

## WE HEAR THAT

of the microhydrodynamics of single or multiple particles or drips in flow fields" and for "his role as a mentor to researchers in rheology." Acrivos is the Einstein Professor of Science and Engineering at the City College of the City University of New York and editor of the journal *Physics of Fluids*.

Also at the October meeting, the first *Journal of Rheology* Publication Award was presented to **Savvas G. Hatzikiriakos** and **John M. Dealy** for two related papers: "Wall Slip of Molten High-Density Polyethylenes. II. Capillary Rheometer Studies" and "Role of Slip and Fracture in the Oscillating Flow of HDPE in a Capillary." The award citation said that the authors "have addressed an important industrial rheology problem and provided solid theoretical and experimental guideposts, which can immediately be exploited by producers and users of high-density polyethylenes." Hatzikiriakos is a professor of chemical engineering at the University of British Columbia in Vancouver. Dealy is dean of engineering at McGill University in Montreal.

## IN BRIEF

In October **Hans F. W. Moeller** retired as vice chairman of the board of directors of Schott Corporation in Yonkers, New York.

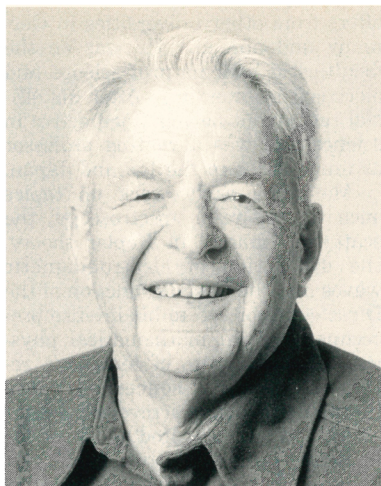
**Reuben Collins** has joined the physics faculty of the Colorado School of Mines in Golden. Collins had been a member of the research staff at IBM in Yorktown Heights, New York.

## OBITUARIES

### Allyn C. Vine

Allyn Collins Vine, a geophysicist and oceanographer, died on 4 January 1994 at his home in Woods Hole, Massachusetts, at the age of 79. He was best known for his role in the construction and use of the deep-diving submarine ALVIN (a contraction of his name).

As a graduate student under Maurice Ewing at Lehigh University in the years 1936-40 Vine carried out research on seismic refraction at the deep ocean floor. He and Ewing first used an instrument chamber lowered by a wire rope; later they used free-floating ocean-bottom seismographs and timed explosive devices. All of those instruments were made by the experimenters. As a byproduct of this work, they also developed underwater cameras to photograph the seafloor.



**Allyn C. Vine**

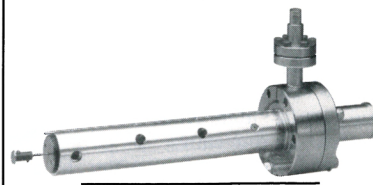
Nearly every picture showed life or evidence of life on the deep sea floor, which had previously been believed to be azoic.

In 1941 Vine moved to the Woods Hole Oceanographic Institution when that organization received the first contract for research work for division 6 of the National Defense Research Committee, in anticipation of possible US participation in World War II. Ewing, Vine and I were the first employees on that contract.

The bathythermograph, invented by Athelstan Spilhaus, was redesigned by Vine and Ewing to be lowered from moving ships and recovered by a wire rope wound on a small winch. The record thus obtained of temperature versus depth was used to compute the paths of refracted sonic rays in the ocean, revealing details of shadow zones and layers beneath which a submarine could hide. Convoy commanders used this information to deploy the screening ships that guarded the convoy.

Vine and Ewing designed a model of the bathythermograph suitable for use on submarines. At first by himself and later with several associates, Vine installed this technology on existing submarines and on each new submarine built, and trained the crews in the instruments' use to escape detection by enemy sonar. Later Vine designed an addition to the bathythermograph record that made it possible to determine how much to flood or pump water from a submarine's ballast tanks to obtain near-neutral buoyancy. This modification eliminated guesswork and greatly expedited the training of submarine crews. In 1972 the US Navy recognized Vine for his services, stating that his work had resulted in "the savings of untold numbers of lives

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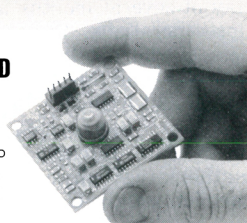
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