Lab on a Chip

Miniaturisation for chemistry, physics, biology, materials science and bioengineering

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IN THIS ISSUE

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Cover
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Inside cover
See Vincent Aimez *et al.*, pp. 4683–4692. Image reproduced by permission of Vincent Aimezfrom *Lab Chip*, 2012, **12**, 4683.

THEMED ISSUE ARTICLES

EDITORIAL

PROFILE

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Lab on a Chip

Miniaturisation for chemistry, physics, biology, materials science and bioengineering

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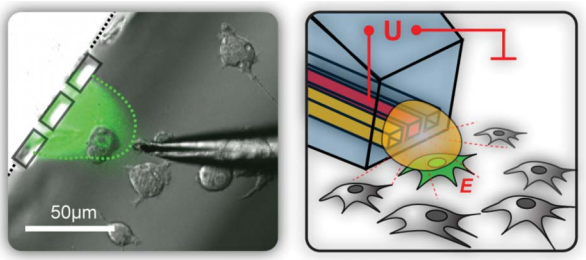
Lab on a Chip publishes new developments, current applications and fundamental research associated with miniaturisation (on or off chips) at both the micro- and nano-scale across a variety of disciplines including: chemistry; biology; (bio)physics; electronics; clinical/medical science; (bio)engineering and materials science.

INFORMATION FOR AUTHORS

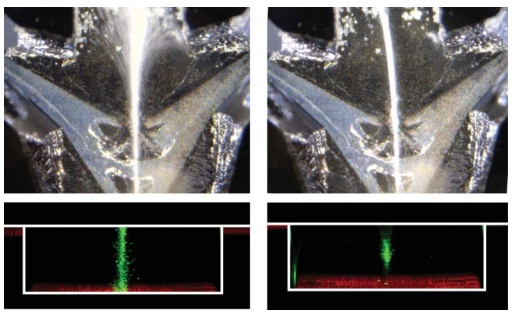
Full details on how to submit material for publication in Lab on a Chip are given in the Instructions for Authors (available from http://www.rsc.org/authors). Submissions should be made *via* the journal's homepage: http://www.rsc.org/loc.

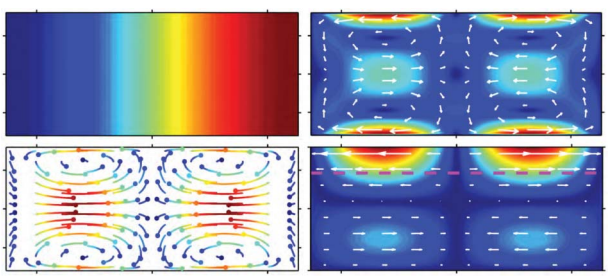
LOC is supported by the Japanese Society for Chemistry and Micro-Nano Systems

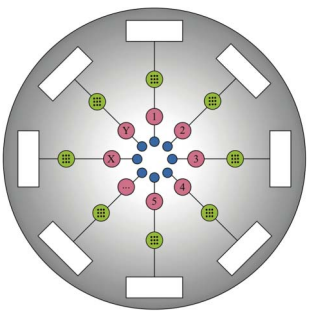
COMMUNICATION



PAPERS







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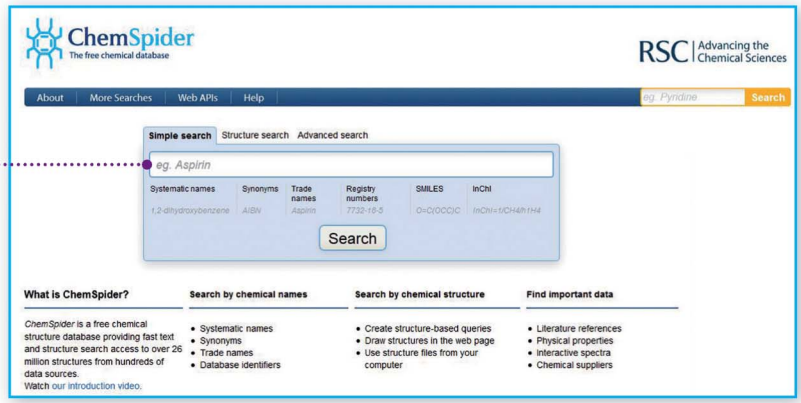

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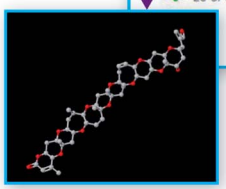

