Lab on a Chip

Micro- & nano- fluidic research for chemistry, physics, biology, & bioengineering

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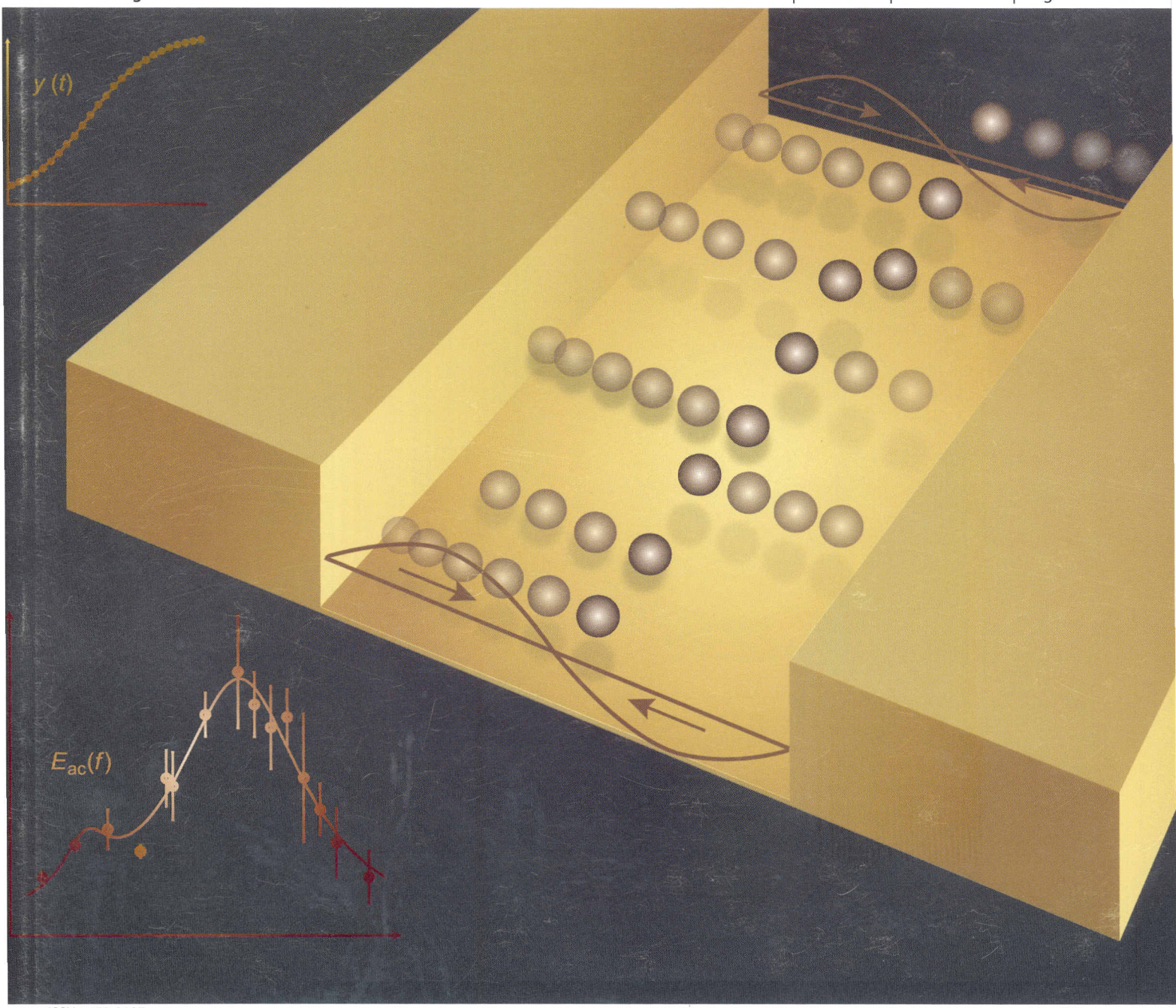
Volume 10 | Number 5 | 7 March 2010 | Pages 529–668



ISSN 1473-0197

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1473-0197(2010)10:5;1-C

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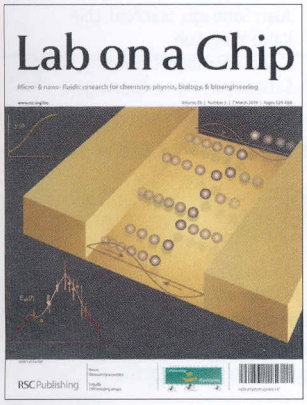
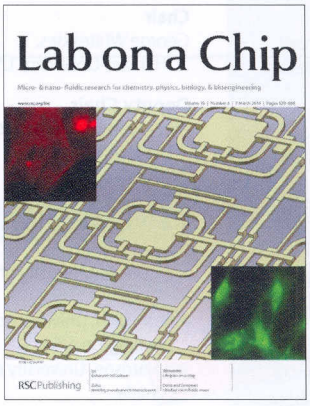
ISSN 1473-0197 CODEN LCAHAM 10(5) 529–668 (2010)

