Evident announces first commercially available non heavy-metal quantum dots

May 23 2005

Indium Phosphide-based, Molecular Plated T2-MP EviTags in Deep Red Colors Offer Benefits for Life Science Research

Evident Technologies today introduced the first commercially available non heavy-metal quantum dot product for life science research, its Molecular Plate T2-MP EviTags.

"To our knowledge, these are the first commercially available bright, long-lasting, quantum dots that do not contain heavy metals, and they represent a real advance in our field," said Clinton Ballinger, Ph.D., CEO of Evident Technologies. "We expect continued use and testing of these EviTags fluorescent labels to open new avenues for life science research."

"The T2-MP EviTags offer a potential range of benefits over traditional quantum dots, especially the possibility of lower toxicity, and, when further developed, a wider range of colors into the near infrared," said Ballinger. "They can also open up potentially vast markets in the European Union and Japan, where researchers have been hesitant to experiment with traditional quantum dots since they typically contain heavy metals that require special handling."

Evident's T2-MP EviTags feature three significant developments: a new ternary (a three component) core material system, new molecular plating shells, and a natural coating on the outer layer.

At the core of the proprietary technology are Evident's Indium Gallium Phosphide (InGaP) quantum dots, which are then coated with a metallic molecular plating. The Molecular Plate(tm) is lattice matched - with a matched pattern of atoms - to improve its molecular bonding to the core. This results in a quantum dot with high brightness and increased stability for longer lasting fluorescence. Evident then further envelopes the plated InGaP quantum dots with a natural coating. This coating allows for high stability in water, can be readily functionalized for life science applications, is long lasting in the harsh environments encountered in biological assays, and is potentially less toxic to cells than traditional heavy metal quantum dots.

The new T2-MP EviTags, are available in the deep red wavelengths used in life science research, and offer the possibility to create new classes of assays for use where current testing materials could produce cytotoxicity or cell death. Potential applications include in vivo imaging - including live cell and even whole animal imaging, blood cancer assays, and numerous other applications.

"Deep red colors are of particular interest to the biological researcher," said Alex Davies, of Antibodies, Inc., a leader in primary and secondary antibody manufacturing and applications. "And having a biologically compatible quantum dot label also lets us further explore in vivo assays, following cells inside living organism to get a new understanding of life."

"We are excited about this new product because it addresses the concerns we have in Japan about Cadmium" commented Shingo Funaki, President of Ocean Photonics, Inc., a leading photonic company. "Many of our customers have asked for an alternative material and we are pleased that the team at Evident has completed the development of this new material system. This pioneering effort is greatly appreciated by our customers."

The deep red T2-MP EviTags are available immediately in wavelengths of Macoun Red (650nm) and Jonamac Red (680nm), with carboxyl, amine, biotin and non-functionalized surfaces.

Evident Technologies