



For immediate release

Yisum introduces Low-Cost Copper Conducting Nano-Inks

Jerusalem, Israel, January 7, 2014 - Printed electronics have become a major technology in the electronic industry, since it provides the ability to wire electronic components and circuits with ease and precision. However, silver based conductive inks are very expensive, and copper-based inks that were designed to replace them, are not stable in air. Furthermore, unlike graphical printing, metallic conductive inks require sintering, so that the nanoparticles can join together and form a continuous conductive structure. Current copper-based inks require high sintering temperatures, which further limits their use and application on heat-sensitive surfaces.

Now, Yisum, the Research and Development Company of the Hebrew University of Jerusalem, presents new, oxidation-resistant copper nano-inks with a low sintering temperature (lower than 150°C), which enables the printing of low-cost conductive patterns on heat sensitive plastic substrates. Due to these traits, the new inks, developed by Prof. Shlomo Magdassi, from the Institute of Chemistry and the Center for Nanoscience and Nanotechnology at the Hebrew University, can be tailored for a variety of applications, including ink-jet, flexography and screen printing.

"Printed electronics opens the door to a future of electronic applications such as flexible displays, smart labels, decorative and animated posters, and active clothing. Due to this great potential, the total market for printed, organic, and flexible electronics is projected to grow from approximately \$16 billion in 2013 to \$76.8 billion in the next 10 years," said Yaacov Michlin, CEO of Yisum. "The copper-based nano-ink invented by Professor Magdassi solves some of the major limitations that are preventing widespread use of conductive inks, and we are certain that this novel ink will become an important aspect of the growing industry of printed electronics. Due to its unique properties, the novel ink is suitable for various applications including RFID-tags, solar cells, sensors and electrodes for displays. Yisum is now looking for partners for further development and commercialization of this invention."

About Yisum

Yisum Research Development Company of the Hebrew University of Jerusalem Ltd. was founded in 1964 to protect and commercialize the Hebrew University's intellectual property. Products based on Hebrew University technologies that have been commercialized by Yisum currently generate \$2 Billion in annual sales. Ranked among the top technology transfer companies in the world, Yisum has registered over 8,100 patents covering 2,300 inventions; has licensed out 700 technologies and has spun out 80

companies. Yisum's business partners span the globe and include companies such as Syngenta, Monsanto, Roche, Novartis, Microsoft, Johnson & Johnson, Merck, Intel, Teva and many more. For further information please visit www.yisum.co.il

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