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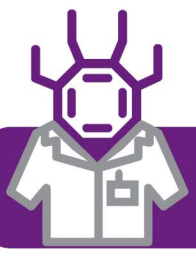

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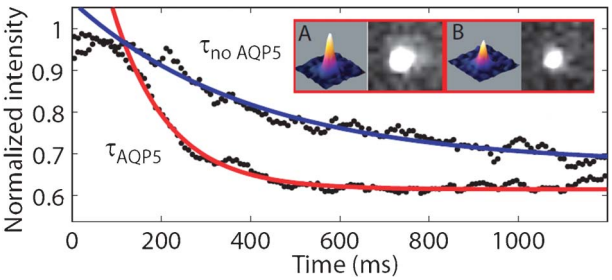
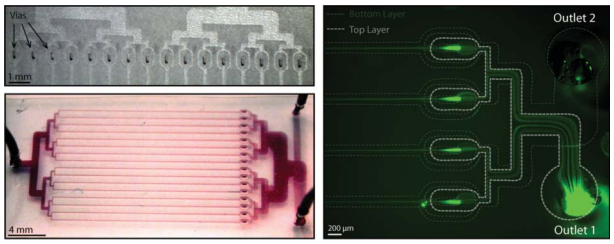
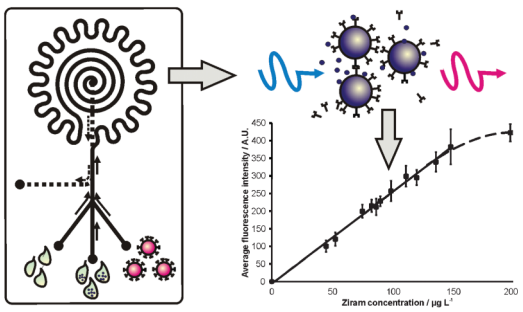
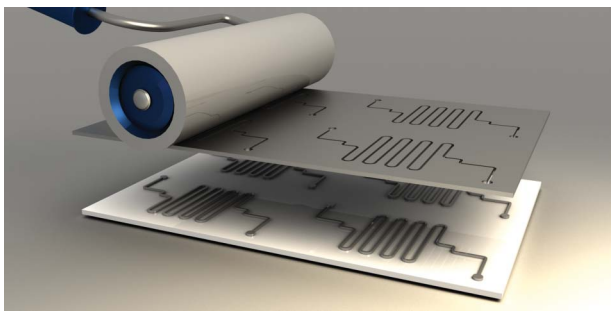








REGULAR RESEARCH ARTICLES

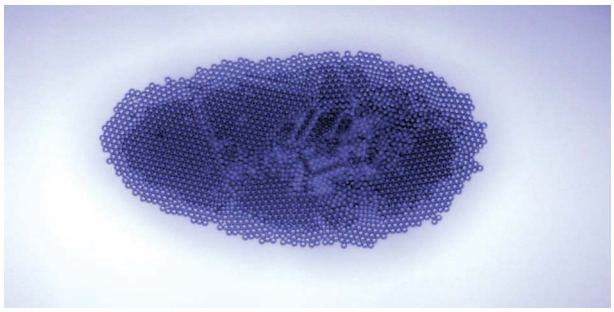
HIGHLIGHT

Research highlights

Šeila Selimović, Mehmet R. Dokmeci and Ali Khademhosseini*

Two-faced microreactors – Soft robots – Liquids as metamaterials.

FOCUS

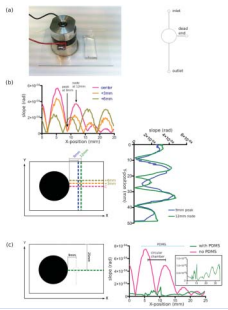


Acoustofluidics 20: Applications in acoustic trapping

Mikael Evander* and Johan Nilsson

This part of the Acoustofluidics tutorial series reviews applications of acoustic trapping where forces in localised acoustic standing waves are used to manipulate and trap micrometer-sized particles and cells.

TECHNICAL INNOVATION

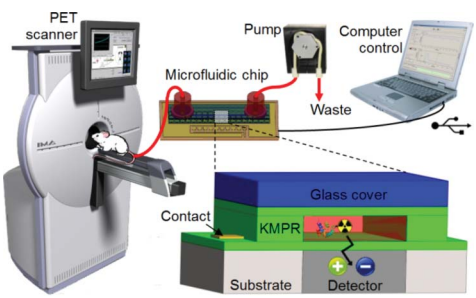


Fragmentation of DNA in a sub-microliter microfluidic sonication device

Qingzong Tseng, Alexey M. Lomonosov, Eileen E. M. Furlong and Christoph A. Merten*

Fragmentation of DNA is an essential step for many biological applications including the preparation of next-generation sequencing (NGS) libraries.

