

New power cell works for nearly 20 years

October 11 2005

University of Missouri-Columbia scientists say they've developed a power cell capable of providing continuous power for years.

The scientists from the university's research reactor and the Qynergy Corp. say their discovery will create new capabilities for applications that require longer power life in compact, low volume containers. The cells have the potential of continuously generating small amounts of electricity for nearly 20 years.

"In our research, we were able to obtain an energy conversion efficiency of 11 percent, while the highest success to date had only been 5 percent," said David Robertson, associate director of research and education at research reactor.

The technology used in betavoltaic power cells is similar to solar power generation, but uses radioisotopes as the energy source, researchers said. The cells use isotopes that are fully contained within the power cell -- similar to the radioactive source found in many smoke detectors -- and can be used without external risk.

The technology transforms beta particles into electrical power with the capacity to generate electricity for years, depending on the energy and half-life of the isotope used.

The project was funded by the U.S. Air Force Research Laboratory, Space Vehicles Directorate.

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