Konarka and Evident to Develop Ultra High Performance Power Plastic

March 23 2005

Companies' novel polymers and quantum dots target capturing broad spectrum of both visible and invisible light

Konarka Technologies, Inc., an innovator in developing and commercializing power plastics that convert light to energy, and Evident Technologies, a leader in quantum dot development and applications, today announced the companies are collaborating on research to increase the sensitivity of plastic solar cells to a wider range of the light spectrum. Using Konarka's proprietary polymers and Evident's quantum dots, the team is developing novel materials that improve the overall performance of power plastic.

"As part of our continuing efforts to push photovoltaic science forward, we've learned how to get sensitivity outside the visible light spectrum, including the infrared, with our polymers," said Russell Gaudiana, Ph.D., vice president of research and development, Konarka. "This collaboration is focused on determining the best materials to capture more light and how to manufacture them outside the lab environment."

Evident's proprietary EviDots™, which are high performance semiconductor nanocrystals active throughout the visible spectrum and into the near–infrared, are being combined with Konarka's conductive polymers to create ultra high performance solar cells that exceed the capabilities of today's best silicon-based technologies. The project is in keeping with both companies' stated missions to offer high-efficiency, low-cost materials in new form factors. The quantum dot power plastic

could be used for demanding energy, communications and military applications, such as battlefield or off-grid power generation.

“Through our proprietary nanotechnology, we uniquely design the optical and electronic properties of our EviDots. Our quantum dots are tuned to absorb light over the solar spectrum from the visible through the infrared. This leads to harvesting a greater portion of energy, resulting in greater efficiencies for solar cells,” commented Michael LoCascio, chief technology officer, Evident Technologies. “By combining our quantum dots with Konarka’s innovative solar cell technology, together we are going to lead the way in making ultra high performance plastic solar cells a commercial reality.”

This program with Evident complements Konarka’s ongoing efforts to develop different coat-able and printable chemistries for its light-activated power plastic. Each chemistry can be tuned to a specific purpose, enabling customers to choose the performance that best suits the power requirements of their devices, systems or structures.