PAPERS

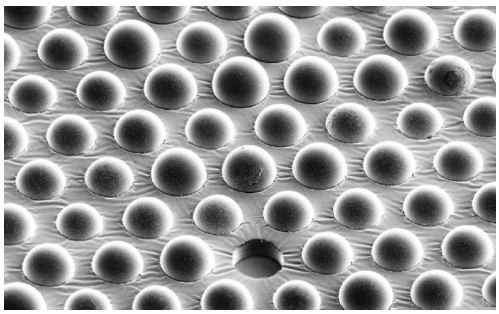


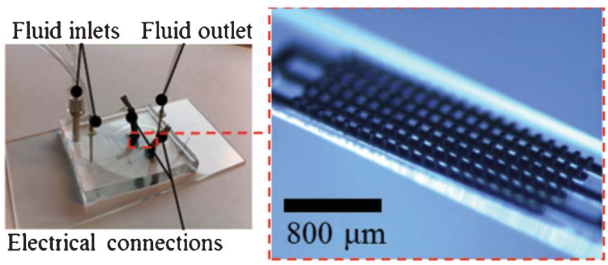
Blood compatible microfluidic system for pharmacokinetic studies in small animals

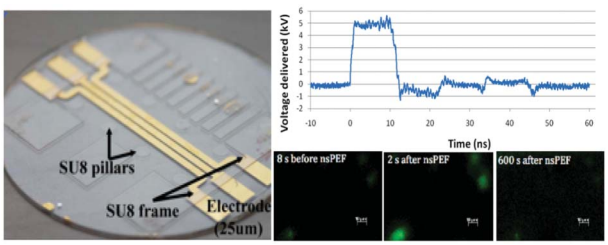
Laurence Convert, Frédérique Girard Baril, Vincent Boisselle, Jean-François Pratte, Réjean Fontaine, Roger Lecomte, Paul G. Charette and Vincent Aimez*

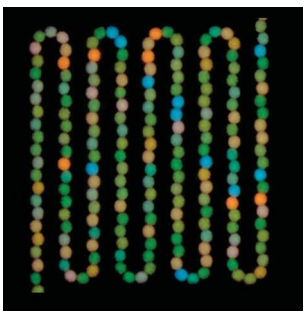
A high efficiency microfluidic blood radioactivity counter was developed to monitor in real time the radioactivity contained in the blood of small animals for radiotracer developments in nuclear imaging.

