

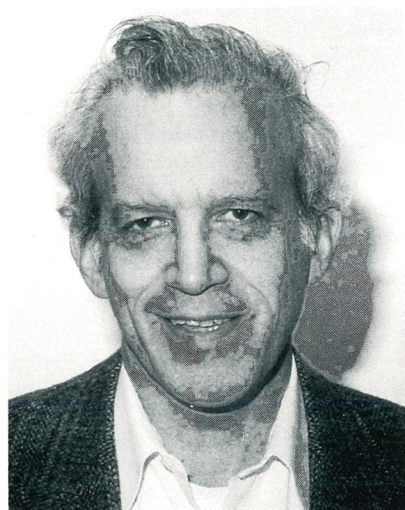
WE HEAR THAT

AAPT Awards Presented in Phoenix

During the winter meeting of the American Association of Physics Teachers, held in Phoenix, Arizona, in January, seven individuals were honored for their contributions to physics education and to the association.

The Oersted Medal, AAPT's highest honor, was presented to **Daniel Kleppner**, Lester Wolfe Professor of Physics at MIT. Kleppner was recognized for "his contributions to physics and to the teaching of physics, for the ways in which he challenges his students, at both graduate and undergraduate levels [and] for his highly regarded efforts to entice the larger community to form a connection with physics."

H. Eugene Stanley, University Professor at Boston University, was this year's recipient of the Richtmyer Memorial Lecture Award. The award



DANIEL KLEPPNER

citation praised Stanley's work in statistical mechanics and in education, noting that he "has left a mark on physics and the teaching of physics with not only his graduate students, but with his many efforts to engage students in high schools and universities in interdisciplinary research."

AAPT presented distinguished service citations to the following five people: **Betty P. Preece** (Melbourne High School in Florida); **J. David Gavenda** (University of Texas at Austin); **Clifton Bob Clark** (University of North Carolina at Greensboro); **David R. Sokoloff** (University of Oregon); and **Beverly A. P. Taylor** (Miami University—Hamilton in Ohio).

APS Honors Two at Vancouver Meeting

At last month's Particle Accelerator Conference in Vancouver, British Columbia, two American Physical Society awards were presented.

The Robert R. Wilson Prize was given to **Andrew M. Sessler**, a distinguished senior staff scientist in the accelerator fusion research division at Lawrence Berkeley National Laboratory. Sessler was cited for "a broad range of theoretical and conceptual advances in particle beam dynamics, leading to important accelerator performance improvements; for contributions in the areas of synchrotron rings, including negative mass instability and resistive wall instability, and free electron lasers; for the two-beam accelerator concept; for helping shape the very language of beam physics; and for inspiring and guiding several generations of accelerator scientists and serving as a statesman of science."

Linda Spentzouris garnered the Dissertation in Beam Physics Award for "her pioneering measurements of nonlinear coherent phenomena in high-energy hadron beams, building upon the rich theoretical development in plasma physics over the last several decades. Her findings include the identification of three-wave interactions in beams, and a related phenomenon, echoes, which provides a means to detect extremely weak diffusive processes at work in the beam. Her work serves as a starting point for the understanding of saturation and turbulent states in high-energy synchrotrons." Spentzouris received her PhD from Northwestern University in 1996 and is now a research associate at Fermilab.

OSA Prizes Recognize Optics Contributions

The Optical Society of America has announced the recipients of its awards for 1997. (OSA's Max Born Award and Charles Hard Townes Award were covered in the May issue of PHYSICS TODAY; see page 41).

The Frederic Ives Medal/Quinn Endowment, OSA's highest honor, goes this year to **Tingye Li** for "his leadership and contributions to lightwave science and technology, ranging from fundamental studies of modes in laser

resonators to remarkable implementations of advanced optical communications systems." Li is a division manager in AT&T's communications infrastructure research laboratory in Holmdel, New Jersey.

The recipient of the Allen Prize, given for contributions to atmospheric remote sensing while a graduate student, is **Richard L. Collins**, an assistant research professor at the Univer-



TINGYE LI

sity of Alaska's Geophysical Institute. Collins is being cited for "making the first lidar observations of mesospheric sodium, stratospheric temperatures and the seasonal evolution of polar stratospheric clouds on the South Pole and for analyzing the impact of atmospheric gravity waves on the small-scale structure of the Antarctic stratosphere and mesosphere using these data."

H. Angus Macleod is the winner of the Esther Hoffman Beller Medal for "his outstanding record of contributions to the education of the optics community about the properties, design, manufacture and measurement of thin film optical coatings and filters. By emphasis on logical understanding and reasoning, and through the use of new methods in computer-aided design, he has brought clarity and understanding of the field to a generation of researchers and engineers." Macleod is president of Thin Film Center Inc in Tucson, Arizona, and a professor emeritus of optical sciences at the University of Arizona.

William T. Plummer has garnered the Joseph Fraunhofer Award/Robert M. Burley Prize for "his exceptional accomplishments in the field of optical engineering, for making state-of-the-

art optical technology affordable, bringing extremely sophisticated optics into the consumer marketplace, and for his expertise and willingness to participate in all aspects of engineering from technology and product development to manufacturing." Plummer is an engineering fellow and director of optical engineering at Polaroid Corp.

The Ellis R. Lippincott Award goes to **Robin M. Hochstrasser**, the Donner Professor of Science at the University of Pennsylvania. OSA is citing Hochstrasser for "his seminal contributions to the development of modern ultrafast infrared and visible laser techniques and their application to the study of condensed phase dynamics, including molecular energy transfer, structural change and chemical reactions."

