

# Calabazas Creek Research, Inc. Receives R&D 100 Award for Advanced Cathode Research

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ROCKAWAY, N.J. – The editors of *R&D Magazine* announced that Calabazas Creek Research Inc. (CCR), and its associate Ron Witherspoon, Inc. (RWI), are among the winners of the 49<sup>th</sup> Annual R&D Awards, which salute the 100 most technologically significant products introduced into the marketplace over the past year. CCR received the award for development of *Controlled Porosity Reservoir Cathodes*. A full list of this year's winners is available at [www.rdmag.com](http://www.rdmag.com).

The R&D 100 Awards have long been a benchmark of excellence for industry sectors as diverse as telecommunications, high-energy physics, software, manufacturing, and biotechnology. For industry leaders, government labs, and academic institutions, the awards can be vital for gauging their efforts at commercialization of emerging technologies. And in winning an R&D 100 Award, developers often find the push their product needs to find success in the marketplace.

Cathodes provide the electron source for a broad range of electron beam devices, including RF sources, medical, industrial, and scientific accelerators, X-ray sources, lithography equipment, and precision welding. Previous cathodes were limited to low current densities to achieve long lifetime and often produced beams with nonuniform emission. *Controlled Porosity Reservoir Cathodes* (CPRCs) allow an order of magnitude increase in current density while providing more than four times the lifetime. Controlled porosity provides electron sources with extremely uniform current emission. The cathodes provide a dramatic increase in performance with simultaneous increase in lifetime.

Funding for the development was provided by the U.S. Department of Energy through the *Small Business Innovation Research* (SBIR) program. The SBIR program funds small businesses to pursue innovative research that can have a significant impact on society.

*Controlled Porosity Reservoir Cathodes* join a long list of products that have received R&D 100 Awards, including the flashcube (1965), the automated teller machine (1973), the halogen lamp (1974), the fax machine (1975), the liquid crystal display (1980), the Kodak Photo CD (1991), the Nicoderm anti-smoking patch (1992), Taxol anticancer drug (1993), lab on a chip (1996), and HDTV (1998).

Winners of the R&D 100 Awards are selected by an independent judging panel and the editors of *R&D Magazine*. The publication and its online portal serve research scientists, engineers, and other technical staff members at high tech industrial companies and public and private laboratories around the world.