

**FOR IMMEDIATE RELEASE: (10.19.18)**

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**IDTechEX Show: November 14 -15, 2018 in Santa Clara, California**  
*CSSM to Showcase Scalable 3D Nano Printing Technology*

**Boston, MA: The Advanced Nanomanufacturing Cluster for Smart Sensors and Materials (CSSM) will be participating at the IDTechEX Show, a premier business exhibition with over 270 exhibitors engaging with over 3,500 attendees, in Santa Clara, California. Using a patented and disruptive technology for printing nano and microelectronics and sensors, CSSM will feature the world's first and only fully automated printing systems for printing nanoelectronics and sensors. The IDTechEX Show will take place in Santa Clara, CA from November 14 - 15, 2018. Visit the CSSM at booth U36.**

### **Innovative Technology**

Imagine what it would be like if designers had complete freedom to use any material or substrate in their electronics or sensors at the micro or nanoscale. This cannot be done using current nanoscale electronics manufacturing which is very expensive and resource-consuming.

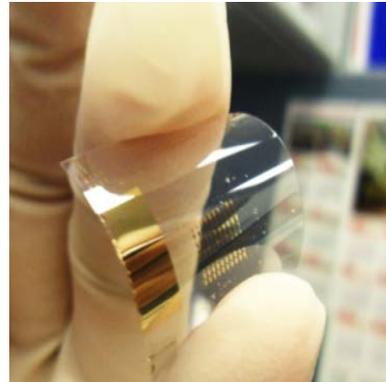
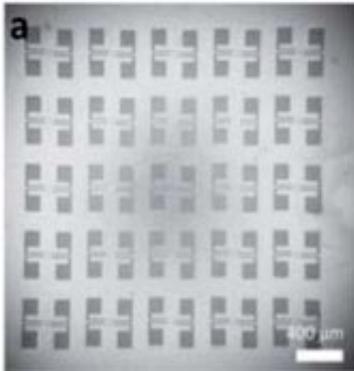
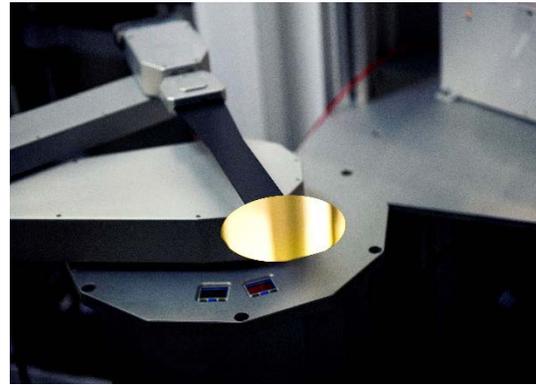
The Nanoscale Offset Printing System (NanoOPS) for electronics, sensors, energy and material applications, however, can print conducting, semiconducting or insulating organic or inorganic materials (nanoparticles, nanotubes, polymers or other nanoelements) using a breakthrough directed assembly-based printing technology.

### **NanoOPS Second-Generation Nanoscale Offset Printing System**

The Advanced Nanomanufacturing Cluster for Smart Sensors and Materials (CSSM) uses a patented and disruptive technology for printing nano and microelectronics and sensors. The printing technology costs 10 to 100 times less than conventional fabrication and can print circuits 1,000 times smaller (down to 20nm) and 1,000 times faster than inkjet or 3D printing. The CSSM also utilizes the world's first and only fully automated printing systems for printing nanoelectronics and sensors.

At the IDTechEX Show, a briefing of the technology behind this cutting-edge printing system will be presented, as well as samples of scalable sensors and materials that have been produced. The NanoOPS printer is a modular system that can print multiple layers at a time with registration and alignment resolution down to 200nm, and on larger substrates than ever before:

- Having the ability to utilize a wider variety of organic and inorganic materials and to have much greater precision in the control of the manufacturing process
  - Is currently being used by researchers to develop and print a variety of devices for industry partners, from chemical and biosensors to medical implantable devices to electronics
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*12/13/17 – BURLINGTON, MA. – Scenes during the unveiling of the Second Generation Nanoscale Offset Printing System (NanoOPS Gen 2) at the George J. Kostas Research Institute for Homeland Security on Dec. 13, 2017.*

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**About CSSM:** The Advanced Nanomanufacturing Cluster for Smart Sensors and Materials (CSSM) works with industry and government partners to print their sensor and electronics applications on rigid or flexible substrates. The printing system is used to print smart chemical and biosensors such as sweat-based sensors for glucose and lactate as well as industrial sensors for harsh environments. Other printed applications include power electronics, consumer electronics including personal or large display, memory, medical and fitness-based sensors.

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**Further Information:**

For more information, please visit the CSSM website: <https://www.northeastern.edu/cssm>