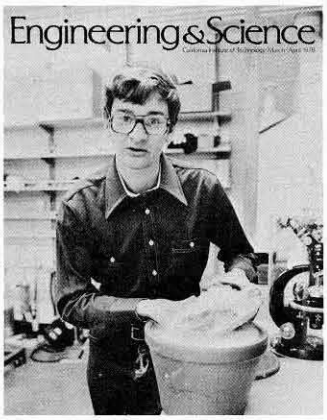
In This Issue



All That Glitters

On the cover—George Rossman, associate professor of mineralogy, is investigating the physical properties and structure of a mineral sample. Specifically, he is studying a sample of calcite, with the aid of some CO_2, or dry ice. Rossman's scientific interests are in the interaction of electromagnetic radiation with minerals, which means his studies involve reactions with light, magnetism, and heat radiation. Since these studies usually require minerals that are free from imperfections, Rossman works frequently with gems—about which he has become something of an expert, as evidenced by "Glitter: Gems or Gyps?" on page 26.

The article has been adapted from a Watson Lecture given by Dr. Rossman in Beckman Auditorium on February 15.

World View

Looking the world over is something Bruce Murray, director of JPL, has had a lot of practice doing—only partly as a planetary scientist observing what's going on "out there." He is also deeply concerned with what is going on right here. Increasingly, he is thinking, writing, and speaking on the nature and quality of life on earth.

About a year ago, *E&S* published Murray's article on what the place of technology is going to be in our lives. Zeroing in on one aspect of that topic, he recently gave a Watson Lecture entitled "Solar Energy: True God or False Prophet?" On page 4 is an adaptation of that talk.

Moon Magic

It may look like a carton of cottage cheese in the hand of Caltech alumnus Noel Hinners (MS '60), but it isn't. No earthly substance could command such undivided attention from these three men. Inside the container are two one-half-gram samples of lunar soil collected from the moon's Mare Crisium by the unmanned Soviet spacecraft Luna 24. They are the first of seven samples from that mission released by the Russians for study by American scientists.

With Hinners are two other Caltech alumni—in the center Michael Duke (BS '57, MS '61, PhD '63), and on the left Bevan French (MS '60). All three are with NASA and are vitally interested in the knowledge gained from the space program in general and in what we are learning about the moon's composition in particular. In fact, Bevan French, who is NASA's Program Chief for Extraterrestrial Materials Research, recently expressed his interest by writing *The Moon Book*. This is a highly readable summary for the layman about what man has learned so far by going to the moon. "The Moon and Beyond" on page 12 is an excerpt from the last chapter of that book.

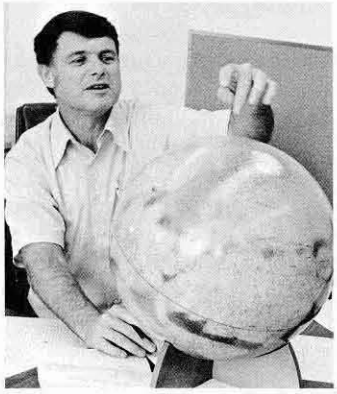
Japanese Future

"Michio Nagai," said Harrison Brown, who introduced him at The Next Eighty Years conference last April, "is an extraordinary man. For example, he was, I believe, the first nonpolitician ever to be appointed Japan's Minister of Education.

"Dr. Nagai was a youngster in Japan during World War II, and he remembers vividly the events of that time and the reconstruction. After the war he was one of the first Japanese students to come to this country, and he has since spent a great deal of time here. He took his PhD in sociology at Ohio State and has taught and done research at Stanford, Columbia, and Berkeley. He has also done research in Mexico, and he was an early visitor to Red China.

"He is the author of a number of books, including *Higher Education in Japan,* which has the intriguing subtitle *Take Off and Crash*. He has also written *Indoctrination and Education* and *An Hour Before Dusk*. In each he has eloquently expressed his concern for mankind."

That concern was also eloquently expressed in his talk at the conference. "The Future of Japan: Continuity and Discontinuity in Social Change" on page 19 is adapted from that talk.



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