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SPOTLIGHT



WRAPPED IN SOLAR BLANKETS

DARREN LIPOMI



ACADEMIC POSITION

Assistant Professor NanoEngineering University of California, San Diego
2012 - current

“ The problem with today's solar panels is that they are expensive, heavy, and fragile. So, imagine if you could make a solar panel thinner than a human hair, ball it up the size of a grapefruit, and unfurl it on a jagged mountainside to catch sunlight. ”

CURRENT RESEARCH

The state-of-the-art flexible solar technology that Dr. Lipomi of University of California, San Diego is working on is called the "solar tarp" -- an inexpensive, extremely lightweight, portable solar module that could be installed anywhere in the world for a small fraction of the cost of current solar technologies.

Skin-like semiconductors have numerous applications for our future energy needs, such as significantly reducing the costs of manufacturing, installing, and repairing solar panels on a massive scale. Additionally, this research on stretchable semiconductors directly impacts the healthcare industry because of their applications in prosthetic sensors and conformable devices for monitoring electrical, chemical, and mechanical signals inside and outside the human body. Dr. Lipomi's research leads to fundamental discoveries and inventions in the field of multifunctional materials, which currently have applications in energy and health sciences.

Dr. Lipomi sought his position in academic research for two equally motivating reasons. First, he regards education as the ultimate enabling force in combating essentially all societal problems, from global warming to disease to ethnic violence. Second, he selected his research topics to blend fundamental science with tangible, near-term applications that if successful would contribute in a significant way to the flourishing of humanity on the global scale.

CATEGORY

Renewable Energy Technologies

AWARDS

Postdoctoral Fellowship (at Stanford University), 2010

STAGE OF RESEARCH

Applied

Fieser Award Lecture, 2010

Elected Chair, Graduate Student & Post-Doc Council, 2009