



NEXT GENERATION SOLAR CELLS FOR LIGHTWEIGHT, CONFORMAL AND RENEWABLE POWER

OVERVIEW:

Organic photovoltaic technology has been used to develop lightweight, conformal and textile integratable photovoltaics (PVs) to help address Soldier power needs.

DESCRIPTION:

The core technology is based on thin polymer coatings that are applied to flexible plastic films or wires in a cost effective roll-to-roll manufacturing process.

WARFIGHTER PAYOFF:

Weight reduction, increased mobility, extend mission times, minimized logistics support requirements, and emergency backup power generating device. The devices are also stealthy, user friendly, require minimal electrical connections and cost effective.

APPLICATIONS:

- Battery Rechargers: Portable (AAs, BB2590, etc.) and Stationary - kW's power from larger surface areas structures (shelters, vehicles - manned and unmanned).
- Hybrid Power: Complement to generators.
- Sensor Arrays: Minimize power resupply for remote, distributed sensor arrays.
- Modular Power: Provide pockets of power, minimize wires/connects.

NEW - UNIQUE CONCEPTS WITH THIS TECHNOLOGY:

- Photovoltaic Fibers: First laboratory demo of a PV fiber. Fibers have been woven into conventional NYCO cloth.

COLLABORATION/TRANSITION:

- Air Force Research Laboratory - panels have been installed on a 16' x 32' shelter at Tyndall AFB for evaluation of long-term stability.

POINT OF CONTACT:

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