Abstract and speaker's information

Name: Je Ping Hu

Company and position

Deputy General Director of Electronic and Optoelectronic System

Laboratories, ITRI

Photo



Presentation title: Flexible electronics at ITRI

Abstract (<300 words)

Printed Electronics has been developed over the past two decades. There are lots of applications and products that have been brought to the market. Each major market region has deployed its own strategies to support the development of printed electronics.

Taiwan has strategically invested in flexible electronics since 2005. With the government's support, ITRI has established the first flexible electronics pilot laboratory in Asia in 2007. The purpose is to facilitate the development of flexible electronics with global partnerships. During these years, many Taiwanese companies have entered the stage of mass production in flexible electronics, including applications such as E-paper, printed touch panels, large area pressure sensors as well as material for solar cells. These companies have taken on leading roles in their respective areas.

With growth opportunities for flexible electronics being limited within the display industry, With the display industry becoming mature, printed electronics is seeking for a new drivers. And with the effects of the Covid-19 pandemic spread widely, new opportunities in the medical device area are becoming apparent. However, only and integrated product-solution approach and versatile business model will ensure successful. Hence, ITRI has established two key service offerings to smooth the stony road from lab to fab, available to all global partners.

- 1. Our versatile roll-to-roll and printing lab is designed for new process/equipment and material evaluation.
- 2. A one-stop shopping IoT integrated service center (lisC) is to assist the partners to bring early prototypes all the way to a market-ready product.

Through these services, we are able to speed up and smoothen the path from lab to fab (TRL 3^4 all the way to TRL 6 or higher) for our partners.

Bio

Je Ping Hu received his Ph.D. in Material Science and Engineering from the National Chiao Tung University, Taiwan, in 1997. Then, he joined ITRI. He has been focusing on the area of printed and flexible electronics area for over 20 years. His research and development efforts have led to the foundation of three start-up companies spun out from ITRI. He became the director of the flexible electronics division in 2008. In 2015, he was promoted to the position of the deputy general director of the electronic and optoelectronic system research lab (EOSL).

He has been a steering committee member of ICFPE (International Conference on Flexible and Printed Electronics) since 2009, and is currently organizing the 2019 ICFPE in Taiwan. He was runner-up of the Wall Street Journal Technology Innovation Award in 2010. Furthermore, he was awarded the title of "Outstanding Engineer" by the Chinese Institute of Engineers in 2013 and received the "National Industrial Innovation Award" from the Ministry of Economic Affairs of Taiwan in 2017. Meanwhile, he also won a "Technical Management Award" from the Chinese Society for Management of Technology.

In recent years, he was able to set up a roll-to-roll lab at ITRI, the purpose of which is to support innovative research and development in the area of printed electronics. Also, he leads an IoT integrated service center (IisC) to help new companies to quickly introduce their IoT products to market.

Company profile

Industrial Technology Research Institute (ITRI) is one of the world's leading technology R&D institutions aiming to innovate a better future for society. Founded in 1973, ITRI has played a vital role in transforming Taiwan's industries from labor-intensive into innovation-driven. It focuses on the fields of Smart Living, Quality Health, and Sustainable Environment. Over the years, ITRI has incubated over 270 innovative companies, including well-known names such as UMC and TSMC. In addition to its headquarters in Taiwan, ITRI has branch offices in the U.S., Europe, and Japan in an effort to extend its R&D scope and promote opportunities for international cooperation around the world.

