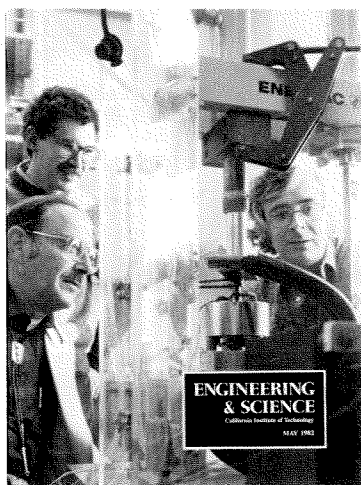


In This Issue



Collaborators

On the cover — three men in a geology laboratory looking at a miniature piston cylinder apparatus. From left to right, the men are Edward Stolper, assistant professor of geology; Gerald Wasserburg, MacArthur Professor of Geology and Geophysics; and David Walker, a geologist from Harvard, who is currently a Fairchild Scholar at Caltech and who has modified this apparatus for experiments to determine whether the Soret effect is the cause of anomalous chemical variations in magmas. The lab actually belongs to Stolper, who works with Walker, but every now and then Wasserburg is also called in for consultation.

This is just one example of the kind of interaction that has been going on at Caltech for the last nine years between Institute faculty and visitors who are invited here under the Sherman Fairchild Distinguished Scholars program. More details on this project and a sampling of others are described in "The Ripple Effect," which begins on page 8.

Scientific benefits are the chief value of this program, but there are many others as well, including some for communities much larger than Caltech's. Fairchild Scholars have delivered a number of Watson Lectures at Beckman Auditorium, for example, and five of them have contributed articles to this magazine, for which we thank them again.

Saving Space



One of the people who can speak with real authority about the past, present, and possible future of space exploration is Bruce Murray. It has been the focus of his professional interest for more than 20 years, beginning in 1960 when he first came to Caltech as a research fellow in space science. In 1963 he became the Institute's first professorial appointment in planetary science. He was an active participant in the scientific teams that planned, observed, and analyzed the Mariner missions to Mars, Venus, and Mercury. In addition to doing research, he has made countless talks, served on boards and committees, and written both books and articles on the subject.

Murray recently announced his impending resignation from the directorship of the Jet Propulsion Laboratory, a position he has held for the past six years. During that time the pace of his interest and the weight of his responsibility have, of course, been greatly intensified. He has become increasingly concerned not only for space science itself but for the role of the United States in future space exploration. In January he discussed these issues in a Watson Lecture at Beckman Auditorium. An adaptation of that talk, "Where Do We Go Next In Space?" begins on page 2.

Chemical Action



John Baldeschwieler came to Caltech in 1973 from Washington, D.C., where he had been for two years deputy director of the Office of Science and Technology. That was, however, just an excursion out of academia. He had previously been on the faculties of Harvard and Stanford universities. For his first five years at the Institute Baldeschwieler had to divide his working hours between administrative duties as chairman of the Division of Chemistry and Chemical Engineering and continuing his research activities as professor of chemistry. Then, after six months' leave of absence spent as a visiting scientist at Bell Laboratories and the Stanford Synchrotron Radiation Laboratory, he came back to Pasadena and plunged into the work described on page 14 in "Tiny Bubbles" by Dennis Meredith, director of Caltech's news bureau.

Of course, he plunged into a few other things too. Some 30 of the more than 200 publications listed under his name have been written since then, and he has continued to serve and/or take on new responsibilities with a number of national committees, including the Committee on Scholarly Communication with the People's Republic of China. He also serves as a consultant to a number of industrial firms.

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