The Edwin H. Land Medal goes to **Efi Arazi**, who is being recognized for "new and original computer-controlled data processing procedures and equipment in the fields of image motion stabilization, textile design and manufacture and in the field of prepress operations of the printing industry." Arazi is the chief executive officer of Imedia Corp, a developer of digital television technology in San Francisco.

This year's recipient of the Adolph Lomb Medal, given for contributions to optics before the age of 30, is **Ekmel Ozbay**, who is being cited by OSA for "the development and application of innovative fabrication techniques for photonic bandgap structures, leading to the creation of the smallest photonic crystals with electromagnetic bandgaps at the highest achieved frequency bands." Ozbay is an assistant professor of physics at Iowa State University.

Jumpei Tsujiuchi is the C. E. K. Mees Medal recipient for "his numerous outstanding and significant contributions to optics, mainly in optical metrology, holography and optical information processing and for his continuous and timeless pursuit of international cooperation." Tsujiuchi is an emeritus professor of applied optics at the Tokyo Institute of Technology.

The recipient of the William F. Meggers Award is **Takeshi Oka**, who is being cited for "his contributions to experimental and theoretical high resolution molecular spectroscopy. As one example, his work on H_2^+ has revolutionized the field of infrared spectroscopy of molecular ions, but the breadth and quality of his work is such that all aspects of his distinguished career spanning 40 years have had a significant impact in the fields of chemistry, physics and astrophysics." Oka is the Robert A. Millikan Distinguished Service Professor at the University of Chicago.

The David Richardson Medal is be-

ing given to **Brian Welham** for "having provided technical leadership in pioneering the development and commercialization of aspheric lens technology. His efforts have led to methods of mass manufacture and assembly of hybrid glass plastic lens systems that have made possible the growth of the projection television industry." Welham is senior vice president of optics technology at US Precision Lens in Cincinnati, Ohio.

The John Tyndall Award, given jointly by OSA and IEEE/LEOS, is going to **Ivan P. Kaminow** for "his contributions to lightwave device technology involving high-speed modulation, integrated optics, semiconductor lasers, polarization effects in fiber and WDM components, and to optical WDM networks." Kaminow spent 42 years with Bell Laboratories, most recently as head of the broadband networks research department, before retiring in January 1996.

Peter Moulton is to accept the R. W. Wood Prize for "the invention of the Ti:sapphire near-infrared laser, which enabled a new era in tunable solid-state lasers and made possible all-solid-state ultrashort sources." Moulton is senior vice president for corporate development at Schwartz Electro-Optics in Concord, Massachusetts.

60 Elected to the Ranks of the NAS

April is the time for election of new members at the National Academy of Sciences, and the academy selected 60 this year. With their addition, the active membership of the academy now stands at 1733. In addition, the academy chose 15 foreign associates to bring the total number of foreign associates to 309.

The new members include

Michael Aizenman, a professor of mathematics and physics at Princeton University.

Neil Ashcroft, associate director of the Cornell High Energy Synchrotron Source and the Horace B. White Professor of Physics at Cornell University.

Tanya M. Atwater, a professor of geological sciences at the University of California, Santa Barbara.

Neta A. Bahcall, a professor of astrophysical sciences at Princeton University.

Charles H. Bennett, an IBM fellow at IBM's T. J. Watson Research Center in Yorktown Heights, New York.

Sylvia T. Ceyer, the John C. Sheehan Professor of Chemistry at the Massachusetts Institute of Technology.

Daniel S. Chemla, director of the materials sciences division at Law-

rence Berkeley National Laboratory and a professor of physics at the University of California, Berkeley.

Robert F. Curl, the Robert C. and Olga K. Wiess Professor of Natural Science in the department of chemistry at Rice University.

Anthony J. DeMaria, chairman and chief executive officer of DeMaria Electro-Optics Systems in Bloomfield, Connecticut.

Donald M. Engelman, a professor of molecular biophysics and biochemistry at Yale University.

George Gloeckler, a professor in the department of physics and astronomy at the University of Maryland at College Park.

John C. Mather, a project scientist and cosmic background explorer at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

Peter B. Moore, a professor of chemistry, molecular biophysics and biochemistry at Yale University.

William D. Phillips, a physicist and NIST Fellow at the National Institute of Standards and Technology in Gaithersburg, Maryland.

Kenneth N. Raymond, department chair and a professor in the department of chemistry at the University of California, Berkeley.

John Schwarz, the Harold Brown Professor of Theoretical Physics at Caltech.

Dieter G. Soll, a professor of molecular biophysics and biochemistry in Yale University's School of Medicine.

John C. Tully, a professor of chemistry at Yale University.

Michael S. Turner, a professor in the department of astronomy and astrophysics and in the department of physics at the University of Chicago and Scientist II at the Fermi National Accelerator Laboratory in Batavia, Illinois.

Anthony J. Tyson, a distinguished member of the technical staff at Lucent Technologies, Bell Laboratories, in Murray Hill, New Jersey.

John M. Wallace, a professor of atmospheric sciences and director of the Joint Institute for the Study of the Atmosphere and Ocean at the University of Washington.

Edward B. Watson, department chair and professor in the department of earth and environmental sciences at Rensselaer Polytechnic Institute.

The newly elected foreign associates include

Bert R. J. Bolin, chair of the Intergovernmental Panel on Climate Change and emeritus professor of meteorology at Stockholm University.

Alain Connes, a professor at the Institut des Hautes Etudes Scientifiques and a professor at the College