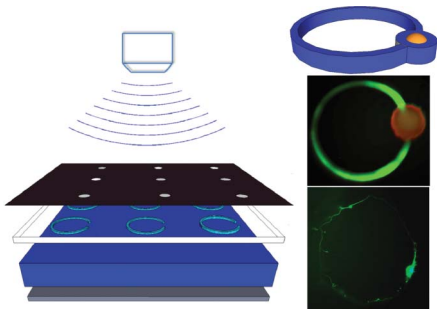
PAPERS

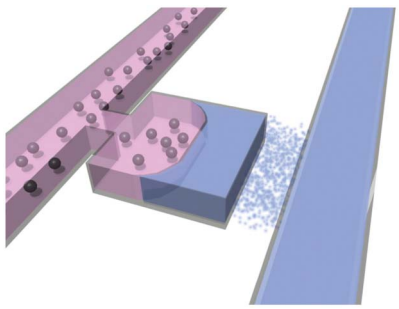


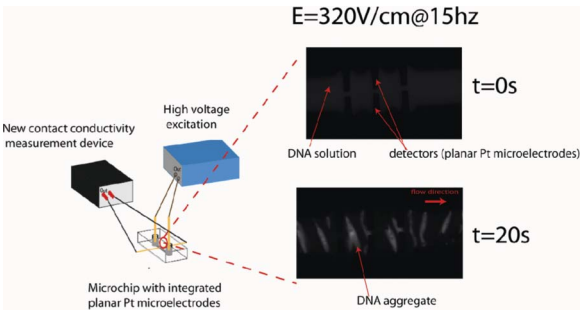


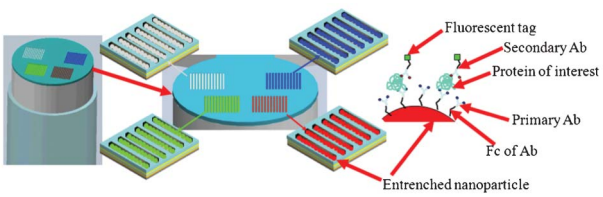


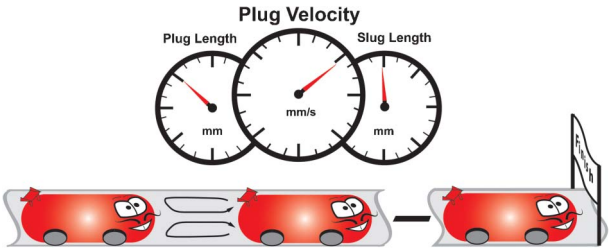


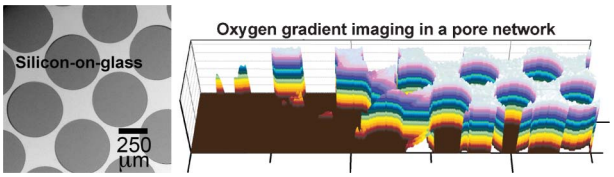


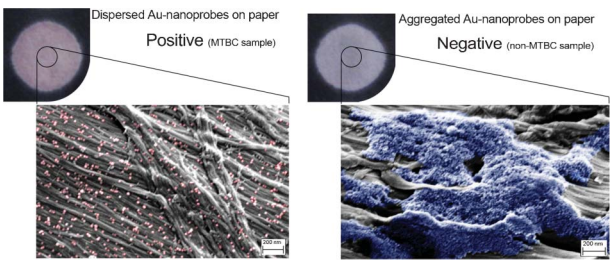


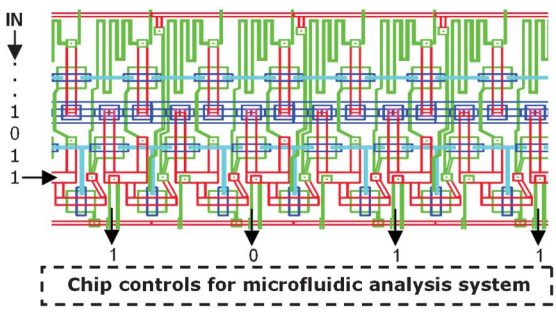












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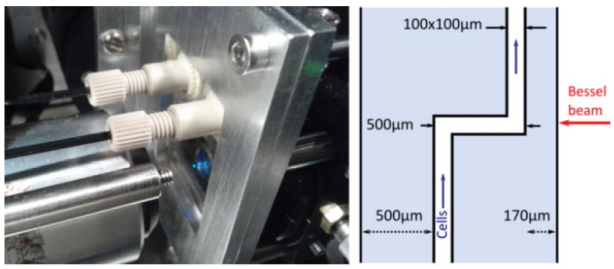

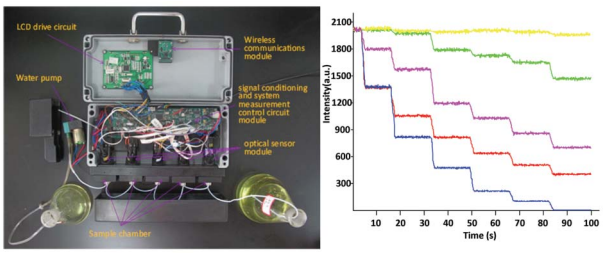

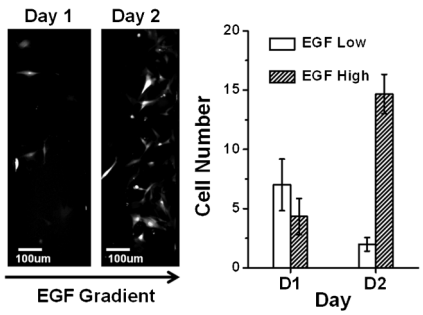

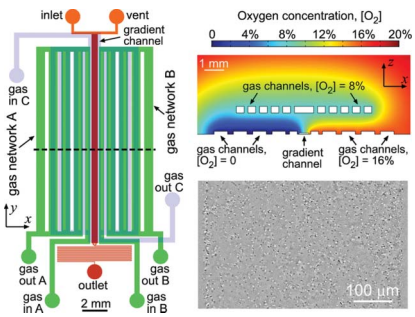

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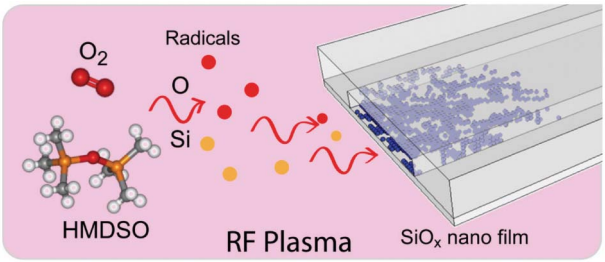

