MARCH MEETING OF APS TO BE HELD IN SEATTLE

The American Physical Society will hold its 1993 March meeting in Seattle from Monday, 22 March, to Friday, 26 March. The meeting will be located in the Washington State Convention and Trade Center.

Once again the March meeting should provide an extensive review of the current state of condensed matter and solid-state physics as well as related fields. Over 550 invited speakers will present talks during the meeting. Among the APS divisions represented will be biological physics, chemical physics, condensed matter physics, fluid dynamics, high polymer physics and materials physics.

The meeting includes several sessions of general interest. A session on COBE and the cosmic background radiation will be held Monday evening. On Tuesday evening a session on advances in "irreproducible science" will provide a humorous look at the sort of research covered in the *Journal of Irreproducible Results*. Research at minority institutions will be discussed Monday afternoon, and a panel discussion on patterns of success for women in physics will be held Tuesday afternoon. Other nontechnical session topics include post-cold-war science, to be discussed Wednesday morning; the future of science funding on Wednesday evening; a historical look at radar and its role during World War II on Thursday morning; and environmental issues on both Wednesday morning and Thursday afternoon.

Prizes and awards

APS will present 11 prizes and awards at the March meeting. On Tuesday afternoon beginning at 2:30 pm an APS prize symposium will take place, during which several of the winners will deliver talks on their work. Other winners are scheduled to give talks at various times during the week.

The 1993 Oliver E. Buckley Prize winner is F. Duncan M. Haldane of Princeton University, who is cited for "his contribution to the theory of low-dimensional quantum systems." In 1983 Haldane realized that antiferromagnetic Heisenberg chains of magnetic atoms with integral spin should have an energy gap in the excitation spectrum—now called the Haldane gap—and a finite correlation length, neither of which is the case for half-integer spin systems. Though initially controversial, these predictions were subsequently confirmed in numerical simulations and experiments on quasi-one-dimensional spin systems. He proposed the effective "Luttinger liquid" description of one-dimensional Fermi fluids. He has also determined the hierarchy of states and other properties of the fractional quantum Hall effect.

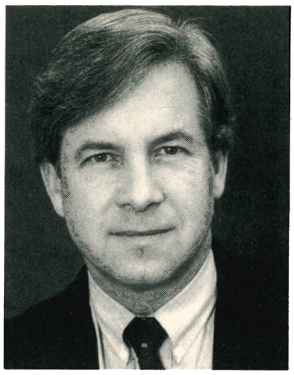
Haldane received a PhD in physics from Cambridge University in 1978. After spending the next three years at the Institut Laue-Langevin in Grenoble, France, he went to the University of Southern California. From 1985 to 1987 he worked as a member of the technical staff at AT&T Bell Laboratories. He became a physics professor at the University of California, San Diego, in 1987. Since 1990 he has been a physics professor at Princeton.

Joseph E. Demuth of IBM will receive the 1993 Davisson-Germer Prize for "his fundamental contributions to understanding the structural and electronic properties of surfaces and adsorbates." He has made innovative contributions in the development and application of several important surface science methods, including low-energy electron diffraction, photoemission, high-resolution electron energy loss spectroscopy and scanning tunneling microscopy. His work has lead to significant advances in determining and understanding the structure and nature of adsorbates, the nature of adsorbate excited states, the conductivity of monolayer films, and atomic imaging of surfaces and surface states.

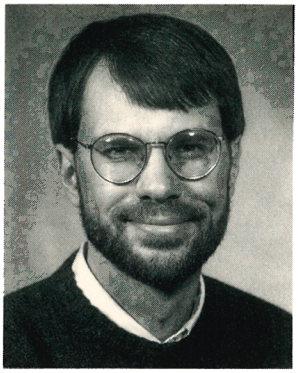
Demuth earned his PhD in applied physics from Cornell University in 1972. He has since worked at the IBM Thomas J. Watson Research Center, where he is now the senior manager of the physics of novel materials department.

