Lab on a Chip

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

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Volume 11 | Number 14 | 21 July 2011 | Pages 2297–2468

ISSN 1473-0197

RSC Publishing

COMMUNICATION

Chan Beum Park *et al.*

Artificial photosynthesis on a chip: microfluidic cofactor regeneration and photoenzymatic synthesis under visible light

1473-0197(2011)11:14;1-2

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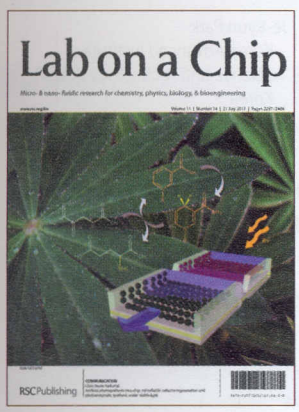
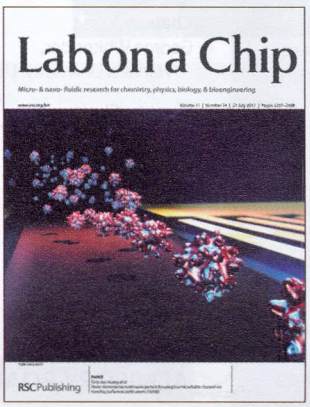
IN THIS ISSUE

ISSN 1473-0197 CODEN LCAHAM 11(14) 2297–2468 (2011)

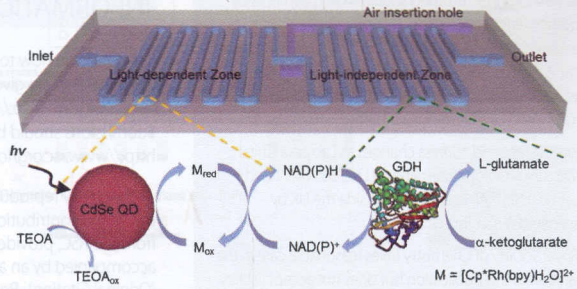


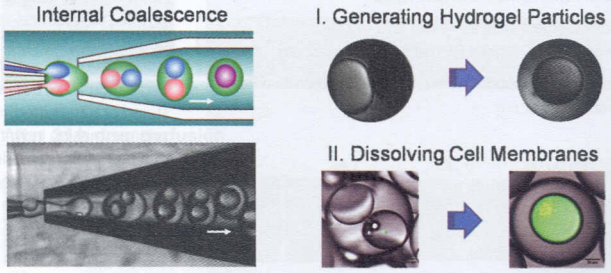
Cover
See Chan Beum Park *et al.*, pp. 2309–2311.
Image reproduced by permission of Chan Beum Park from *Lab Chip*, 2011, **11**, 2309.



Inside cover
See Tony Jun Huang *et al.*, pp. 2319–2324.
Image reproduced by permission of Tony Jun Huang from *Lab Chip*, 2011, **11**, 2319.

COMMUNICATIONS





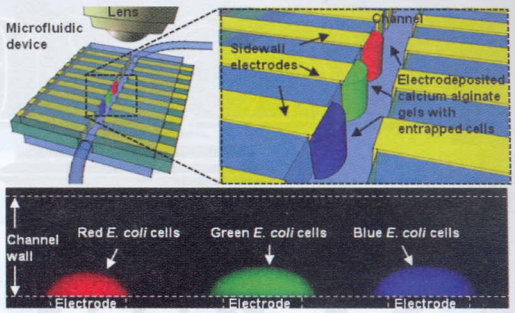
COMMUNICATIONS

2316

Biocompatible multi-address 3D cell assembly in microfluidic devices using spatially programmable gel formation

Yi Cheng, Xiaolong Luo, Chen-Yu Tsao, Hsuan-Chen Wu, Jordan Betz, Gregory F. Payne, William E. Bentley and Gary W. Rubloff*

We report biocompatible, electroaddressable 3D cell assembly in microfluidic devices using spatially programmable gel formation.



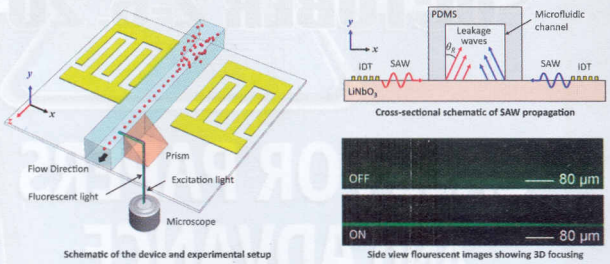
PAPERS

2319

Three-dimensional continuous particle focusing in a microfluidic channel *via* standing surface acoustic waves (SSAW)

Jinjie Shi, Shahrzad Yazdi, Sz-Chin Steven Lin, Xiaoyun Ding, I-Kao Chiang, Kendra Sharp and Tony Jun Huang*

A standing surface acoustic wave (SSAW) based particle manipulation technique enables the three-dimensional (3D) continuous microparticle focusing in a single-layer planar microfluidic channel.