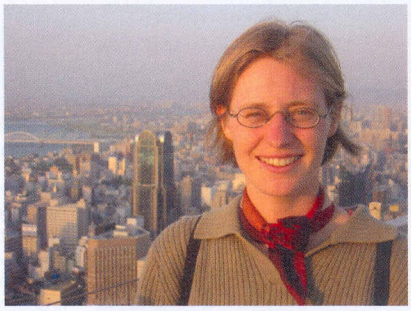


Cover
See Bruus *et al.*, pp. 563–570.
Based on particle tracking and subsequent curve fitting to the observed paths, we measure *in situ* the local ultrasound pressure amplitude in microfluidic chips designed for acoustophoresis of particle suspensions.
Image reproduced by permission of Henrik Bruus from *Lab Chip*, 2010, **10**, 563.

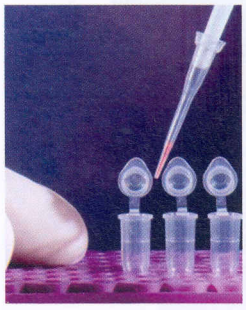


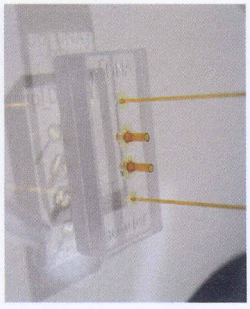
Inside cover
See Lu *et al.*, pp. 571–580.
An array of microfluidic chambers with bridge-and-underpass architecture, enabling continuous perfusion without cross-chamber contamination for cell culture and assay.
Image reproduced by permission of Hang Lu from *Lab Chip*, 2010, **10**, 571.