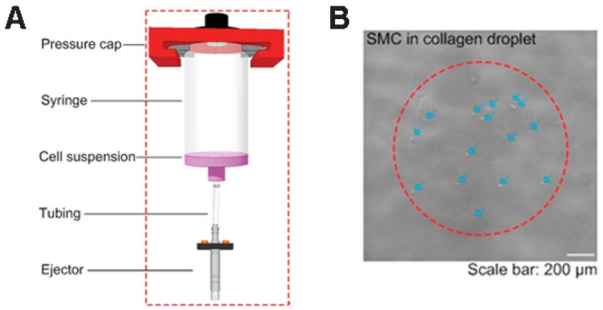

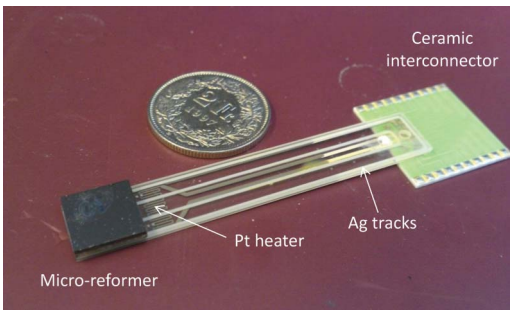

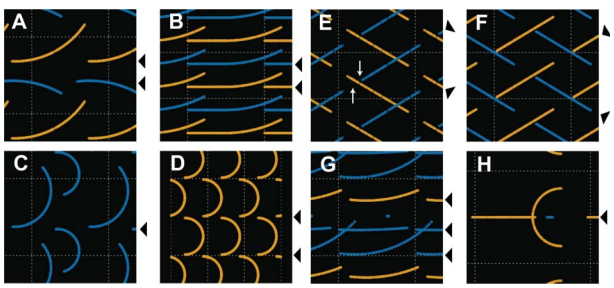

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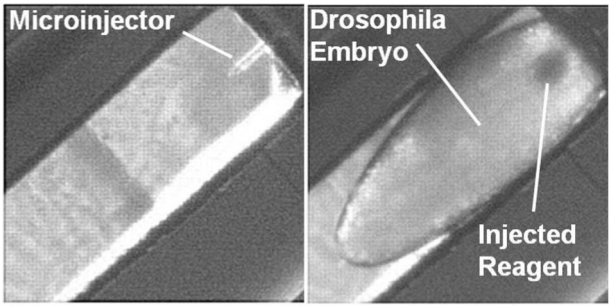
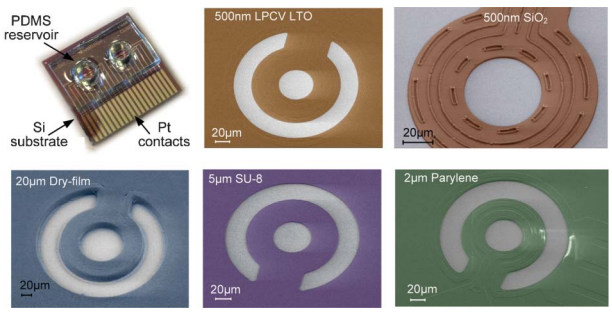


Microfluidic system with integrated microinjector for automated *Drosophila* embryo injection

Daniel Delubac, Christopher B. Highley, Melissa Witzberger-Krajcovic, Joseph C. Ayoob, Emily C. Furbee, Jonathan S. Minden and Stefan Zappe*

Our fully automated, microfluidic system with integrated microinjector retrieves *Drosophila* embryos from an off-chip reservoir, injects embryos, and sends injected embryos to a second off-chip reservoir.

METHOD



A comparative study on fabrication techniques for on-chip microelectrodes

Yuksel Temiz, Anna Ferretti, Yusuf Leblebici and Carlotta Guiducci*

This paper presents the reliability of fabrication techniques used for the development of on-chip microelectrodes that are employed in aqueous solutions and/or subjected to chemical surface modification. Detailed fabrication processes for microelectrodes passivated with different materials, advantages and disadvantages of each technique, and statistical analyses of the measurement results are provided for comparison.