

COWLEY AND MOODIE HONORED FOR WORK IN CRYSTALLOGRAPHY

The International Union of Crystallography presented the first Ewald Prize to John Maxwell Cowley (Arizona State University) and Alexander Forbes Moodie (CSIRO, Australia) last August at a meeting in Perth, Australia. The triennial prize was named for the late Paul Peter Ewald, in honor of his many contributions to crystallography and to IUCr (see *PHYSICS TODAY*, May 1986, pages 81 and 104).

Cowley and Moodie were cited for "their outstanding achievements in electron diffraction and microscopy, especially for their fundamental contributions to the theory and technique of direct imaging of crystal structures and structure defects by high-resolution electron microscopy." Beginning in the late 1950s, they developed the "multi-slice" formulation for an electron wave scattered by a crystal. One may take into account many hundreds of scattered beams using this formulation, and it has become the basis of widely used computer programs for interpreting electron micrographs and determining the structures of perfect crystals and crystals containing defects.

Cowley was educated at the University of Adelaide (Australia) where he

John M. Cowley



received a master's degree in physics in 1945. From 1945 to 1962 he was a research scientist in the chemical physics division of the Commonwealth Scientific and Industrial Research Organization in Melbourne, and from 1963 to 1970 he was a professor of physics at the University of Melbourne. He obtained a PhD from MIT in 1949, and in 1970 he was named the Galvin Professor of Phys-

ics at Arizona State. He is the author of *Diffraction Physics* (1981, North Holland).

Moodie joined CSIRO in 1948 after receiving his bachelor's degree from St. Andrews University (Scotland) in 1948. He is currently a chief research scientist in the CSIRO chemical physics division, which was incorporated into the division of materials science and technology at the end of 1986.

IN BRIEF

The Royal Society recently elected two physicists as foreign members: **Walter Gilbert**, professor of biology at Harvard University, "in recognition of his outstanding contributions to molecular biology," and **Vitaly L. Ginzburg**, head of the I. E. Tamm Department of Theoretical Physics at the P. N. Lebedev Institute of Physics of the USSR Academy of Sciences, "in recognition of his distinguished contributions to many aspects of theoretical physics."

Daniel S. Fisher, formerly a member of the technical staff at Bell Labs (Murray Hill, New Jersey), has become professor of physics at Princeton University.

Francis E. Close, senior principal scientific officer at the Rutherford Appleton Laboratory (Chilton, England), in January will become a Distinguished Scientist at the University of Tennessee in Knoxville and at Oak Ridge National Lab.

Edwin Loh, formerly a member of the research staff at Princeton University, and **Timothy Beers**, formerly a postdoc at Caltech, have joined the astronomy and astrophysics group at Michigan State University; **Joey Huston**, formerly a research associate at the University of Rochester, has joined Michigan State's high-energy group; and **Mitsuro Tohyama**, formerly a JSPS Fellow at

the University of Tokyo, has joined the nuclear physics group as an assistant professor, with a joint appointment to the National Superconducting Cyclotron Laboratory. Four individuals have joined Michigan State's condensed matter group: **Michael Dubson**, formerly a postdoc at Ohio State University; **Philip Duxbury**, formerly a postdoc at Rutgers University; **David Tomanek**, formerly a postdoc at the University of California at Berkeley; and **Roger Tobin**, currently a member of the technical staff at AT&T Bell Labs (Murray Hill, New Jersey). Tobin will remain at Bell until September 1988 when he will assume his duties at Michigan State. **B. Alex Brown** and **Gary Westfall**, who both held continuing appointment status at the cyclotron lab, have received joint appointments in the lab and as associate professors in the physics and astronomy department.

Douglas D. Osheroff, formerly head of the solid-state and low-temperature physics department at Bell Labs (Murray Hill, New Jersey), has become a professor both in physics and applied physics at Stanford University.

James L. Kinsey, formerly professor of chemistry at MIT, has joined Rice University as dean of its Weiss School of Natural Sciences and D. R. Bullard-Welch Foundation Professor of

Science in its chemistry department. He will begin his five-year term as dean in January 1988, when the current dean, **G. King Walters**, returns to his duties as professor of physics.

OBITUARIES

Howard Laster

Howard Laster died at his home in Iowa City on 31 December 1986. At the time, he was professor of physics at the University of Iowa. He had formerly been dean of the college of liberal arts.

