



EURONANOFORUM 2009 – INDUSTRIAL TECHNOLOGIES WORKSHOP

PRESENTATION ABSTRACT

INK-JET PRINTING FOR NANOMANUFACTURING

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Ink-jet printing and dispensing are promising technologies for device manufacturing at the micro and nano scale.

The ability of the technology to dispense a wide range of materials in a precisely controlled manner at high resolution, high throughput and for the fraction of the cost of other techniques makes it attractive for various applications.

These applications can be found in the fields of electrical engineering (interconnects and solder bumping), on-chip optics (microlenses and waveguides), sensors, MEMS and NEMS, biomedical devices and tests, new power sources to name just a few.

In this presentation, we briefly review the basics of ink-jet printing technology and we outline the main challenges the technology must overcome for nanodevice fabrication.

Illustrating examples taken from different application domains are also presented.