



*Yixiang Duan adjusts a filter in his portable air-particulate monitor.*

## Laboratory Licenses Environmental Monitor

Los Alamos National Laboratory (LANL) has licensed an environmental monitoring tool to **Advanced Realtime Technologies (ART) LLC**. ART has been awarded \$75,000 by the Center for Commercialization of Advanced Technology (CCAT) of San Diego, California. The award will be used to develop a commercial version of a cost-effective, real-time, continuous, field-portable, air-particulate monitor. The CCAT will also provide a market feasibility assessment in coordination with the Entrepreneurial Management Center at San Diego State University.

The core technology for Advanced Realtime Technologies was developed at LANL to compliment the Department of Energy's Chronic Beryllium Disease Prevention Program. The Laboratory's Industrial Business Development (IBD) Division is assisting Advanced Realtime Technologies with business development. The CCAT award will help the startup company finalize development of a commercial version of the monitor in a relatively short time period. The commercial product will have broad applications in environmental monitoring, occupational safety inspection, mining processes, and the aerospace, semiconductor, and petrochemical industries.

"Our instrument will combine the advantages of a highly sensitive laboratory technique with the portability and ease-of-use of an in-the-field instrument," said the Los Alamos inventor and founder of Advanced Realtime Technologies, Dr. Yixiang Duan.

"This instrument can be used for onsite environmental pollution monitoring, real-time occupational safety inspection, and industrial process control. Through real-time, highly sensitive detection in the field, the instrument can provide instant feedback to site-workers, allowing them to take prompt action to avoid overexposure to harmful chemicals or environmental hazards."

Current techniques are limited by requiring from days to weeks for analysis of a single sample, which must be done in a laboratory environment.

Duan is one of more than 90 Laboratory technical staff members who have participated in the Commercialization and Entrepreneurship Training Course offered by IBD during the last three years.

"We are trying to nurture entrepreneurship within the Laboratory. Advanced Realtime Technologies demonstrates that entrepreneurs in the Lab can build companies attractive to outside investment. We believe that transferring LANL technologies adds great value to New Mexico and the U.S. economy overall," said Donna Smith, IBD Division Leader. Advanced Realtime Technologies is one of 39 Los Alamos-affiliated spin-offs and one of 38 New Mexico startups assisted by IBD division since 1997.

The CCAT—funded by the Department of Defense—is a collaborative partnership among academia, industry and government. Partners include the San Diego State University Foundation and Entrepreneurial Management Center, the University of California, San Diego (UCSD) Jacobs School of Engineering, UCSD CONNECT, and ORINCON Technologies, Inc., with support from the Space and Naval Warfare Systems Center, San Diego.