

DKN Research Newsletter

#1710, April 16th, 2017 (English Edition)

(Micro Electronics & Packaging)

dnumakura@dknresearch.com, www.dknresearch.com

FineTech Japan 2017

FINETECH JAPAN is one of the more significant trade shows for the Japanese electronics industry. The show was held at Tokyo Big Sight on April 5, 2017. Tracing the roots of the show, FINETECH JAPAN began as an exhibition for new material technologies 26 years ago. The convention expanded year over year to include other segments affiliated with the electronics industry. The following events were added to the trade show over the years: Fiber Optics Expo, International Laser & Photonics Expo, Film Tech Japan, Plastic Japan, Metal Japan and Ceramics Japan. Two new events were added this year - Video Communication Expo and Joining Japan. The East Hall of Tokyo Big Sight was fully booked.

There were over fifteen hundred companies and organizations represented at the trade show. The venue was packed with visitors; the aisles were tough to negotiate making it almost impossible to view the entire exhibition. I had to divide and conquer, so I focused on Finetech and Filmtech, and I had to pass by many interesting displays due to my time constraint.

Many exhibitors featured various materials using new technologies with hopes of securing new applications. Most of the key words throughout the show were Wearable, Printable, Flexible, Elastic and Transparent. The two big suppliers of functional films, Toyobo and Teijin, and two large printing companies, Dainippon Printing and Toppan Printing reserved large booths. Textile manufacturers Unitika and Kurabo displayed many kinds of functional materials that included plastic resins, films, laminates, powders and inks with special functions. It seems they are preparing for an increase in the display devices market. An engineering representative for one company explained that the flexible display would be ready in the near future; the problem for these Japanese material manufacturers is that the display device business shifted to other countries.

Transparent is a relatively new trend. Material suppliers expected a significant volume for display panels and touch panel screens, but this very competitive market is putting pressure on margins. Material suppliers are also expecting a spike in business from medical and healthcare applications. Wearable Electronics is a market that is exploding, and margins are extremely fat. Sales could be smaller than other consumer applications, however, customers require

higher reliabilities, and Japanese manufacturers can retain their competitive position in the market. Material manufacturers are ready to supply transparent substrates, transparent conductors and transparent dielectric materials. This means transparent flexible circuits are ready for volume production.

FineTech Japan featured a lot of progress with the functional materials in the industry. We could be one step closer to the new electronics, with just a few more tweaks.

Dominique K. Numakura, dnumakura@dknresearch.com
DKN Research, www.dknresearch.com

*To see the back numbers of the newsletter, please visit following URL.

<http://www.dknresearchllc.com/DKNRArchive/Newsletter/Newsletter.html>

Headlines of the week

(Please contact haverhill@dknresearch.com for further information of the news.)

1. Tokyo Metropolitan University (Tokyo, Japan) 3/28
Has developed a new precious synthesizing process of organic conductive polymers with high performances. It could be valuable as the key material of photovoltaic cell and OLED devices.
2. Panasonic (Major electronics company in Japan) 3/27
Has developed a new small size angle sensor with high accuracy for automobile applications.
3. Tohoku University (Sendai, Japan) 3/27
Has co-developed a volume production process of silicon base precious UV sensor photo diode with SII for wearable devices and IoT devices.
4. Asahi Kasei (Major chemical company in Japan) 3/30
Will increase the manufacturing capacity of the separator for lithium ion batteries in Moriyama Plant in Shiga-Prefecture.
5. NICT (Major R&D organization in Japan) 4/4
Has developed the world strongest deep UV LED (wave length: 265 nm) with over 150 mW power for medical and industrial applications.
6. DNP (Major printing company in Japan) 4/3

Has started a new visible service for healthcare management of the companies. The system measure the mental stress levels of the employees.

7. NEDO (Major R&D organization in Japan) 4/3

Has started a field test of the new hybrid power generation system of fuel cell and micro gas turbine engine.

8. AIST (Major R&D organization in Japan) 4/11

Has co-developed a new stress sensor sheet with DaiNippon Printing. The sensor array on the sheet measure the distortion of bridges continuously.

9. JST (Major R&D organization in Japan) 4/11

Has co-developed a synthesizing process of the solid state switching material with Kyoto University. The lighting switches the ion stream.

10. Hamamatsu Photonics (Major optical device manufacturer in Japan) 4/11

Has developed the world smallest stabilized power source module with low noise for medical and healthcare systems.

11. Kobe University and Osaka University (Japan) 4/10

Has co-developed a new high efficiency photo catalyst for hydrogen production process. The new catalyst increase the hydrogen generation rate more than ten times.

Recent Articles of DKN Research

Please find the full articles at the following web site.

<http://www.dknresearchllc.com/DKNRArchive/Articles/Articles.html>