

Life of plastic solar cell jumps from hours to 8 months

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A team of researchers from the University of Alberta and the National Institute for Nanotechnology has extended the operating life of an unsealed plastic solar cell, from mere hours to eight months.

The research groups' development of an inexpensive, readily available plastic solar cell technology hit a wall because of a chemical leeching problem within the body of the prototype. A chemical coating on an electrode was unstable and migrated through the circuitry of the cell.

The team led by U of A and NINT chemistry researcher David Rider, developed a longer lasting, polymer coating for the [electrode](#). Electrodes are key to the goal of a solar energy technology, extracting [electricity](#) from the cell.

Prior to the polymer coating breakthrough the research team's plastic solar cell could only operate at high capacity for about ten hours.

When Rider and his research co authors presented their paper to the journal, *Advanced Functional Materials*, their plastic solar cell had performed at high capacity for 500 hours. But it kept on working for another seven months. The team says the unit eventually stopped working when it was damaged during transit between laboratories.

The collaborative research by Jillian Buriak, Michael J. Brett Rider, Rider's colleagues at the University of Alberta and the National Institute for [Nanotechnology](#) will be published June 22 in the journal, *Advanced*

Functional Materials.

Provided by University of Alberta

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