

## obituaries

### Wallace Brode

Wallace R. Brode, an internationally known chemist, died on 10 August in Washington, D.C. at the age of 74. He was an outstanding chemist and a leader in the scientific community.

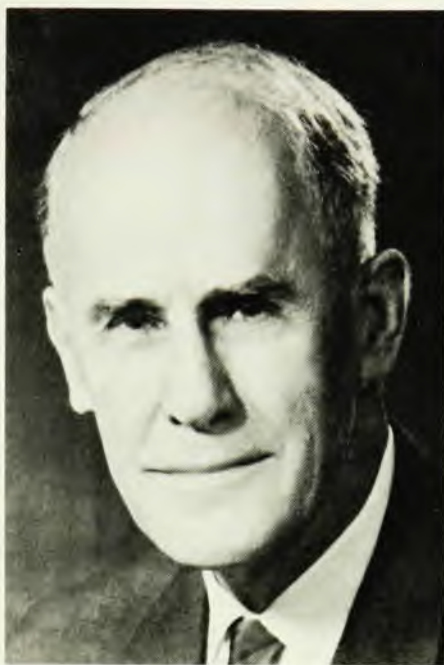
Born in Walla Walla, Washington, where his father was professor of zoology at Whitman College, Brode received his bachelor's degree at Whitman and the MS and PhD at the University of Illinois. After two years as a Guggenheim Fellow at Leipzig, Zurich and Liverpool he in 1928 joined the department of chemistry at Ohio State University, where he remained for twenty years.

His doctoral dissertation on the organic chemistry of dyes required spectrochemical methods, which led to further research on spectrographic methods in chemistry. Many of his forty doctoral students did their dissertations in this area. Brode became an acknowledged leader in the field and wrote a standard textbook on the subject.

In 1947 Brode left Ohio State University to become associate director of the National Bureau of Standards, where he remained until 1958. After two years as Science Advisor to the Secretary of State he retired to spend his time as consultant and member of advisory boards to the military and the Atomic Energy Commission.

For ten years he was editor of the *Journal of the Optical Society of America*. He served as president of Optical Society of America, the American Chemical Society and the American Association for the Advancement of Science.

He was the recipient of three honorary degrees as well as the Priestley medal of the American Chemical Society, the medal of the Society of Applied



BRODE

Spectroscopy, and the Exceptional Service Medal of the Department of Commerce. For his wartime services in Europe during World War II with the Office of Scientific Research and Development he was awarded the Presidential Certificate of Merit. He was a member of the National Academy of Science.

Actively interested in the international exchange of scientific information and the teaching of science in the secondary schools, Brode collaborated on three textbooks in chemistry.

His administrative ability was evident in his work at the National Bureau of Standards, and as the first head of the Science Department of the Naval Ordnance Test Station at Inyokern, California.

RALPH A. SAWYER  
Former Chairman  
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### Wallace Waterfall

Wallace Waterfall, recently named Secretary Emeritus of the American Institute of Physics, and Treasurer and Secretary Emeritus of the Acoustical Society of America, died on 21 August after a long illness. He was 74 years old.

Waterfall served as a major pillar of the administrative side of American physics for nearly two generations. He was born in Columbia City, Indiana and received his BS from the University of Illinois in 1923. He began his working

career as a construction supervisor in Indiana schools.

After two years on the construction job, Waterfall joined the Celotex Corporation as an acoustical engineer, and from then on he belonged to acoustics and acoustics belonged to him.

During this early period, he picked up another degree from the University of Illinois, this one in engineering physics. At the same time, he continued to advance at Celotex and by 1942 he had become its director of research.

World War II interrupted this straightforward engineering career and

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#### SPECIFICATIONS

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**Effective aperture ratio:** f/8. **Focal length:** 457 mm. **Reciprocal linear dispersion at exit slit:** 17.5Å/mm in first order with 1180 lines/mm gratings. **Grating range:** available for use from 180 nm to 30 microns. **Resolution (first order) — 1Å** with 0.01 mm slit width & 1180 lines/mm grating — 5Å with 0.05 mm slit width & 590 lines/mm grating. **Diffraction grating:** Plane reflection replica grating, 48 x 48 mm. **Stray light:** 0.1% or less within  $\pm 1\frac{1}{2}$  bandwidths of a given line. **Slits:** Straight slits 12.7 mm high, width adjustable in unison from 5 to 5000 microns. Width read from digital counter, 2 microns per division. Height reducible by inserting baffle plugs. **Slit construction:** Honed, hardened, stainless steel. Cannot be damaged by closing.

##### Mechanical—

**Wavelength readout:** digital counter, 0.2Å per division with 1180 lines/mm gratings. **Wavelength dial accuracy:**  $\pm 3$  divisions (0.6Å with 1180 line/mm gratings). **Dimensions:** 21½" L x 11" W x 7½" H; 35 pounds.

##### Electrical—

**Scan drive (optional):** T<sup>2</sup>L computer compatible or front panel selectable. **Scanning speeds:** 20, 50, 100, 200, 500 and 1000Å/min. (with 1180 line/mm grating). **Scan drive power:** 117V, 60 Hz or 230V, 50 Hz; 15 watts — other voltage optional @ 50 Hz. **Power cord:** Standard three-wire (grounding).

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