ZEON Develops Coatable Insulator for Organic LED Display

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ZEON CORPORATION (President and CEO: Naozumi Furukawa) has announced it has developed a high-performance coatable organic insulator, ZEOCOAT™, using ZEON's original technology.

The advantages of ZEOCOAT™ are energy savings and reducing the manufacturing costs of flat-panel displays and semiconductors. It possesses excellent properties that enable it to easily replace conventional silicon compounds and other inorganic films. Since ZEOCOAT™ is considerably more transparent than that of conventional materials such as Polyimide, an application for organic LED display (OLED) has been recently developed using this new technology.

This newly-developed ZEOCOAT™ is in a liquid state and can easily be applied using the various coating methods. Users can form a highly transparent thin film by drying at about 150°C. Since ZEOCOAT™ has an excellent thermal resistance, it is less susceptible to heat decomposition. Furthermore, ZEOCOAT™ also exhibits high performance in electric insulation, having a dielectric constant of 3.0, which is lower than that of conventional products. In addition, ZEOCOAT™ can be used in the forming of micron-sized patterns by photolithography.

These features are made possible by using ZEON's specialty base polymer resin, which facilitates minimization of high-polarity substituents containing oxygen, etc., forming thermally and electronically stable molecular structures. Optimization of the base polymer resin, polymerization catalyst, and manufacturing process has enabled mass production, which the Takaoka Plant in Toyama Prefecture is equipped with the facilities to handle.

ZEON CORPORATION is currently conducting a study of the film's applications for TFT (Thin Film Transistors) passivation layer toward its practical use within the next couple of years. The application for TFT will be in addition to the above-mentioned application for organic LED displays as pixel separation layer. Passivation layer and interlayer insulation layer for oxide and organic semiconductors are also under development for potential application in flexible displays using film substrates.

Outside of the display market, ZEON CORPORATION intends to bring ZEOCOAT™ in the future to the semiconductor market where it anticipates billions of yen in sales of these materials by 2015.

For further information

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