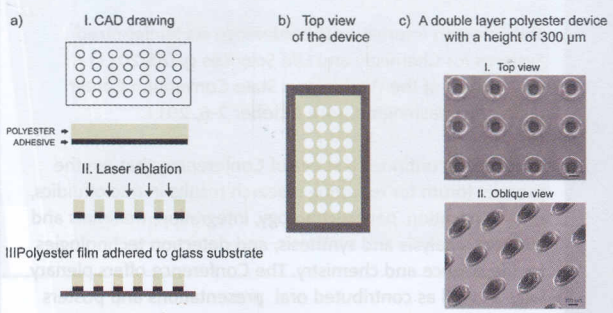


2325

Microfabricated polyester conical microwells for cell culture applications

Šeila Selimović, Francesco Piraino, Hojae Bae, Marco Rasponi, Alberto Redaelli and Ali Khademhosseini*

Simple and inexpensive fabrication of a polyester microwell platform *via* laser ablation.

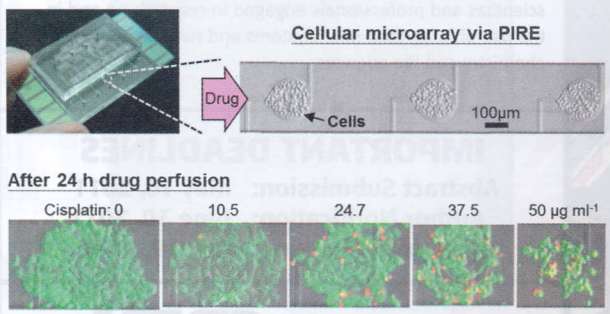


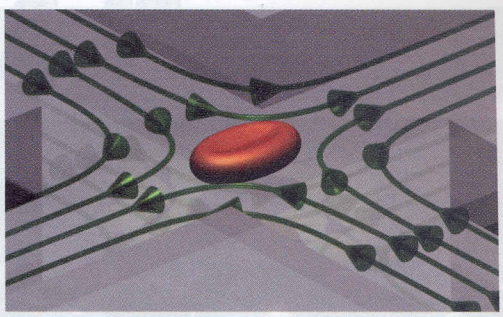
2333

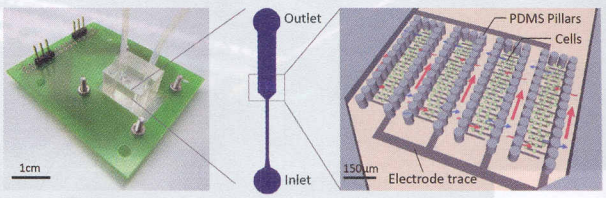
Dielectrophoresis-based cellular microarray chip for anticancer drug screening in perfusion microenvironments

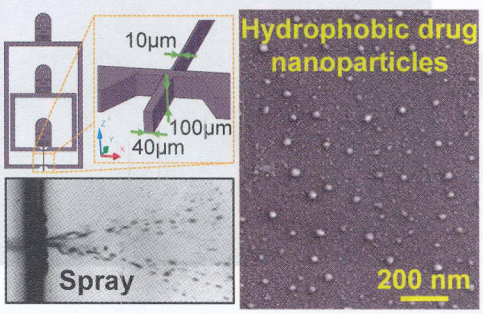
Lo-Chang Hsiung, Chi-Ling Chiang, Chen-Ho Wang, Yu-Hsu Huang, Ching-Te Kuo, Ji-Yen Cheng, Ching-Hung Lin, Victoria Wu, Hsien-Yeh Chou, De-Shien Jong, Hsinyu Lee* and Andrew M. Wo*

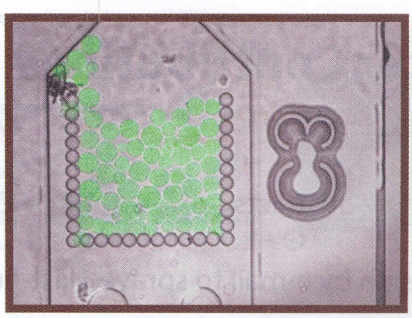
Anticancer drug screening *via planar interdigitated ring electrodes* and valve-assisted flow stabilization in cellular microarray chip.









