

APS honors four physicists at March meeting

During its general meeting held last March in Atlanta, The American Physical Society honored four physicists with Society awards for 1976. The prizes were: the Oliver E. Buckley Solid State Physics Prize to George Feher, and APS High Polymer Physics Prize to Richard S. Stein and the APS International Prize for New Materials to William G. Pfann and Henry Theuerer.

Feher, professor of physics at the University of California, San Diego, received the Buckley Prize for his "development of electron-nuclear double resonance, and the application of spin resonance to a wide range of problems in the physics of condensed matter." The prize is endowed by Bell Laboratories. Feher earned his doctorate in 1954 at the University of California and went to work for Bell Labs the same year. He left that position after six years to become a faculty member at the University of California, San Diego, where he teaches solid-state physics and biophysics.

The High Polymer Physics Prize has



FEHER



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been given to Stein, Commonwealth Professor at the University of Massachusetts, Amherst, for his "optical and x-ray studies of structure and deformation in solid polymers under both equilibrium and dynamic conditions." Stein, who is also director of the Polymer Research Institute on the Amherst campus, received his doctorate in physical chemistry from Princeton University in 1949 and has been a member of the University of Massachusetts faculty since 1950. The

High Polymer Physics Prize is sponsored by the Ford Motor Co.

In the second year of its presentation, Pfann and Theuerer (both of Bell Labs) have been named the winners of the APS International Prize for New Materials. The prize is sponsored by the IBM Corp and cited Pfann and Theuerer for their "work on the development of methods for the purification of semiconductors and the growth of epitaxial crystals from the vapor phase."

Institute of Physics gives 1976 awards

The Council of the (British) Institute of Physics has presented 1976 IOP awards to: S. D. Smith, G. N. Hounsfield, Sir Montague Finniston, Abdus Salam, Stephen W. Hawking, Roger J. Blin-Stoyle and Joan M. Freeman.

Smith received the Charles Vernon Boys Prize for his contributions to the design of scientific instruments in solid-state physics and in physical meteorology; he is a professor at Heriot-Watt University in Edinburgh.

The Duddell Medal and Prize has been awarded to Hounsfield of EMI Limited for his development in the use of x rays for the examination of three-dimensional structures.

Finniston of the British Steel Corp was the winner of the Glazebrook Medal and Prize for his leadership in the application of science to the large-scale manufacture of steel.

Salam of Imperial College, London and the International Centre for Theoretical Physics, Trieste received the Guthrie Medal and Prize for his contributions to

the theory of fundamental particles.

The Maxwell Medal and Prize was awarded to Hawking of the University of Cambridge for his contributions to theoretical astrophysics.

Blin-Stoyle of the University of Sussex and Freeman of the UK Atomic Energy Authority, Harwell shared the Rutherford Medal and Prize for their work on beta-radioactivity of complex nuclei.

Apfel named for acoustics award

The 1976 Biennial Award of the Acoustical Society of America has been presented to Robert E. Apfel, associate professor in Yale University's department of engineering and applied science. The award honors a Society member who has contributed through published papers to the advancement of theoretical or applied acoustics, and is under 35 years of age.

Apfel received his PhD in applied physics from Harvard University in 1970 for graduate work on physical acoustics, especially acoustic cavitation and the strength of liquids. This research re-

sulted in a series of papers in the *Journal of the Acoustical Society of America*. The Biennial Award consists of a citation and a bound set of the *Journal* from 1929 to the present.

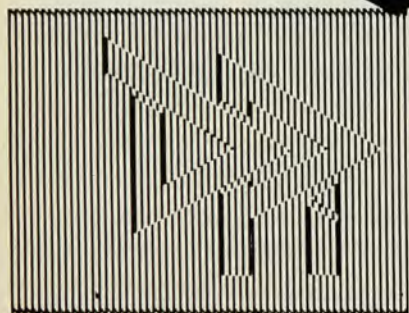
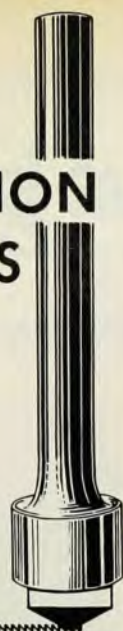
Kenneth C. Brog and **Robert H. Poirier** have been named research-department managers at Batelle's Columbus Laboratories. Brog heads research in physics, electronics and nuclear technology while Poirier is responsible for energy and environmental-processes research. In addition, **Edward W. Ungar** and **Duane N. Sunderman** have been appointed associate directors of research at Batelle-Columbus.

