

Solar Inventions' breakthrough cell architecture awarded patents in China and Israel, and a second patent in the U.S.

Technology proven to reduce silver costs and increase power generation with guaranteed return on licensing fees

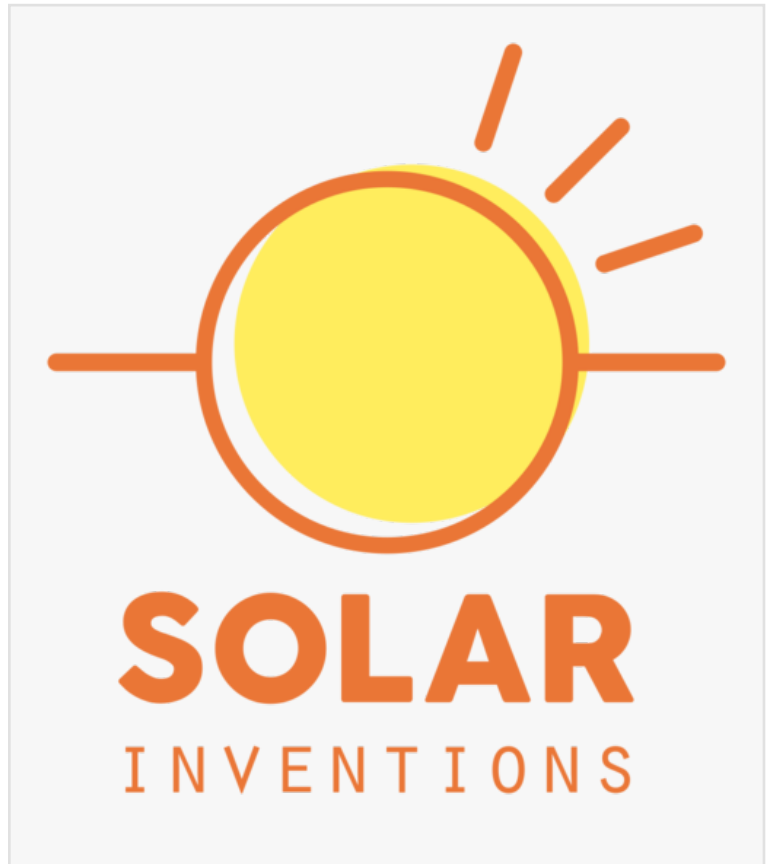
ATLANTA, GEORGIA, UNITED STATES, December 13, 2022 /EINPresswire.com/ -- Solar Inventions has been granted important new patents in the United States, China and Israel on its invention of an improved architecture for solar photovoltaic cells and modules, the company announced.

The United States has issued effective Dec. 13 a "continuation patent" which greatly broadens the claims from the company's first issued patent, US 11145774, and now includes the most modern cell structures.

"As the solar industry shifts to new cell structures such as Topcon and HJT and production continues to accelerate around the globe, the economic benefits of our [Configurable Current Cell \(C3\)](#) technology gain importance," said Dr. Ben Damiani, the firm's Chief Technology Officer. "C3 dramatically increases silver cost savings for solar cell manufacturers, while adding power and resiliency."

China recently issued patent CN 111868935 for Solar Inventions' C3 technology, on October 21, 2022. Israel published patent IL 279079 in November, and lacking opposition, will issue it on February 1, 2023. Applications are pending in the European Union and 13 additional countries, including Australia, Brazil, Canada, Egypt, India, Japan, Korea, Mexico, Saudi Arabia, Taiwan, Turkey, United Arab Emirates, and Vietnam, which together account for nearly 90% of the worldwide solar market.

Dr. Damiani, a [veteran inventor](#) in the solar and semiconductor sectors who previously worked at Suniva and Intel, discovered that he could create multiple "lanes" or subcells on a single wafer by electrically dividing each cell during the metalization process. The process requires no capital





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*Dr. Ben Damiani, Solar
Invention's Chief Technology
Officer*

expenditure or process change from PV cell manufacturers to implement.

This technique effectively creates a new architecture that improves cell, module, and system performance, while saving up to 18% of the silver required — between US \$2-5 million in savings per gigawatt at prevailing silver prices.

The improved cells and panels can easily be made on existing PV factory lines, without any new equipment or materials. CEO Gregg Freishtat says manufacturers that

license the technology will pay only a fraction of the silver savings created thereby guaranteeing increased profit from the very first cell produced using C3.

“It’s exciting to see something brand new like C3,” said Abasifreke (Aba) Ebong, Professor and Director of the Graduate Program in Electrical and Computer Engineering at the University of North Carolina at Charlotte. “The resistively bounded subcells in C3 have the promise to spawn a whole family of new innovations.”

The technology won first place in the U.S. Department of Energy’s American-Made Solar Prize contest for innovative technologies, in September 2019. Since then, Freishtat said, “Cherry Street Energy, one of the largest and most innovative renewable energy providers in the Southeast, installed the first C3 cells in a commercial rooftop installation in Athens, Georgia over two years ago and has enjoyed fantastic performance.”

Manufacturers may license the technology by contacting Gregg Freishtat, Chief Commercial Officer, at gregg@solarinventions.com.

About Solar Inventions

Solar Inventions was created to accelerate the pace of innovation in solar and other clean energy solutions. Our Configurable Current Cells (C3), based on the work of Dr. Ben Damiani, won the first-ever American-Made Solar Prize from the U.S. Department of Energy in 2019 for breakthroughs in photovoltaics that expand the flexibility and effectiveness of traditional solar technology without requiring new equipment or manufacturing techniques. Learn more at www.solarinventions.com

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