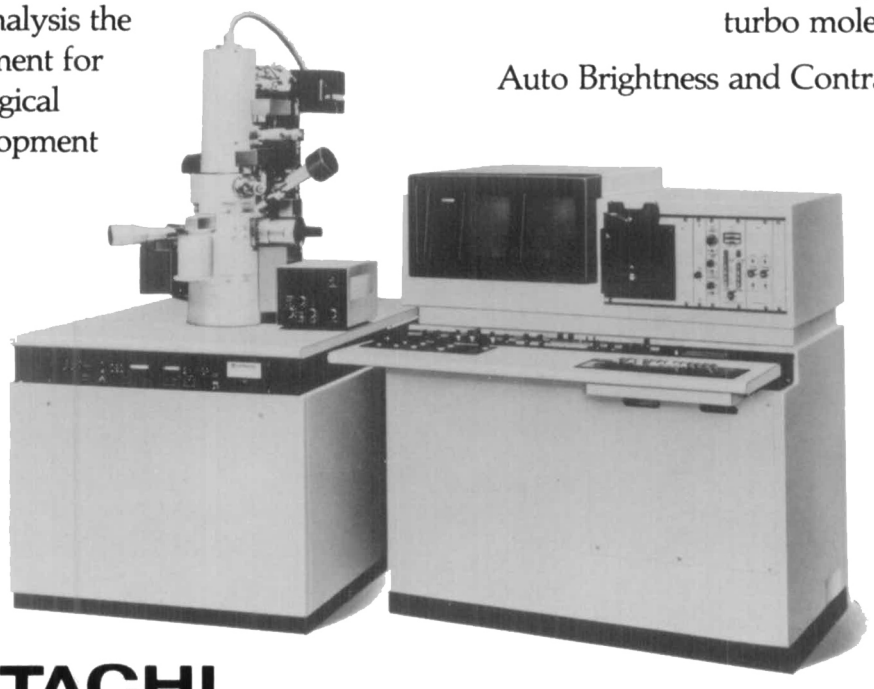

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