Michael C. King, formerly of Bell Laboratories, has joined Qualitron Corp as manager of engineering.

The Nuclear Regulatory Commission has appointed **Carson Mark** to its Advisory Committee on Reactor Safeguards (ACRS). Mark is a mathematician and physicist who, in 1973, retired from Los Alamos Scientific Laboratory.

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we hear that

Peter W. Likins, associate dean and professor at the University of California, Los Angeles' School of Engineering and Applied Science, has been named dean of Columbia University's School of Engineering and Applied Science. He will assume the new post on 1 July.

Frederick G. Fernald, a member of the Upper Atmospheric Project at the National Center for Atmospheric Research in Boulder, Colorado, has been appointed a research physicist at the University of Denver Research Institute.

Robert Bradshaw has been named head of Los Alamos Scientific Laboratory's engineering department.

obituaries

Alfred Landé

Alfred Landé was an inconspicuous and modest man, never ostentatious; he possessed a fine ironic humor, and a warm and kind personality. Landé, who died in November 1975 at the age of 86, was a brilliant lecturer and a giant in contemporary physics and the philosophy of science.

Landé was born in Elberfeld, Germany on 13 December 1888. He studied at the Universities of Munich and Göttingen, and moved to Göttingen after he decided to become a theoretical, rather than experimental, physicist. The greatest mathematician of his time, David Hilbert, asked Landé to keep him informed about the latest developments in physics, and thus the young student from Munich became acquainted with mathematicians such as Felix Klein and Edmund Landau. He also met Max Born, Theodore von Kármán, E. Madelung, Paul Hertz and Vladimir A. Fock. It was here that Landé intensified his studies of relativity, quantum theory, aerodynamics, thermodynamics and partial differential equations. At the same time, he attended lectures and seminars by visiting physicists such as Niels Bohr and Hendrik Lorentz.

However, it was in Munich that Landé received his doctorate under Arnold Sommerfeld in 1914. Two weeks later the war broke out and the young Landé served with the Red Cross until his former lecturer, Born from Göttingen, was able to place him at the Artillerie-Prüfungskommission in Berlin, where both men worked on sound-detection techniques. This collaboration with Born led to a revolutionary paper in 1918 that refuted the plausibility of Bohr's model of coplanar electronic orbits.

Most of Landé's research at the time was devoted to various issues in quantum theory, and though always original, they did not represent a series of unmitigated triumphs. Wolfgang Pauli, then a 20-year old student of Sommerfeld, was able to show that some of Landé's calculations concerning the spectrum of helium and the stationary states of an excited helium atom were erroneous. Nevertheless, this



LANDE

work convinced Born to make Landé *Privatdozent* at the University of Frankfurt in 1920.

The same year at the Bohr Institute in Copenhagen, Landé reported on his symmetric model of the carbon atom—a lecture that was strongly criticized by Bohr. It was here that Landé became encouraged and stimulated by Bohr's ideas about the anomalous Zeeman Effect. Bohr, as well as Sommerfeld, had realized that this "unorthodox" magnetic-splitting effect concealed perhaps some of the deepest secrets of atomic structure. Consequently, Landé concentrated his work on every aspect of the anomalous Zeeman Effect at the Physical Institute of the University of Frankfurt, which after the war, had become a center for the study of magnetic-splitting of spectral lines and of molecular beams. Landé recognized that he was dealing with a dual problem: the vectorial presentation of angular momenta and the magnetic-core hypothesis. His work on this led him to the insight that the anomalous Zeeman Effect was inseparable from the multiplet line structure.

The result of these efforts culminated in the celebrated *g* or (the inverse of the) *gyromagnetic factor* that determines not only the fine, but also the hyperfine structures of optical and x-ray spectra. It

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