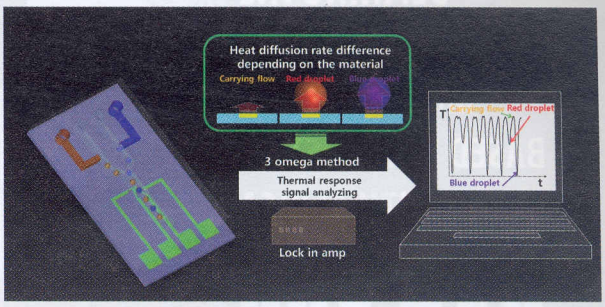


2378

Micro-droplet detection and characterization using thermal responses

Namwoo Yi, Byoung Kyoo Park, Dongsik Kim and Jaesung Park*

Using 3ω method, droplets are able to be detected and distinguished in real time by different thermal response depending on droplet material.



2385

A microfluidic platform for high-sensitivity, real-time drug screening on *C. elegans* and parasitic nematodes

John A. Carr, Archana Parashar, Richard Gibson, Alan P. Robertson, Richard J. Martin and Santosh Pandey*

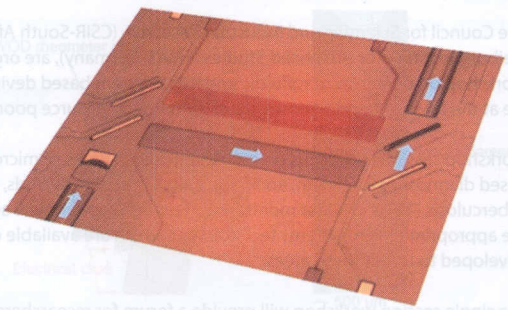
A new tool for high-sensitivity, real-time screening of anthelmintic drugs on nematode worms is presented.

2397

Pneumatically tunable optofluidic 2 × 2 switch for reconfigurable optical circuit

Wuzhou Song* and Demetri Psaltis

We presented a reconfigurable optical circuit on PDMS chip with integrated optofluidic switch controlled by compressed air.

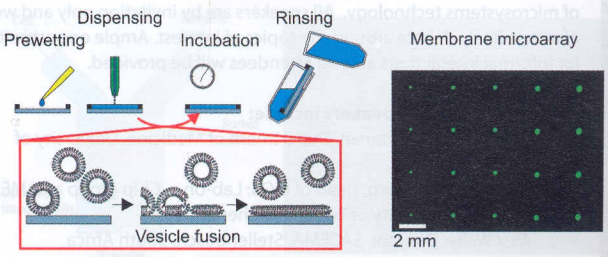


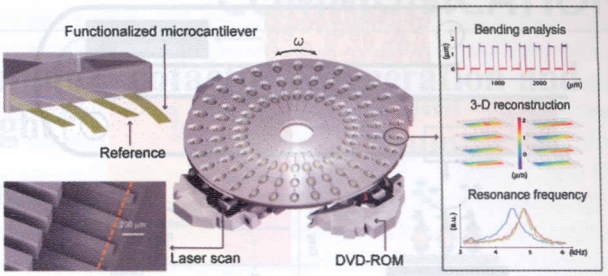
2403

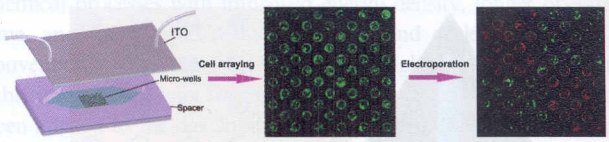
Supported lipid bilayer microarrays created by non-contact printing

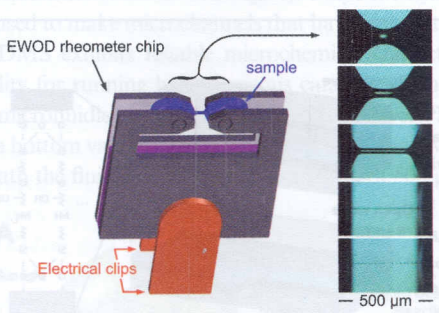
Stefan Kaufmann, Jens Sobek, Marcus Textor and Erik Reimhult*

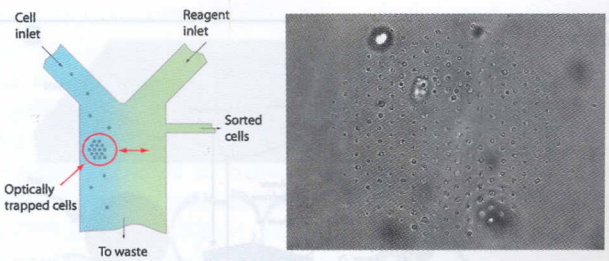
A novel way to produce microarrays of fluid supported lipid bilayers (SLBs) is presented, based on non-contact dispensing of vesicles to a substrate through a thin surface confined water film.











PAPERS

TECHNICAL NOTES