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New technological ideas in energy conservation . . .

ENERGY SOURCES

Conservation and Renewables

Edited by David Hafemeister, Henry Kelly, and Barbara Levi

Packed with ideas that point the way to future advances, this important volume surveys energy-conservation technology in buildings, windows, lighting, appliances, HVAC, industry, automobiles, electrical generation, and more.

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- photovoltaic technologies
- applications of maximally concentrating optics for solar energy collection
- wind turbines

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Sound technical options

Energy Sources: Conservation and Renewables analyzes specific techniques to enhance end-use efficiency. Reviewing the past decade's technical progress, it shapes the discussion of energy options and planning for the coming years.

"The ideas discussed in these chapters are too numerous to summarize, but together they give a clear signal that there are soundly based technical options which can continue to reduce America's energy consumption in the future."

The Editors

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demy of Sciences in Szeged.

Eisenstein served for five years on the APS Committee on the Status of Women, serving as chair for 1983-84. She was a member of the editorial board of the Biophysical Society (1982-85), and was elected to the nominating committee of the AAAS physics section and to the executive committee of the APS biological-physics section. She was also a member of the NIH study section on biophysics and biophysical chemistry.

In her honor the department of physics of the University of Illinois at Urbana-Champaign, together with the APS Committee on the Status of Women, has instituted the Laura Eisenstein Award to encourage women students in the pursuit of a degree in physics.

HANS FRAUENFELDER

PETER G. DEBRUNNER

University of Illinois
at Urbana-Champaign

James Daniel Hardy

James Daniel Hardy, Professor Emeritus at Yale University and Director Emeritus of the John B. Pierce Foundation, died 6 September 1985 at the age of 81. Hardy received his bachelor's (1924) and master's (1925) degrees from the University of Mississippi. He obtained his PhD in physics from The Johns Hopkins University in 1930, where he worked with A. H. Pfund on problems in infrared spectroscopy.

In 1932 Hardy became a research fellow at the Russell Sage Institute of Pathology at the Cornell University Medical School, where he applied his knowledge of physics and instrumentation to problems in physiology. His work led to the first quantitative assessment of pain and to the seminal book *Pain Sensations and Reactions*, written with Harold A. Wolff and Helen Goodell. His development of the Hardy radiometer was important to his analyses of energy balance in human thermoregulation, a subject that interested him all of his life and to which he made fundamental contributions.

In 1940 Hardy joined the Navy as a physicist, working on mine-detection techniques and then, characteristically, applying these techniques while serving as an officer on mine sweepers in the Mediterranean. He served as director of the Naval Reserve Officers' School in Philadelphia in 1953 and retired from the Naval Reserve with the rank of Rear Admiral in 1964. He was awarded the Purple Heart and the Medal of the Legion of Merit.

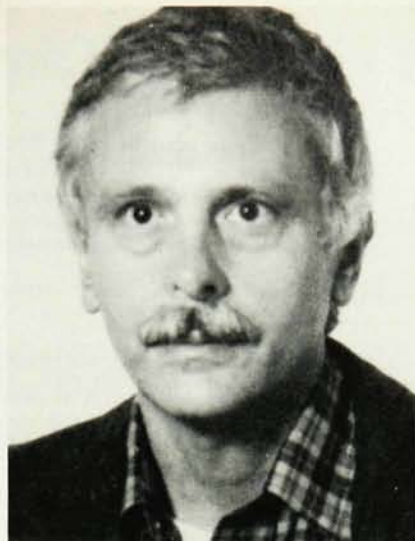
While professor and director of graduate studies in physiology at the University of Pennsylvania, Hardy acted also as scientific director of the Naval Medical Research (human centrifuge)

Laboratory at Johnsville, Pennsylvania, and on the National Research Council Committee on Man in Space from 1957 to 1961. In 1961 Hardy joined the faculty of the Yale Medical School and accepted a position as director of the John B. Pierce Foundation Laboratory in New Haven. There he assembled a crossdisciplinary faculty and made that laboratory a world center of environmental physiology. He retired from both posts in 1974. Hardy was elected to membership in the National Academy of Sciences in 1970.

As director of the research of a large number of graduate and postgraduate students, Hardy was especially proud of the many women who studied with him, a pride that was sometimes in amusing contradiction to rhetoric derived from his youth in Mississippi in the early years of the century.

ROBERT ADAIR
Yale University

ELEANOR ADAIR
John B. Pierce Foundation
New Haven, Connecticut



PARKS

nomena and the interactions between superconductivity and magnetism, but it later expanded to other areas such as phase transitions in magnetic and liquid metallic systems, superconducting flux flow and superconducting fluctuations in one- and two-dimensional systems. He organized and edited the classic two-volume compendium *Superconductivity* (1969). In 1975 Parks began a major study of valence instabilities in rare-earth-based metallic systems. In 1976 he organized the first international conference on valence instabilities in Rochester, from which he edited the pacesetter *Valence Instabilities and Related Phenomena* the following year.

Moving to the Polytechnic Institute of New York in 1979 to head the physics department, Parks began research on surface phenomena, performing several important photoemission studies on mixed-valence systems and supervising three dissertations dealing with ternary Eu- and Ce-based systems. Parks was one of the first to recognize the importance of superconductivity in CeCu_2Si_2 and of the emerging field of heavy-fermion systems. In 1984 he took a position as professor at New York University, where he continued working, in spite of deteriorating health, until about a month before his death.

Parks will be remembered for his remarkable spirit of invention, imagination and whimsy, and he will be greatly missed. He communicated to his students the excitement and fun of laboratory work.

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Ronald D. Parks

Ronald D. Parks, professor of physics at New York University, died on 17 April 1986, in New York City, after a year-long illness. He was 51 years of age. With his death the physics community loses one of its most imaginative experimenters.

Born on 9 February 1935 in Kansas City, Kansas, Parks attended Kansas State University and graduated with highest honors in 1956. He went on to study physics at Stanford University, where he received his PhD in 1961. His dissertation focused on the competition between superconductivity and magnetism, an area to which he returned from time to time throughout his research career. While an NSF postdoctoral fellow at Stanford, Parks—along with his dissertation adviser William Little—elegantly demonstrated flux quantization in a multiply connected superconductor through resistivity measurements, a classic effect that now bears their names.

In 1962 Parks took a position as assistant professor of physics at the University of Rochester, where he remained until 1979. He was promoted to associate professor in 1965, and to professor in 1968. At Rochester, Parks and his graduate students established one of the world's most significant low-temperature research facilities. Twenty-five students received their PhDs from Rochester under Parks's supervision, and over 70% of his 143 publications were written with these students. His research initially centered on superconducting flux-quantization phe-