



Cyril S. Smith

His industrial experience started at the American Brass Company, where he studied the microstructures of all kinds of copper alloys and their various physical properties. During World War II he worked at the Los Alamos Laboratory, mainly on the purification and properties of plutonium and other fissionable materials. He also joined the General Advisory Committee of the Atomic Energy Commission where, together with J. Robert Oppenheimer, he voted against the crash development of the H-bomb. After the war he organized and directed the Institute for the Study of Metals at the University of Chicago, where he showed his organizational and scientific gifts.

The institute was the first academic organization devoted to interdisciplinary research on materials. There Cyril used his detailed knowledge of metallurgy to develop quantitative microscopy using topological methods connecting three-dimensional shapes and structures with two-dimensional cross sections of grains and their microconstituents as seen under the microscope. He also investigated the propagation of shock waves in alloys and the resulting induced phase changes.

Cyril was creative during an important time in crystallography and metallurgy. He participated in discussions of the details of atomic positions at tilt and twist grain boundaries or in stacking faults in alloys and gingerly pursued calculations of the energies of theoretical models. Above all, Cyril loved to speculate about rafts of soap bubbles, which helped to visualize the atoms near defects in crystal lattices and analyze their behavior.

In 1960 Cyril became Institute Professor at MIT. There he became deeply involved in studying the his-

tory of science in general and the history and practice of metallurgy in particular. He developed procedures aimed at deducing the methods of fabrication and thus the ages of all kinds of ancient metallurgical objects, such as Japanese swords and sword guards. This link among science, history and archaeology struck a deep chord within him. He showed through his historical research that many important scientific results were motivated by aesthetic curiosity rather than by the pursuit of practical goals.

Cyril was fascinated by the relation between scientific aspects of decorative arts that can be analyzed and the fine arts themselves, and he lectured on that topic at the Freer Gallery and the Sackler Museum in Washington, DC.

Visiting Cyril in his office or laboratory at the University of Chicago or later at MIT was like going to a museum or an art gallery. The walls and drawers were full of photographs or actual examples of beautiful structures such as sword guards and models of atomic arrangements.

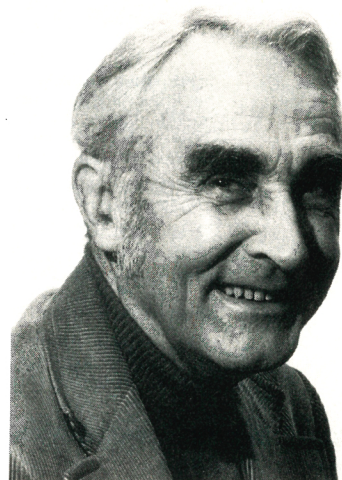
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## Malcolm Correll

Malcolm Correll, a past president of the American Association of Physics Teachers, died suddenly on 6 September 1992.

Correll was born 3 May 1914 in Linton, Indiana, and received his bachelor's degree from Indiana University in 1935. After working as an engineer in industry, he began graduate study in physics at the University of Chicago in 1940. He taught at the college there until he earned his PhD for work in cosmic-ray physics in 1948. From 1948 to 1951 Correll was chair of the department of physical sciences of Oklahoma A&M University, and from 1952 to 1961 he was chair of the department of physics at DePauw University, in Greencastle, Indiana. During the summers from 1955 to 1961 he continued his research at the High Altitude Observatory in Boulder, Colorado, and in 1961 he accepted a joint appointment as professor of physics and chair of the department of integrated studies of the University of Colorado, Boulder. He held those positions until he retired in 1981.

During the McCarthy period of the 1950s, Correll's unwillingness to sign a state-mandated loyalty oath cost him his position with Oklahoma A&M University. He then became one of nine plaintiffs in the landmark case



Malcolm Correll

*Wieman vs Updegraff*, in which the US Supreme Court in 1952 held the Oklahoma loyalty oath to be unconstitutional.

Throughout most of his professional career, Correll's primary dedication was to education in the sciences. He became president of the AAPT in 1961. From 1960 to 1966 he was part of the 17-member Commission on College Physics, which evaluated all aspects of undergraduate programs in physics in the US. The commission catalyzed many improvements in physics education, and Malcolm played an active role in its work. At the University of Colorado he collaborated with Frank Oppenheimer in the development of an innovative and comprehensive laboratory for the calculus-based introductory physics course. In 1966-67 he led a Ford Foundation program to improve science teaching at Mindanao State University in the Philippines.

Correll's interests were broad. In the department of integrated studies he was concerned with the general education of nonscience students in the biological and physical sciences, and at a time when cold war tensions were high, he founded the program "Problems and Prospects for Peace." After his retirement he continued to work with the Rocky Mountain Peace Center in Boulder.

Malcolm wanted to share science with students who were just starting the great adventure of studying science, and especially with students whose principal interests lay in other academic areas. His complete devotion to this critically important goal is a model and inspiration for all who knew him.

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