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Smartkem

Smartkem Signs Multi-Year Agreement with FlexilC to Develop a New Generation of CMOS for Smart Sensors

New project builds on ongoing collaboration to develop custom circuits using Smartkem's organic transistor technology

MANCHESTER, England, Dec. 5, 2024 /PRNewswire/ -- Smartkem (NASDAQ: SMTK), which is seeking to change the world of electronics using its disruptive organic thin-film transistors (OTFTs), has signed a multi-year agreement with FlexilC, a company providing innovation in the design of flexible integrated circuits and systems, to begin a new project to develop a new generation of CMOS for smart sensors.

The goal of the two-year project is the development of custom circuitry using Smartkem's organic thin-film transistor (OTFT) technology and n-type oxide TFT to make low-power CMOS enabled sensor devices. The devices are expected to incorporate mixed signal and digital IPs, such as RISC-V cores (a circuit type which uses an open-source instruction set), as well as utilizing machine learning (ML), a type of artificial intelligence (AI) that allows machines to learn and improve from data without being explicitly programmed, to improve processing of signals.

Smartkem Chairman and Chief Executive Officer, Ian Jenks commented, "This project with FlexilC furthers Smartkem's technology for potential use in the field of large area, low power consumption electronics suitable for the internet-of-things (IOT), a market which is expected to grow to approximately \$4,062.34 billion by 2032, a CAGR of 24.3% from 2024[1]. The use of CMOS architecture in this application is significant as it consumes much less power, has better noise margins, generates less heat and has enhanced scalability compared to alternative PMOS architectures. We are excited to be involved in this ambitious project and, if successful, we believe that this project will demonstrate the utility of Smartkem's technology in next generation biosensors, force sensors, optical sensors, chemical sensors, item level tracking, and other new areas of flexible electronics."

FlexilC co-CEO Dr Eloi Ramon stated "Our innovative sensor acquisition platform offers affordability, adaptability, and eco-friendliness, empowering diverse sensor applications with robust amplification and transmission capabilities to mitigate noise interferences effectively. The partnership in this project with Smartkem to provide custom circuits in foil with low power and a rapid turnaround from design through fabrication is vital to the success of system in foil devices".

The project commencement is subject to receipt of the approval of grant funding by the Centro para el Desarrollo Tecnológico Industrial (CDTI), a Spanish public entity under the Ministry of Economy and Competitiveness.

About Smartkem

Smartkem is seeking to reshape the world of electronics with its disruptive organic thin-film transistors (OTFTs) that have the potential to revolutionize the display industry. Smartkem's patented TRUFLEX® liquid semiconductor polymers can be used to make a new type of transistor that can be used in a number of display technologies, including next generation microLED displays. Smartkem's organic inks enable low temperature printing processes that are compatible with existing manufacturing infrastructure to deliver low-cost displays that outperform existing technology.

Smartkem develops its materials at its research and development facility in Manchester, UK and provides prototyping services at the Centre for Process Innovation (CPI) at Sedgefield, UK. It has a field application office in Taiwan. The company has an extensive IP portfolio including 125 granted patents across 19 patent families and 40 codified trade secrets. For more information, visit: www.Smartkem.com and follow us on LinkedIn <http://www.linkedin.com/company/Smartkem-limited>.

About FlexiiC

Founded by organic electronics researchers and chip designers from the Institute of Microelectronics of Barcelona (IMB-CNM-CSIC), FlexiiC provides innovation in the design of system-on-chip (SoC) solutions for Edge Computing applied to Smart Systems and IoT.

FlexiiC innovates in the development of disposable electronics for Life Sensing by creating and integrating flexible, organic integrated circuits and sensors using sustainable, functional materials. By incorporating advanced computing capabilities, FlexiiC aims to deliver smart, short-lifespan monitoring systems designed for applications in medical & healthcare, packaging, and environmental applications.

For more information, visit: <https://flexiic.tech/>

Forward-Looking Statements

All statements in this press release that are not historical are forward-looking statements, including, among other things, its market position and market opportunity, expectations and plans as to its product development, manufacturing and sales, and relations with its partners and investors. These statements are not historical facts but rather are based on Smartkem Inc.'s current expectations, estimates, and projections regarding its business, operations and other similar or related factors. Words such as "may," "will," "could," "would," "should," "anticipate," "predict," "potential," "continue," "expect," "intend," "plan," "project," "believe," "estimate," and other similar or related expressions are used to identify these forward-looking statements, although not all forward-looking statements contain these words. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, and assumptions that are difficult or impossible to predict and, in some cases, beyond the Company's control. Actual results may differ materially from those in the forward-looking statements as a result of a number of factors, including those described in the Company's filings with the Securities and Exchange Commission. The Company undertakes no obligation to revise or update information in this release to reflect events or circumstances in the future, even if new information becomes available.

¹ <https://www.fortunebusinessinsights.com/industry-reports/internet-of-things-iot-market-100307>

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