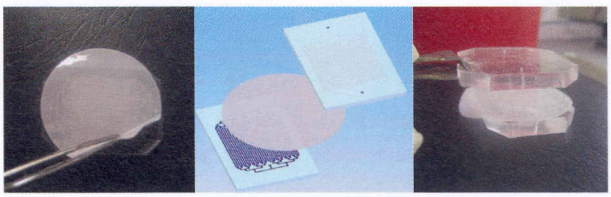
HIGHLIGHT

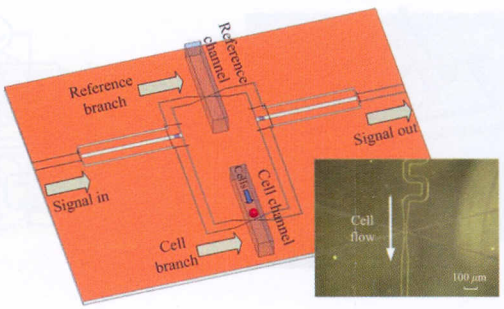


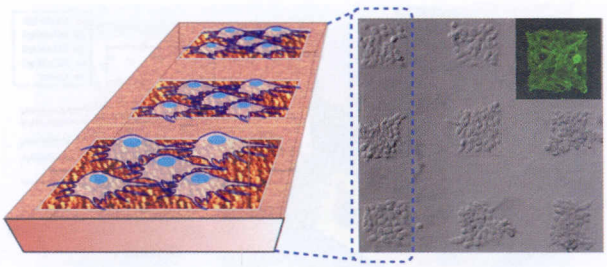
FOCUS

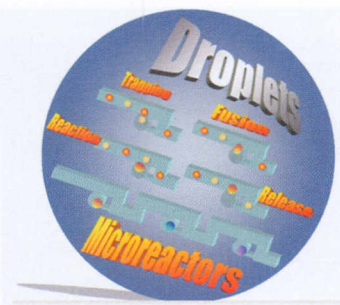


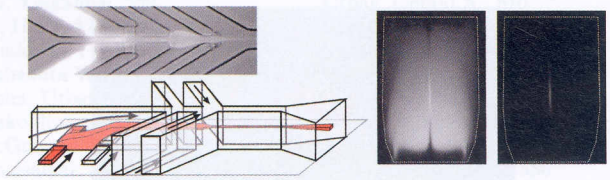


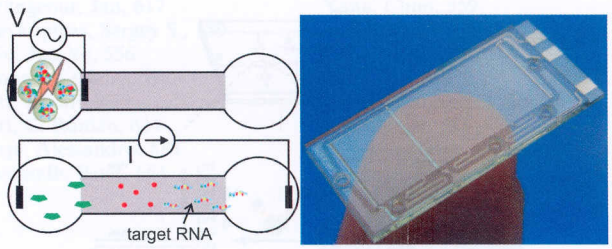


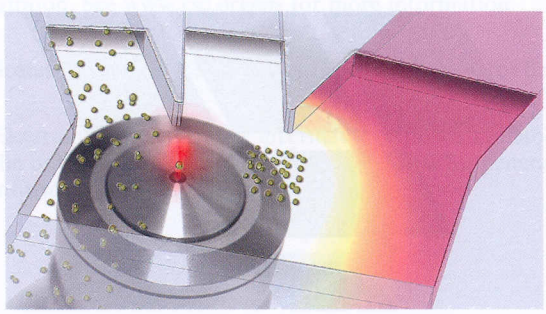


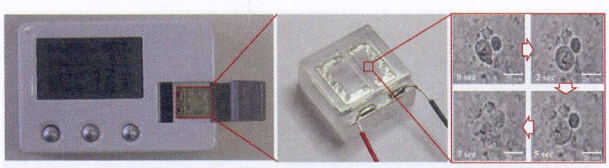












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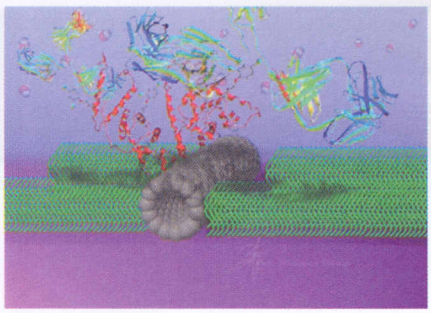

Femtomolar detection of 2,4-dichlorophenoxyacetic acid herbicides *via* competitive immunoassays using microfluidic based carbon nanotube liquid gated transistor

I Putu Mahendra Wijaya , Tey Ju Nie, Sonu Gandhi, Robin Boro, Alagappan Palaniappan, Goh Wei Hau, Isabel Rodriguez,* C. Raman Suri and Subodh G. Mhaisalkar*

A competitive immunoassay is introduced in a microfluidic-based liquid-gated transistor for femto-molar label-free electrical detection of herbicide in soil extract.

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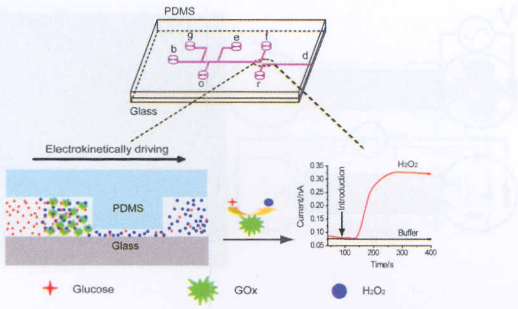

Study on the kinetics of homogeneous enzyme reactions in a micro/nanofluidics device

Chen Wang, Su-Juan Li, Zeng-Qiang Wu, Jing-Juan Xu, Hong-Yuan Chen and Xing-Hua Xia*

In this paper, a micro/nanofluidic preconcentration device integrated with an electrochemical detector has been used to study the enrichment of enzymes and homogeneous enzyme reaction kinetics.

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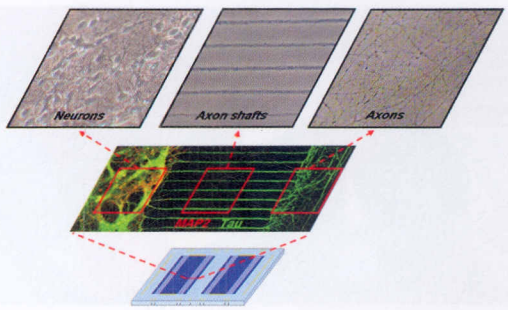

A lab-on-a-chip platform for studying the subcellular functional proteome of neuronal axons

Huei-Ing Wu, Gia-Her Cheng, Yi-Yun Wong, Chia-Min Lin, Weileun Fang, Wei-Yuan Chow and Yen-Chung Chang*

We report here a chip device which can be used to produce large quantities of pure neuronal axons for the study of their protein and RNA components. This device and its modified versions are powerful tools in addressing various issues in the functional proteomics of neuronal axons under normal and pathological conditions.

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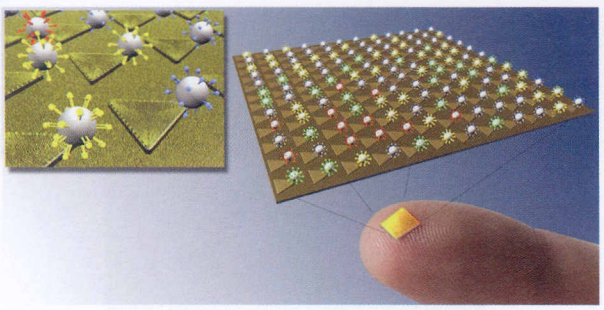

A magnetic microchip for controlled transport of attomole levels of proteins

LarsErik Johansson, Klas Gunnarsson,* Stojanka Bijelovic, Kristofer Eriksson, Alessandro Surpi, Emmanuelle Göthelid, Peter Svedlindh and Sven Oscarsson

We report on a novel method of controlled transport of proteins immobilized to micron sized magnetic beads in a lab-on-a-chip environment without the need of microchannels.