



# International Nanotechnology Conference & Expo

April 4-6, 2016 Baltimore, USA

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## Nanotechnologies for advanced printed electronics

### Tatsuo Hasegawa

Department of Applied Physics, The University of Tokyo/ National Institute of Advanced Industrial Science and Technology (AIST), Japan

Printed electronics aims to realize self-formation of electronic devices under ambient conditions via the printed microfluids that contain such as soluble organic electronic materials or dispersed metal nanoparticles. In this talk, we present our recent investigations for developing advanced printed electronics. The topics include; 1) development of self-organized layered organic semiconductors and of their novel printing method for fabricating high performance printed thin-film transistors, 2) development of printed organic ferroelectric capacitor that presents few volt switching operations, and 3) new printing principle via nanoparticle chemisorption for conductive silver patterning with submicron resolution. We discuss that the explorations are based on outcomes in various fields of materials and nanoscience such as molecular nanotechnology, supramolecular chemistry, solid state and soft matter physics.

### Biography:

Tatsuo Hasegawa has completed his Doctor of Engineering degree from the University of Tokyo, Japan and was a research associate at the University of Tokyo, was an associate professor at Hokkaido University, and then was a senior research scientist at National Institute of Advanced Industrial Science and Technology (AIST). Now he has been a professor at the Department of Applied Physics, the University of Tokyo since 2014, and also leads a research group at AIST.