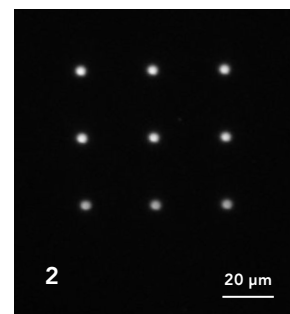
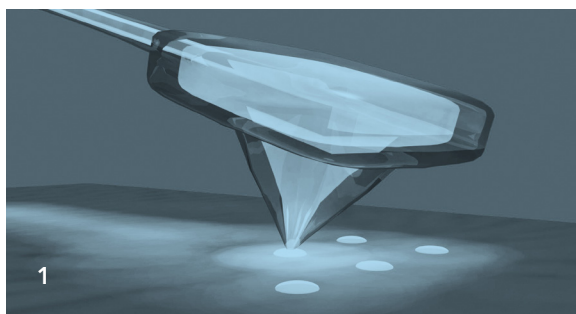




# SPOTTING

FluidFM spotting enables you to reproducibly create high density arrays with femtoliter spot sizes, both in gaseous and liquid environments. Print oligonucleotides, proteins, DNA, bacterial clones, oil and other materials with unprecedented precision and within their native environment. Applications of FluidFM spotting are found in life sciences, sensor technology, minimal lubrication and beyond.



#### SPOTTING.

1 Illustration of FluidFM nanopipette spotting. 2 Fluorescent image of femtoliter spots printed with FluidFM. Courtesy of Behr P., ETH Zurich

## PRECISE

fL SPOT DISPENSING

## VERSATILE

LIQUID & GAS ENVIRONMENT

## FAST

EXCHANGE OF INKS

## VAST

CHOICE OF INKS

### FluidFM® GIVES YOU THE EDGE.

FluidFM based spotting redefines volumetric control of material spot printing. With FluidFM spotting it is possible to reliably produce spot sizes with volumes as low as a few femtoliters on a large variety of target surfaces.

The entire procedure can thereby be carried out in gaseous or liquid environment, with the option of additional humidity control. Precise adjustment of the relevant process parameters enables the creation of various spot sizes as required by your application.

Create microarrays of numerous biomolecules directly within their native

environment to avoid denaturation of your sensitive samples. Create functionalized surfaces with unparalleled spatial resolution for the creation of novel biosensing devices with smaller footprints and higher levels of performance. Provide minimally lubricated surface modifications for your most demanding micromechanical components. FluidFM based spotting gives you the edge for your small scale material dispensing applications.

### THE PROCEDURE IN BRIEF.

Spots are created while the FluidFM nanopipette is in contact with the target surface via application of a short

pressure pulse generated by the FluidFM microfluidics control system.

Interaction forces with the surface are thereby monitored and adjusted in real-time during the entire procedure. Reproducible control of spot size and dispensing volumes can be comfortably achieved via modification of the contact time and applied pressure.

### SELECTED PUBLICATIONS

– 2014. H. Dermutz, R.R. Grütter, A.M. Truong, L. Demkó, J. Vörös & T. Zambelli. **Local polymer replacement for neuron patterning and in situ neurite guidance.** *Langmuir: the ACS journal of surfaces and colloids*, 30(23), 7037–46. doi:10.1021/la5012692

– 2009. A. Meister, J. Polesel-Maris, P. Niedermann, J. Przybylska, P. Studer, M. Gabi, P. Behr, T. Zambelli, M. Liley, J. Vörös & H. Heinzelmann. **Nanoscale dispensing in liquid environment of streptavidin on a biotin-functionalized surface using hollow atomic force microscopy probes.** *Microelectronic Engineering*, 86(4-6), 1481–1484. doi:10.1016/j.mee.2008.10.025

### CONTACT US.

We offer complete support for our customers and distributors. Please visit the Cytosurge Help Center in order to access the FluidFM® user community. [www.fluidfm.com](http://www.fluidfm.com)

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