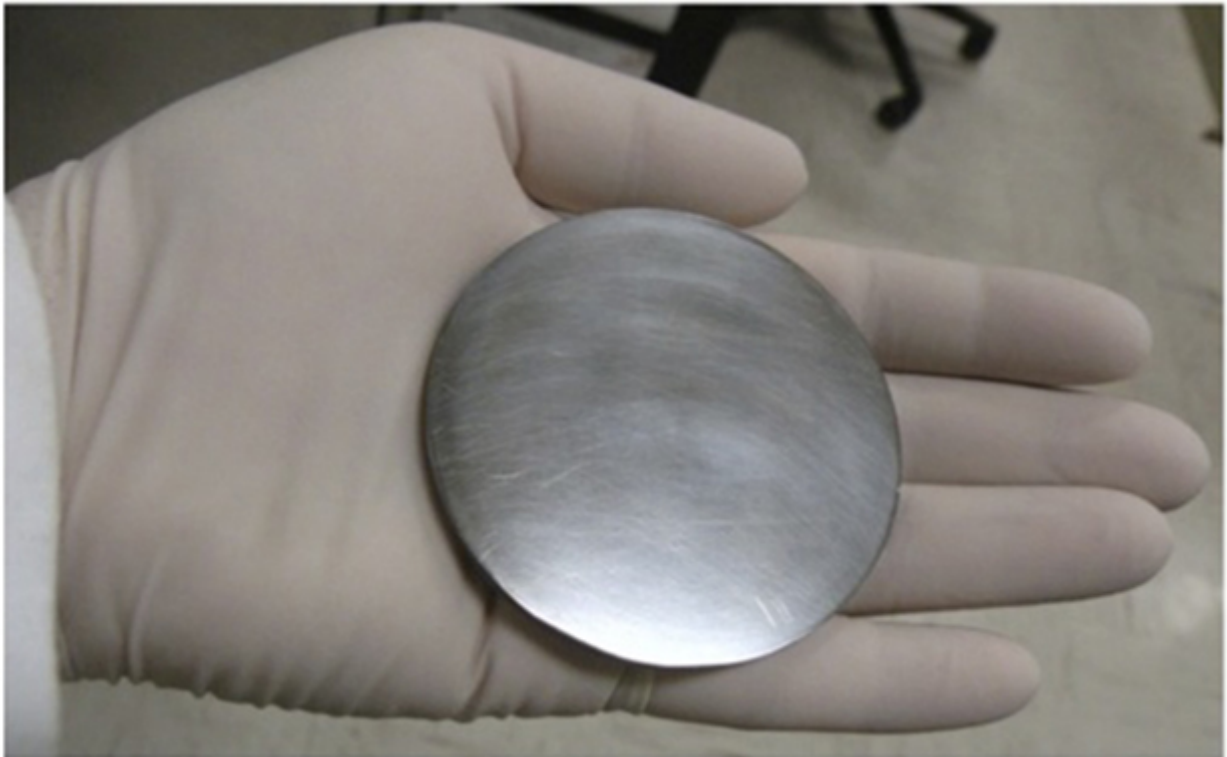


Company developing commercial tech to convert heat to electricity

April 9 2015, by Elizabeth Landau



This thermoelectric material called skutterudite can be used for power generation. Credit: NASA/JPL-Caltech

NASA's Jet Propulsion Laboratory, Pasadena, California, has licensed patents on high-temperature thermoelectric materials to Evident Technologies, Troy, New York, which provides these kinds of materials

and related power systems.

Thermoelectric materials convert heat into electricity. For example, by using this technology, waste-heat from a car could potentially be fed back into the vehicle and used to generate electricity. This would increase efficiency and deliver low-cost solutions for harvesting waste heat.

"The licensed technology could be applied to convert heat into electricity in a number of [waste heat recovery](#) applications, including automobile exhaust and high-temperature industrial processes such as ceramic and glass processing plants," said Thierry Caillat, task leader for the thermoelectrics team at JPL.

JPL has a long history of high-temperature thermoelectric development driven by the need for space mission [power](#) in the absence of sunlight. Many space probes that leave Earth's orbit use thermoelectrics as their electrical power source.

NASA's Voyager 1 (the first spacecraft to enter interstellar space) and Voyager 2 are still traveling away from the sun using thermoelectric power systems, more than 35 years after their launches. Both of these spacecraft use radioisotope thermoelectric generators (RTGs), systems that convert heat from a radioactive decay process into electricity. NASA's Mars Curiosity rover, the largest vehicle to ever land and operate on Mars, also relies on a similar system for power.

On Earth, Evident Technologies will use technological advances from JPL in this area to develop commercial, high-temperature thermoelectric modules for terrestrial applications.

"We feel that there is an unmet need for customers who want to convert high-temperature heat into [electricity](#)" said Clint Ballinger, CEO of

Evident Technologies, "We are excited to capitalize on these NASA advances and plan to launch commercial products very soon."

Currently there are no commercially available products that use this NASA-developed technology. Evident plans to launch product based on this [technology](#) within the next three months.

Evident Thermoelectrics provides thermoelectric solutions for power generation. JPL is managed by the California Institute of Technology for NASA.

Provided by NASA

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