

Thinfilm and Polyera Partner to Bring Printed CMOS Memory to Market

OSLO, November 30 - Thin Film Electronics ASA ("Thinfilm") today announced a partnership with Polyera - a developer and supplier of high-performance functional materials for the flexible and printed electronics industry. Thinfilm and Polyera will jointly develop organic semiconductor materials for high-volume printing of Thinfilm Addressable Memory™ and printed integrated systems. The collaboration brings printed integrated systems, such as smart sensor tags, closer to commercial availability.

Thinfilm and Polyera will co-develop gravure based ink formulations for use in high-throughput printing equipment and will prototype integrated printed system products incorporating Polyera materials, including n-type semiconductors, with Thinfilm Addressable Memory.

"Polyera's groundbreaking work on n-type organic transistors has paved the way for printed CMOS circuits - more energy-efficient logic circuitry with simpler design. Such printed logic plays a key role when we now are combining our memory technology with other printed components to enable printed systems," said Davor Sutija, Thinfilm CEO.

Using Polyera materials, Thinfilm and PARC, a Xerox company, recently demonstrated a prototype of the world's first printed non-volatile memory device addressed with complementary organic circuits, the organic equivalent of CMOS circuitry. Thinfilm Addressable Memory combines Thinfilm's polymer-based memory technology with PARC's transistor technology using complementary pairs of n-type and p-type transistors to construct the circuits. The addition of integrated circuits makes the roll-to-roll printed Thinfilm Memory addressable by printable logic.

"We are building an ecosystem and supply chain for a world filled with the 'Internet of things', where everything is connected via a 'smart' tag. By engaging with state-of-the-art partners like Polyera, Solvay, who provides the ferroelectric polymer memory material, and InkTec, who recently opened a facility dedicated to manufacturing Thinfilm Memory, we move significantly closer to our goal of enabling fully printed electronics and our 'memory everywhere' vision," Sutija continued.

The agreement calls for Polyera to supply commercial quantities for Thinfilm and partner manufacturing and to have exclusive rights to ink formulations developed for Thinfilm's field of use.

Led by a world-class R&D team recognized for their breakthroughs in the development of solution-processable semiconductors and dielectrics, Polyera is

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focused on creating breakthrough materials platforms and providing in-depth technical support to enable their partners to rapidly commercialize fundamentally new types of electronic products.

“Thinfilm has a truly exciting roadmap to rapidly commercialize printed memory and logic,” said Philippe Inagaki, founder & CEO of Polyera. “The future of electronics will be enabled by revolutionary advances in materials technology. We are pioneering these materials, and we are working closely with customers and partners to make sure this future becomes reality.”

Posted by Jason Lomberg, Technical Editor

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