APS will bestow the 1993 Dillon Medal on Mark D. Ediger, an associate professor in the chemistry department of the University of Wisconsin, Madison. He is recognized for "his insightful experimental and computational investigations of local polymer dynamics and, in particular, for his illumination of the connection be-

F. Duncan M. Haldane



Joseph E. Demuth

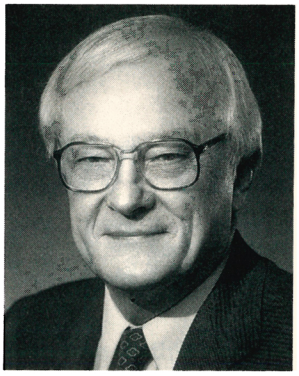


Mark D. Ediger

Benjamin Chu

Gordon C. Osbourn

J. David Litster



Roland W. Schmitt

Ahmed H. Zewail

tween solvent and polymer relaxations in solution." Ediger used time-resolved optical spectroscopy to study local polymer chain dynamics. He later combined this technique with computer simulations of chain motion and data from nmr experiments to analyze backbone conformational transitions in isolated polymer chains as well as the coupling between chain motions and solvent motions.

Ediger received a PhD in physical chemistry from Stanford University in 1984 and then joined the faculty of the University of Wisconsin.

The 1993 High Polymer Physics Prize will go to Benjamin Chu of the State University of New York, Stony Brook. The prize citation notes "his matchless experimental studies of static and dynamic light scattering in polymer solutions and critical mixtures." Chu helped develop the application of light-scattering techniques to the study of critical phenomena in liquid mixtures and polymer solutions. His light-scattering characterization of Teflon in solution led to a means for determining the macromolecular parameters of advanced high-temperature polymeric materials. His recent work includes x-ray measurements at the micron level of long-range inhomogeneities in ionomers.

Chu earned a PhD in physical chemistry from Cornell in 1959 and spent the next three years as a research associate there with Peter J. W. Debye. He joined the chemistry faculty of the University of Kansas in 1965 and went to SUNY in 1968, where he is a Distinguished Professor of both chemistry and materials science and engineering.

Gordon C. Osbourn of Sandia National Labs has been chosen to receive the 1993 International Prize for New Materials. The prize committee cited him for "originating the field of strained-layer superlattice electronics and optoelectronics" as well as for "inventing important new electronic and optical devices." Osbourn made the first calculations of the electronic and optical properties of epitaxial strained-layer semiconductor superlattices. He introduced their application to quantum-well-based materials and to devices such as field-effect transistors and infrared detectors.

Osbourn earned a PhD in solid-state physics from Caltech in 1979. He subsequently went to work at Sandia, where he is now a department manager.

The 1993 Irving Langmuir Prize for interdisciplinary work in chemistry and physics will go to J. David Litster of MIT. He is cited for his "pioneering experimental and theoretical studies of the phases and phase transitions of thermotropic liquid crystals." Litster realized that ideas developed to explain magnetic critical points could be applied to the understanding of complex fluids as well. Using light scattering, he studied the establishment of nematic order in liquid crystals. With colleagues he extended this technique, using high-resolution x-ray scattering to examine smectic liquid crystals and their phase transitions. More recently his research group has used x-ray scattering and light scattering to study single-domain phases with hexatic, or bond orientational, order.

In 1965 Litster earned a PhD in physics from MIT, and he then joined the physics faculty there. He directed the MIT Center for Materials Science and Engineering from 1983 to 1988 and the Francis Bitter Magnet Laboratory from 1988 to 1992. He has been vice president and dean for research at MIT since 1991.

The 1993 George E. Pake Prize will go to the president of Rensselaer Polytechnic Institute, Roland W. Schmitt, for "fundamental studies of transport in dilute magnetic alloys that led to the discovery of the spin glass phase, and for outstanding leadership in performing and managing industrial research, improving science and technology education, and shaping US science and technology policy." Schmitt did low-tempera-

ture research on the thermodynamics of ferroelectric materials, and his experiments on the electric and magnetic behavior of dilute alloys in copper led to studies of what are now called spin glass systems. At General Electric Schmitt established both applied and basic research programs. He has helped influence the direction of science and technology policy through his service on the National Science Board.

After earning a physics PhD from Rice University in 1951, Schmitt became a researcher at the GE Research and Development Center. He became vice president of corporate R&D at GE in 1978 and senior vice president of science and technology in 1987. He became president of RPI in 1988. From 1984 to 1988 he was chairman of the NSB, of which he is still a member. Schmitt is also slated to become chair of the governing board of the American Institute of Physics in March.

