Media Contact: **Dean L. Ledger**
Global Photonic Energy Corporation
800-599-4426
dledger@globalphotonic.com
www.globalphotonicenergy.com

Global Photonic Energy Corporation's Research Partners Develop New Materials for Enhanced Performance in Organic Solar Cells

-- Latest breakthrough sets stage for higher power levels in organic solar cells --

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EWING, New Jersey, July 24, 2006 – Global Photonic Energy Corporation (GPEC), the leading developer of Organic Photovoltaic (OPV™) technology for ultra-low cost, high power solar cells, today announced that the Company's research partners at the University of Southern California (USC), Princeton University (Princeton) and the University of Michigan (Michigan) have identified new materials that when integrated into an organic solar cell double the open-circuit voltage and illustrate the potential to greatly increase the power output in an optimized device. New material advances, like this most recent, promise to rapidly accelerate the performance of ultra-low cost, high power organic solar cells.

This latest achievement is part of GPEC's overall research and development efforts aimed at increasing the operating performance of its OPV™ technology. The Company's partner researchers detail their work in the June 2, 2006 issue of *The Journal of the American Chemical Society*.

According to the U.S. Department of Energy's International Energy Outlook 2005, electricity demand will nearly double by 2025 requiring an additional 11.7 trillion kilowatt-hours of capacity. Solar energy must play a major role in meeting this demand to mitigate greenhouse gas effects and meet global emission standards. Global solar cell production has grown 25% annually for the last 20 year reaching sales of $9 billion in 2005. This accelerating growth has resulted in a worldwide shortage of semiconductor silicon driving solar cell prices higher.

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Traditionally, photovoltaic or "solar" cells have been constructed of an inorganic semiconductor like silicon. Efficient silicon based devices, especially of large surface area, are difficult and expensive to produce. Silicon cells are fragile, heavy and opaque – limiting applications and potential uses. Cost is a critical factor in the solar cell industry as solar generated power is still four to six times more expensive to consumers than coal generated power.

Recent efforts have focused on the use of "organic" semiconductor materials. Organic semiconductors contain the ubiquitous element Carbon and have the potential to achieve ultra-low cost production costs and high power output. Organic materials are ultra-thin, flexible and can be applied to large areas including curved or spherical surfaces. Because the organic layers are so thin, transparent solar cells can be fabricated creating power-generating windows that retain their basic functionality.

GPEC sponsored researchers at USC, Princeton and Michigan, led by Professor Stephen R. Forrest at Michigan and Professor Mark E. Thompson at USC, have focused on organic "small-molecule" devices that are assembled literally a molecule at a time in highly efficient nanostructures.

Solar cell researchers have long sought to boost the power output of photovoltaic cells, which in turn reduces their cost per kilowatt-hour – an important comparison criteria for electrical power generation technologies. Solar cell power output is the product of open-circuit voltage, short-circuit current and a metric called "fill-factor". Maximizing each of these variables maximizes power output. A high-efficiency organic solar cell typically has a open-circuit voltage of 0.54 volts. Silicon solar cells can have an open-circuit voltage as high as approximately 0.71 volts.

In this recent work, GPEC partner researchers at USC, Princeton and Michigan achieved an open-circuit voltage of 0.97 volts, while surpassing the power output of a control organic solar cell by over 50%.

"This latest research demonstrates that we can achieve high open-circuit voltages in small-molecular organic solar cells while also making gains in power output," said Dr. Stephen R. Forrest, Vice President for Research and as the William Gould Dow Collegiate Professor in Electrical Engineering, Materials Science and Engineering, and Physics.

Organic materials can be applied to virtually any surface using a low-temperature method akin to spray painting. Production methods of this sort are easily adaptable to continuous and so called "roll-to-roll" manufacturing processes and hold the promise of

dramatically reduced production costs. Organic materials also can be used in flexible applications. GPEC's proprietary OPV™ technologies can be used to create photovoltaic cells of different colors or cells that act as window tinting in building integrated applications.

Aaron L. Wadell, Chief Operating Officer of Global Photonic Energy Corporation, stated, "We would like to congratulate Professors Thompson and Forrest on this latest achievement. The combination of new materials, new fabrication approaches and device-level architectural innovations continues as one of the hallmarks of this highly productive team."

About Global Photonic Energy Corporation

Global Photonic Energy Corporation (GPEC) is the world leader in developing sustainable molecular Organic Photovoltaic (OPV™) technologies. GPEC is collaborating with world-class organizations to transform the energy and photovoltaic markets. GPEC has research partnerships with the University of Southern California, the University of Michigan and Princeton University.

GPEC was founded in 1994 by entrepreneur Sherwin I. Seligsohn. Mr. Seligsohn has been the Chairman of the Board and Chief Executive Officer of the Company since its inception. Mr. Seligsohn is also the founder, Chairman and Chief Executive Officer of Universal Display Corporation, a public company (NASDAQ: PANL).

Global Photonic Energy Corporation is located at the Princeton Crossroads Corporate Center in Ewing, NJ, minutes away from Princeton University.

To learn more, visit www.globalphotonicenergy.com