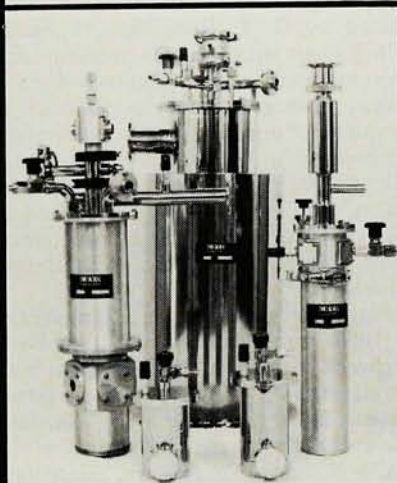


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1958 demonstrating that several different formulations of the random-phase approximation for an electron gas are, in fact, equivalent and giving the definitive calculation of the correlation energy of the electron gas. Nozières has written two books: *N-Body Problem: The General Problem of a Gas of Fermions* (1962), a field-theoretic description of Fermi interactions; and *Theory of Quantum Liquids* (1965), with Pines. Nozières has worked on the explication and justification of the Landau-Fermi liquid theory; in addition, he has studied the interaction of local perturbing potentials with the electron gas. A key contribution was the explanation, partly with Cyrano De Dominicis (Paris), of what are called edge singularities, observed in the x-ray spectra of metals. This led him to important work on the Kondo problem of magnetic spins interacting with the Fermi gas, which he formulated in a Fermi liquid version. He has recently studied many-body interactions of excitonic liquid states (droplets) in semiconductors. He and Bernard Castaing have proposed a quick-melt method for producing spin-polarized helium.

Marcus received his PhD in physical chemistry in 1946 from McGill University in Montreal, Canada. He held postdoctoral positions with the National Research Council of Canada in Ottawa (1946-49) and with the University of North Carolina (1949-51). He taught at the Polytechnic Institute of Brooklyn 1951-64, becoming a full professor in 1958. In the 1950s, Marcus worked on what is now called the RRKM theory of unimolecular reactions, which unifies an earlier description of the breakup and rearrangement of molecules put forth by Oscar Rice, H. C. Ramsperger and Louis Kassel in the 1920s. He published his results, first in a paper with Rice (1951) and later in a series of his own papers (1952). From 1956-65, Marcus studied electron-transfer reactions in solution, investigating how the reactants' bonding links and angles, as well as the solvent itself, change before and after a reaction. He extended this work to electron transfer at electrodes in 1957, and to proton transfer in 1968. Marcus joined the faculty of the University of Illinois in 1962. In parallel with William H. Miller, he developed a semiclassical theory of molecular collisions. Among other contributions, Marcus introduced natural collision coordinates for reactions and also showed how the canonical invariants of non-separable anharmonic vibrational systems could be obtained from suitable classical trajectory calculations. He used the latter to treat bound states semiclassically. In 1978 he became the Arthur Amos Noyes Professor of Chemistry at Caltech.

## AAPT honors Leonard Jossem and James Gerhart

At its spring meeting, the American Association of Physics Teachers named E. Leonard Jossem (Ohio State University) as the second recipient of its Melba Newell Phillips Award, which recognizes creative leadership and dedicated service within the Association. James B. Gerhart (University of Washington) was named the 1985 Robert A. Millikan Lecturer.

Jossem received his PhD in physics in 1950 from Cornell University. He held appointments at Cornell (1940-42) and at Los Alamos National Laboratory (1945-46). In 1946, he returned to Cornell, where he remained until 1956. He then joined the faculty of Ohio State University, becoming a full professor in 1964 and serving as chairman of the physics department 1967-80. Jossem served as president of AAPT for 1973-74. In addition, he has served on the AAPT committees on professional concerns (1976) and on national policy (1984), and he is currently the chairman of the AAPT Committee on International Education. Jossem has participated in numerous national and international committees and conferences on education: the Commission on College Physics (1963, 1964 and 1966), the US National Advisory Council on Education Professions Development (1967), the NAS-NRC Physics Survey Panel on Education (1970), the AIP Advisory Committee on Education and Manpower (1976) and the International Committee on Physics Education (1981). In 1981 Jossem served as US liaison for the International Union of Pure and Applied Physics.

Gerhart was cited for "his long and devoted service to the teaching of physics and dedication to the affairs of physics teachers everywhere." Gerhart received his PhD from Princeton University in 1954. In 1956 he joined the faculty of the University of Washington, where he has remained since, becoming a full professor in 1965. Gerhart began his service in AAPT as chairman of the Washington State Section's committee on the crisis in science education in 1957. He was elected section representative in 1964 and, in 1971, was elected secretary of AAPT; Gerhart was president of AAPT for 1979. In addition, he has served on every AAPT constitutional committee, as well as serving for eight years on both the Awards and Publications Committees. Gerhart was a member of the AIP Governing Board for 1973-76 and for 1977-81. He has served for 18 years as director, and for three years as chairman, of the Pacific Northwest Association for College Physics. He presented his lecture, "Handling

numbers," at the 1985 AAPT summer meeting held in June at Northern Arizona University in Flagstaff.

## National Academy of Sciences names 60 new members

The National Academy of Sciences elected 60 new members in April in recognition of their distinguished and continuing achievements in original research, thereby bringing the total number of American members to 1453. Among these are the following, whose work is in physics or related fields: W. David Arnett, professor of astrophysics, University of Chicago; Robert J. Aumann, professor of mathematics, Hebrew University of Jerusalem; Richard Bersohn, professor of chemistry, Columbia University; B. Clark Burchfiel, professor of geology, MIT; Alfred Yi Cho, head of the electronics and photonics materials research department of Bell Labs; Stephen A. Cook, professor of computer science, University of Toronto; Mildred S. Dresselhaus, professor at the Center for Materials Science and Engineering and in the electrical engineering department, MIT; Eugene B. Dynkin, professor of mathematics, Cornell University; Sandra M. Faber, professor of astronomy, Lick Observatory, University of California, Santa Cruz; Ronald L. Graham, director of the Mathematics and Statistics Research Center, Bell Labs; Victor W. Guillemin, professor of mathematics, MIT; Icko Iben, professor of astronomy and physics, University of Illinois, Urbana-Champaign; Erich P. Ippen, professor of electrical engineering, MIT; Jiri Jonas, professor of physics, University of Illinois, Urbana-Champaign; Walter D. Knight, professor of physics, University of California, Berkeley; Serge Lang, professor of mathematics, Yale University; James S. Langer, deputy director of the Institute of Theoretical Physics, University of California, Santa Barbara; Paul C. Lauterbur, professor in the college of medicine and in the chemistry department, University of Illinois, Urbana-Champaign; Joseph Pedolsky, senior scientist and professor of oceanography, Woods Hole Oceanographic Institution; Paul L. Richards, professor of physics, University of California, Berkeley; Fred Sherman, professor and chairman of the biology department and professor of radiation biology and biophysics, University of Rochester School of Medicine and Dentistry; Robert Steinberg, professor of mathematics, University of California, Los Angeles; Kenneth L. Thompson, technical staff member, Bell Labs; and Bruno Zumino, professor of physics, University of California, Berkeley.

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