The 1993 Earle K. Plyler Prize will go to Ahmed H. Zewail of Caltech for "pioneering and seminal contributions in the area of femtosecond spectroscopy." Zewail developed femtochemistry with numerous applications in simple and complex molecular systems. He pioneered the use of ultrafast lasers and molecular beams to observe real-time dynamics of chemical reactions, such as quantum state-to-state rates, energy redistribution and femtosecond dynamics of transition states.

Zewail earned a PhD in chemical physics from the University of Pennsylvania in 1974. After two years as a research fellow at the University of California, Berkeley, he went to Caltech, where he is the Linus Pauling Professor of Chemical Physics.

Simon C. Moss of the University of Houston has been chosen to receive the 1993 David Adler Lectureship Award for his "outstanding contributions to the understanding of the structure and transformation behavior of new materials." Moss has used x-ray and neutron scattering techniques to study order–disorder phenomena and structural transformations of materials, including metallic alloys, amorphous metals and semiconductors, quasicrystals, oxide superconductors and fullerenes. He is known for his lecturing abilities.

In 1962 Moss earned an ScD in metallurgy and materials science from MIT with a thesis in the physics department under Bertram E. Warren. He then joined the materials science faculty at MIT, after which he worked for Energy Conversion Devices Inc, in Troy, Michigan, as director of the science department. In 1972 he went to the University of Houston, where he holds the M. D. Anderson Chair in Physics.

Steven Feller of Coe College in Cedar Rapids, Iowa, will receive the 1993 APS Award to a Faculty Member for Research in an Undergraduate Institution. He is cited for "his painstaking investigations and elucidation of the structure of borosilicate glasses, and for his strong commitment to the education of undergraduate students and vigorous encouragement of their substantial participation in his research program." Feller has studied the relationship between the properties and atomic structure of glass. In his research Feller involves students at Coe, who work with him in collaboration with groups at the National Hellenic Research Foundation in Athens, Greece, Iowa State University and Brown University.

In 1979 Feller earned his PhD in physics from Brown. He then joined the faculty at Coe, where he is a physics professor and the chair of the department.

Ismael Escobar will get the 1993 John Wheatley Award for "his pioneering work in founding, establishing, building and directing the extremely successful Laboratorio de Fisica Comica de Chacaltaya, in Bolivia." The LFCC is a high-altitude facility for the study of high-energy cosmic ray phenomena. Escobar drew plans and supervised construction of the facility, including raising government funds and acquiring scientific equipment and instruments in collaboration with MIT.

After doing graduate study in Spain and other countries, Escobar became a postdoctoral fellow in physics at MIT in 1949–50. During the late 1940s he was a staff member at the Universidad Mayor de San Andres in La Paz, Bolivia. He directed the LFCC at the university from 1952, when the lab was founded, until 1963, when he joined the Inter-American Development Bank in Washington, DC. In 1968 he became chief of the bank's education, science and technology section. He retired from the bank in 1983.

Meeting services

During the meeting, the American Institute of Physics will run the APS show, which will feature research instrumentation and publications from over 120 exhibitors. The exhibit, also located in the convention center, will be open from noon to 6 pm Tuesday, 10 am to 5 pm Wednesday and 10 am to 3 pm Thursday.

AIP will also run a job placement center and a press office. The placement center will be open from 9 am to 5 pm Monday through Wednesday and 9 am to noon on Thursday. The press office will be open from 8 am to 5 pm Monday through Wednesday and from 8 am to noon on Thursday. ■

Sessions with Invited Speakers

Monday, 22 March

morning

Doped La_2NiO_4. *Buttrey, Yamada, Brown*

Global phase diagram of the quantum Hall effect. *Lee, D'Iorio, Jiang, Santos, Halperin*

Growth kinetics of random systems. *Schatzel, Giglio, Bibette, Wong, Russo*

Organic solid-state devices. *Bradley, Moerner, Pai, Lytel, Horowitz*

Elementary to complex systems I. *Field, Merer, Morse, Lehmann*

Scanning probe microscopy of DNA. *Hansma, Lindsay, Allison, Beebe Jr, Vesenka*

Fullerenes—Tubes and related structures. *Ugarte*

Light emission from Si nanocrystallites I. *Sanders, Zheng*

Conducting polymers—Nonlinear optics. *Garnier*

Epitaxial oxide films and heterostructures I. *Eckstein*

Interfaces I. *Hirth, Holm*