

# Cold fusion efforts continue to advance

by Carol White

On June 18, SRI International in California announced the findings of their investigation of the explosion which killed cold fusion researcher Andrew Riley on Jan. 2. They concluded that in all probability the accident was chemical rather than nuclear in origin, caused by an "unanticipated and undetected" buildup of deuterium and oxygen gases. According to the scenario which they put forward, several safety systems appear to have failed simultaneously.

While many scientists who are studying the phenomenon of cold fusion prefer to work with open glass cells, because they fear the kind of uncontrolled pressure buildup which was presumably responsible for the SRI accident, experiments at SRI were conducted in closed metal cells. The advantage of the latter design is the ability to make far more precise diagnostic measurements than when the experiment is open to the atmosphere.

At SRI, the electrochemical cell was set inside a vacuum glass calorimeter, which was itself placed in a temperature-controlled water bath. The cell used a heavy water electrolyte of deuterium-oxide. It was lined with Teflon, and used palladium electrodes. A platinum catalyst was placed in the cell, in order to ensure the controlled recombination of the deuterium and oxygen, which were released through the process of electrolysis. The intention was to avert the danger of an explosive recombination such as that which apparently did occur due to a failure of this catalytic device.

According to SRI's report, investigators assume that since the catalyst was not working properly, deuterium and oxygen gases accumulated in the cell. Furthermore, a gas outlet tube which should have allowed the gases to escape, and should have monitored a buildup of pressure, also failed. It became partially sealed by a Teflon piece which supported wires and other parts near the top of the cell. As a result, the pressure in the cell built up from 1 atmosphere pressure, at which the experiment was to be conducted, to an uncontrolled 30 atmospheres of pressure; no one was aware the buildup was occurring. It is then assumed that, when Riley removed the cell from the water bath, it was shaken up, detonating an explosive chemical reaction. The explosion blew out the welded bottom of the six-inch-long steel cylindrical cell.

The SRI team members are hopeful that new safety protocols they have developed as a result of this analysis be accept-

able to safety authorities in California, so that they will be permitted to resume their experimental program.

## Results of Takahashi U.S. tour

Following the April tour of the United States by Japan's leading cold fusion researcher, Dr. Akito Takahashi, many U.S. and Japanese scientists have begun to test variations of the Takahashi experiment. Some positive results have already been circulated in private discussions, but it is still too early to draw conclusions. One interesting feature of the new experiments is that Tanaka Metals has been making palladium available to both U.S. and Japanese researchers free of charge, in order to encourage international cooperation.

The Takahashi tour received unusually good press coverage in the United States. His tour was also featured in *Aera*, a major Japanese news magazine. The article, which appeared on June 16, described the work of Dr. Takahashi and other experimenters in Japan, and then quoted Eugene Mallove, author of *Fire from Ice*, who is now conducting a cold fusion experiment based upon Dr. Takahashi's design in collaboration with Jed Rothwell. This author was also interviewed.

*Aera* reporter Atsuko Tsuji titled his feature: "Cold Fusion: From a Religion to a Science," and continued: "Three years after the 'discovery of the century' researchers are working in the basements of their own homes. In America, they cannot do research openly. Calling themselves the 'resistance,' they gain moral support from the progress made in Japanese research, and look forward to the day when 'cold fusion becomes just another part of science.' "

The article describes the Takahashi tour, a full report of which appeared in *EIR*'s May 8 issue, and goes on to describe how Rothwell, a 38-year-old entrepreneur who ran a highly successful computer software business, invested \$12,000 in order to help Mallove set up a basement cold fusion laboratory.

In his interview with me, Tsuji wrote: "According to Carol White, editor of the science and technology magazine *21st Century*, which is publishing information enthusiastically about cold fusion, and who also accompanied Professor Takahashi's U.S. trip: 'American cold fusion researchers are a Resistance [movement]. They're hiding underground, and doing their research clandestinely.

" 'If there's even the slightest possibility of [cold fusion] being true, then, of course, we should do research. But in spite of that, nowadays in the United States, if you say you're going to try to do cold fusion work, you're treated as a criminal. I'd say that if this were the Kennedy era of the 1960s, [cold fusion pioneer] Dr. Fleischmann et al. would be treated like the astronaut John Glenn was, as a hero. . . . Although Dr. Takahashi is so busy, it's truly very nice of him to have come. It's a big boost for the American resistance movement.' "