## Banpil Photonics, Inc. announces issuance of core patent for nano-enabled electronic and photonic devices

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## Banpil nanostructures enable innovations in highly sensitive multispectral sensors, energy harvesting, and high-efficiency solar cells on foreign substrates such as plastic

**SANTA CLARA, California – February 12, 2010 -** Banpil Photonics, Inc., a leading company in expanding the boundaries of optics and electronics through innovation, today announced that the United States Patent and Trademark Office has granted the company a new core patent based on the use of nanostructures for fabricating high performance electronic and photonic devices. The new patent is at the core of Banpil's highly sensitive multispectral image sensors, energy harvesting, and high-efficiency solar cells technologies.

Photonic devices that will be transformed by this innovation include energy efficient solar cells and energy harvesting thermo-electric generators; and electronic devices include high sensitivity sensors and next generation CMOS devices. Banpil's breakthrough technology in quantum dots provides an innovative way to transfer nanoscale devices from the original substrate on which it is created to a third substrate or layer. This means nanoscale devices can be independently formed on any substrate. For example, a high-efficiency crystalline solar cell can be formed on plastic and other foreign substrates.

This is a significant breakthrough opening new avenues of innovation in multiple applications. In photonic devices, especially solar cells, this will enable solar cell fabrications into a lot more surfaces which may not be desirable for the traditional solar equipment, for example all kinds of building surfaces exposed to the sun. Self-powered or energy generating buildings and homes with become a reality without interfering with aesthetics that limit solar deployments today, and all this at high energy efficiency since the technology can apply to crystalline solar cells as well as with other solar cell materials.

"The benefits renewable energy through solar and energy harvesting from waste and the environment are clear and exciting," noted Banpil CEO Dr. Achyut Dutta. "In addition, this innovation when applied to electronic devices extends functionality to enable multispectral image sensors and high sensitivity electronic sensor that will revolutionize imaging in various application areas. We are very pleased and proud to be able to offer this technology in our expanding IP portfolio for companies ready to exploit it for their next generation applications."

Banpil has already demonstrated the novel nanostructure technology in its own patented multispectral image sensors and high-efficiency solar cells technologies. The company welcomes opportunities to work with application developers to explore new or enhanced applications including joint product development, technology licensing, and manufacturing partnerships. Banpil is also actively seeking licensees, strategic partners and investors.

## **About Banpil Photonics, Inc.**

Banpil Photonics develops and licenses fundamental technology expanding the boundaries of optics and electronics. The company has developed an extensive IP portfolio of high-speed interconnects, multispectral image sensors, and high-efficiency photovoltaic technologies. Banpil innovations enable the development and manufacture of new generations of low-cost, high-speed electrical interconnects for chip-to-chip, chip-to-board, board-to-board, and rack-to-

rack applications; multispectral image sensors for automotive & medical imaging, mobile, security, remote-sensing, and communication applications; and photovoltaic technology for solar cell applications. For more information, visit <a href="https://www.banpil.com">www.banpil.com</a>.

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