March 22, 2024

Smartkem

Smartkem Commences Project with RiTdisplay To Develop World's First Commercially Ready Active-Matrix OLED Display Using OTFT Technology

Smartkem project funded by Innovate UK as part of Taiwan-UK Research & Development Collaboration.

MANCHESTER, England, March 22, 2024 /PRNewswire/ -- Smartkem (OTCQB: SMTK), the developer of a disruptive type of organic transistor that has the potential to drive a new generation of displays, today announced that it has entered into a collaboration agreement with RiTdisplay Corp. (RiTdisplay), a leading developer of optoelectronic solutions, visual displays and passive-matrix OLED (PMOLED) displays, for the manufacture of a new type of active-matrix OLED (AMOLED) display.

The Taiwanese Ministry of Economic Affairs and Innovate UK, part of UK Research and Innovation (UKRI), announced that they are investing a total of NT $650 million (approx. USD $20 million) to support both Taiwan and UK companies as part of the Taiwan-UK Research & Development Collaboration. As part of the collaboration, UKRI has committed £418.8K (approx. USD $530K) in grant funding to the Smartkem project with RiTdisplay.

Pursuant to the Smartkem and RiTdisplay collaboration, Smartkem will provide its proprietary OTFT materials to RiTdisplay to integrate with its frontplanes (OLED). If successful, the project will create the world's first commercially ready AMOLED display made using organic transistors, with properties of higher brightness, lower power consumption and higher dots per inch (DPI) when compared with existing PMOLED displays. Smartkem's OTFT materials are developed to be coated on standard display process equipment sets, such as spin-coaters, and can be processed at temperatures as low as 80°C. Consequently, this reduces energy usage and associated costs compared with processing inorganic transistor backplanes. If successful, the project is intended to demonstrate that high performance and stable display backplane technology is accessible to display manufacturers at a lower capital and operational cost compared to inorganic TFT technology as plasma enhanced chemical vapor deposition (PECVD) tools are not required. The project is expected to be complete in 2026.Smartkem Chairman and Chief Executive Officer, Ian Jenks comments, "This project follows up on our 2021 joint development agreement with RiTdisplay. If successful, we believe the integration of our materials will result in the development of the world's first commercially ready full color demonstration AMOLED display using OTFT backplanes."

Smartkem intends to engage the Industrial Technology Research Institute (ITRI) in Taiwan to develop a Gen2.5 (370mm x 470mm) backplane process using Smartkem's materials, which it believes will enable faster transfer to manufacturing equipment for commercial production after the project is completed in 2026.

Smartkem's OTCQB information can be found on the OTC Markets website: www.otcmarkets.com/stock/SMTK/overview

About Smartkem
Smartkem is seeking to reshape the world of electronics with its disruptive organic thin-film transistors (OTFTs) that have the potential to drive the next generation of displays. Smartkem's patented TRUFLEX® semiconductor and dielectric inks, or liquid electronic polymers, can be used to make a new type of transistor that has the potential to revolutionize the display industry. Smartkem's inks enable low temperature printing processes that are compatible with existing manufacturing infrastructure to deliver low-cost displays that outperform existing models. The company's electronic polymer platform can be used in a number of display technologies including microLED, miniLED and AMOLED displays for next generation televisions, laptops, augmented reality (AR) and virtual reality (VR) headsets, smartwatches and smartphones.

Smartkem develops its materials at its research and development facility in Manchester, UK and its semiconductor manufacturing processes 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 www.linkedin.com/company/smartkem-limited and Twitter @SmartkemOTFT.

About RiTdisplay Corporation
RiTdisplay is the world's leader of passive matrix organic light emitting diode (PMOLED). RiTdisplay not only holds the world's largest PMOLED production capacity, but also supplies its product to multiple Tier 1 customers around the world. With its main applications ranging from smart appliances, medical devices, set-top boxes, wearables, industrial instruments, to AIOT products.

About Innovate UK
Innovate UK, part of UK Research and Innovation, is creating a better future by inspiring, involving and investing in businesses developing life-changing innovations.

Innovate UK provides targeted sectors with expertise, facilities and funding to test, demonstrate and evolve their ideas, driving UK productivity and economic growth. Join our network and communities of innovators to realise the potential of your ideas and accelerate business growth. Innovate UK: inspiring business innovation.

Forward-Looking Statements
All statements in this press release that are not historical are forward-looking statements, including, among other things, statements relating to the Smartkem's expectations regarding 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 elated 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.

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