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SMARTKEM JOINS HI-ACCµRACY PROJECT DEVELOPING ACTIVE-MATRIX PRINTED Q-LED DISPLAYS

EUROPEAN COLLABORATION AIMS TO REVOLUTIONISE DISPLAY PRODUCTION TECHNOLOGY

MANCHESTER, England, Feb. 23, 2023 /PRNewswire/ -- SmartKem, Inc. (OTCQB: SMTK), a company seeking to reshape the world of electronics with a revolutionary semiconductor platform that enables a new generation of displays, has today announced its participation in a groundbreaking partnership of European technology businesses and research institutions. The collaborative Hi-Accµracy project brings together eleven of the most innovative and forward-thinking companies in the industry in a bid to establish the next generation of Organic and Large Area Electronics (OLAE) - including Organic Thin Film Transistors (OTFT) and Electroluminescent Quantum Dot Light Emitting Diode (EL-QD-LED) based displays.

SmartKem's role will include developing an OTFT back-plane upon which consortium member Fraunhofer IAP will print a QD-LED front-plane. The backplane utilises a compact, two transistor one capacitor (2T1C) circuit. Q-LED materials will be added to the front-plane using high resolution Electro-Static Jet (ESJET) printing. The resulting 300ppi RGB display will showcase the performance of SmartKem's range of TRUFLEX® materials when used in conjunction with micron scale additive patterning processes and low temperature processing conditions. SmartKem believes its technology has the potential to enable the sustainable manufacture of high quality, robust, flexible displays at low cost. SmartKem are also working with consortium member VTT in the project to adapt their OSC inks for compatibility with highly efficient reverse offset printing (ROP) processes.

Dr Simon Ogier, Chief Technology Officer at SmartKem commented "We are pleased to join the Hi-Accµracy project, which will highlight the potential of high resolution printing for making emissive displays driven by solution processed Organic Transistors."

The Hi-Accµracy project is targeting the large printed, flexible and organic electronics global market. This market, dominated by displays, is estimated at €28.3bn with an annual growth rate of greater than 8%[1]. Overseen by an advisory board made up of Sony, Huawei and Polar, the project offers Europe the opportunity to make a step-change beyond the technologies currently utilised in the Far-East – creating valuable intellectual property together with new manufacturing and job opportunities. Hi-Accµracy has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862410. Details of the project can be found at https://www.hi-accuracy.eu/

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 a revolutionary semiconductor platform that enables a new generation of displays, sensors and logic. SmartKem's patented TRUFLEX® inks are solution deposited at a low temperature, on low-cost substrates to make organic thin-film transistor (OTFT) circuits. The company's semiconductor platform can be used in a number of applications including miniLED displays, AMOLED displays, fingerprint sensors and integrated logic circuits. SmartKem develops its materials at its research and development facility in Manchester, UK, and its semiconductor manufacturing process at the Centre for Process Innovation (CPI) at Sedgefield, UK. The company has an extensive IP portfolio including over 175 patents across 17 patent families. For more information, visit: www.smartkem.com and follow us on LinkedIn SmartKem, Inc. | LinkedIn and Twitter @SmartKemTRUFLEX

About HI-ACCµRACY
HI-ACCµRACY aims to deliver the next generation of large area manufacture of flexible OLAE structures such as organic Thin Film Transistors (OTFTs) and Electroluminescent Quantum Dot Light Emitting Diode (EL-QD-LED) displays, to µm-scale feature size printable onto flexible substrates. This is aimed at the large and excisting printed, flexible and organic electronics global market, estimated at €28.3bn with an annual growth rate of >8% which is mainly dominated by displays. HI-ACCµRACY will display front- and back-plane structures with feature sizes approaching 1 µm using low cost materials that can operate at frequencies of >1MHz. This will be achieved through a unique range of cutting-edge materials and printing inks, in combination with inherently scalable, cost-effective printing and deposition approaches, that have non vacuum or minimal vacuum requirement. Materials such as EL-QD-LED material stacks with multilayer barrier layers that can achieve the required WVTR and oxygen transmission rates, novel organic semiconductors and conductive inks that can be produced at low cost with minimal environmental impact are being developed.

HI-ACCµRACY is an ambitious project representing a pan-European EU consortium of world leading research centres and cutting-edge SMEs that are looking to develop and commercialise these technologies of European origin.

The final project demonstrators produced will be validated at the industrial facilities of one of the SME partners and the subsequent displays being further processed and tested by the end-user partners in their testing facilities (TRL5).

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.

[1]Market Share for Printed, Flexible and Organic Electronics (IDTechEx, 2018)

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