Laster was born in Jersey City in 1930, and obtained his undergraduate degree at Harvard. He received his doctorate at Cornell University for work in theoretical cosmic ray physics and astrophysics. Upon leaving Cornell in 1956, he joined the faculty at Maryland, where he became chairman of the physics and astronomy department in 1965, following a year as director of its space sciences program. During the decade of his tenure as chairman, the department experienced a period of enormous growth, both in the number of faculty members and in the number of federally supported research efforts. Among Laster's achievements were the considerable expansion of the nuclear theory group and the development of the plasma physics program. Outside of the university, his reasonable and rational approaches to controversial subjects were evident during his membership on the Governor of Maryland's Science Advisory Board and on the Board of Directors of the Atlantic Research Corporation. After stepping down as chairman of the department in 1975, Laster served in the International Programs Directorate of the National Science Foundation for one year before resuming academic responsibilities at the Maryland.

In 1977 Laster joined the University of Iowa as dean of the college of liberal arts. As dean he found ways to encourage the creation and implementation of innovative, interdisciplinary programs despite financial stringencies. When he stepped down as dean in 1984, due to serious illness, he began teaching large introductory courses in physics. His dedication and abilities as a teacher flowered during these remarkably active few years.

Statements regarding Howard Laster's successes in academic life do little to express those qualities that

William Rarita was honored on his 80th birthday at Lawrence Berkeley Lab last April. Rarita taught physics at Brooklyn College for 32 years before becoming a visiting scientist in the theory group at LBL in 1962.



Howard Laster

meant most to his friends. His intellectual interests extended well beyond scientific boundaries and included a special fondness and appreciation of early music. He was extraordinarily even-tempered and constantly of good humor and relaxed manner. It might be said that he was the ultimate good Samaritan, his instinctive actions directed toward helping the stranger, with personal considerations always pushed aside. His warm, humane qualities and his genuine professional abilities will be terribly missed by all of us who took pleasure in his company.

ANGELO BARDASIS

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Kalman Kalikstein

Kalman Kalikstein, professor of physics at Hunter College of the City University of New York, died 6 May 1987 after a year-long battle with lung cancer.

In 1943, when he was 14, he and his younger brother were taken by the Nazis from Strzemieszyce, Poland, and imprisoned in a series of concentration camps; the rest of his family

perished during the war. After the war, Kalman completed his high-school education at a refugee center near Versailles, France, where his roommate and classmate was Elie Wiesel. After coming to New York in 1947, Kalikstein entered Brooklyn College and received his BS in 1952. From 1953 to 1964 he worked at the Material Laboratory of the New York Naval Shipyard, first as a project engineer and electronic scientist, then as a research physicist. Here his work was mainly concerned with the development and testing of klystrons, magnetrons and traveling wave tubes.

While working for the Navy Kalikstein began his doctoral studies at New York University and completed his degree (under Larry Spruch) in 1964. Based largely on the recently developed variational bound on the scattering length, his thesis was an attempt to interpret the low-energy nucleon-deuteron scattering data. Variational bounds and principles remained of central interest in his research career. In 1964, he and Spruch published a paper in which they rewrote Maxwell's equations as a Schrödinger equation; they could then readily apply the variational bounds and principles developed for quantum mechanical scattering problems to many problems of scattering by obstacles in waveguides. While on sabbatical at NYU in 1983, he collaborated on papers on variational bounds and principles of functions that characterize equalization processes, such as the temperature $T(r, t)$. His publications included many applications of the above results. Although his background was in theoretical physics, he thoroughly enjoyed experimental work, and at Hunter College he collaborated on studies of photoconductivity and luminescence in ZnCdS materials.

In his 22 years at Hunter College, Kalikstein exhibited an unusual degree of consideration for both his colleagues and students. His integrity, humor, modesty and openness won the respect not only of the physics faculty, but of the many members of the Hunter community who knew him. He was extraordinarily gentle. His students continually rated him among the best in the science division, and their admiration and respect for him was evident, especially in his final year.

Kalikstein's outstanding characteristics may be traced not only to the horrors he suffered in his teens, but also to the intensity with which he immersed himself in Judaic learning. He was extremely knowledgeable on