



## News from the Savannah River National Laboratory

October 23, 2001 For immediate release

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### SRTC Wins R&D 100 Award

AIKEN, S.C. – Work performed in collaboration with researchers across the country has earned the Savannah River Technology Center a coveted R&D 100 Award, considered the Academy Awards of applied research and development. (SRTC is the Savannah River Site's applied research and development laboratory.) The R&D 100 Awards are presented each year by *R&D Magazine* to recognize the 100 most technologically significant developments of the year.

SRTC, along with the Department of Energy's Pacific Northwest National Laboratory and the Massachusetts Institute of Technology, received the award for the Millimeter-Wave Viscometer. This device measures on-line viscosities of hot molten materials like glass, such as in the Savannah River Site's Defense Waste Processing Facility. Viscosity is a measure of how well a liquid flows within stationary boundaries such as a pipe or pour spout in response to a given force. It is a key parameter of molten materials that can indicate the chemistry and quality of a glass or metal product.

SRTC's Dr. Gene Daniel and Bond Calloway worked with researchers from the other two laboratories on development of the device.

The Millimeter-Wave Viscometer fills a need for a high-temperature online viscosity sensor that makes possible real-time process control in the manufacture of glass, metals, and other melter-produced materials. For the first time, it allows active feedback control of the manufacturing process that will lead to improved product quality, manufacturing efficiency, and lower costs.

SRTC's involvement in the development of the device grew out of the lab's work to continuously improve operations at DWPF, which converts high-level radioactive waste to a stable glass form.

The Millimeter-Wave Viscometer earned one of 25 R&D 100 Awards received by DOE's labs across the complex. Secretary of Energy Spencer Abraham, commenting on the awards presented to SRTC and other DOE laboratories, said, "These accomplishments clearly demonstrate the value of government-funded research to our nation."

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For 39 years, the R&D 100 Awards program has recognized the developers of the top 100 technologically significant products introduced into the marketplace over the past year. This year's selection finds industrial, academic, and government researchers from around the world who have moved the bar another notch higher in their continuing efforts to develop technology-based products that work to improve the human experience. Many of the winning products accomplish tasks for which no previous product was able to satisfy.

In years past, the R&D 100 Awards have recognized many winning products that later became household names, including Polacolor film (1963), the flashcube (1965), the automated teller machine (1973), the halogen lamp (1974), the fax machine (1975), the liquid crystal display (1980), the laser printer (1986), the Kodak Photo CD (1991), the Nicoderm antismoking patch (1992), Taxol anticancer drug (1993), lab on a chip (1996), and HDTV (1998).

WSRC-01-44

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