Lab on a Chip

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

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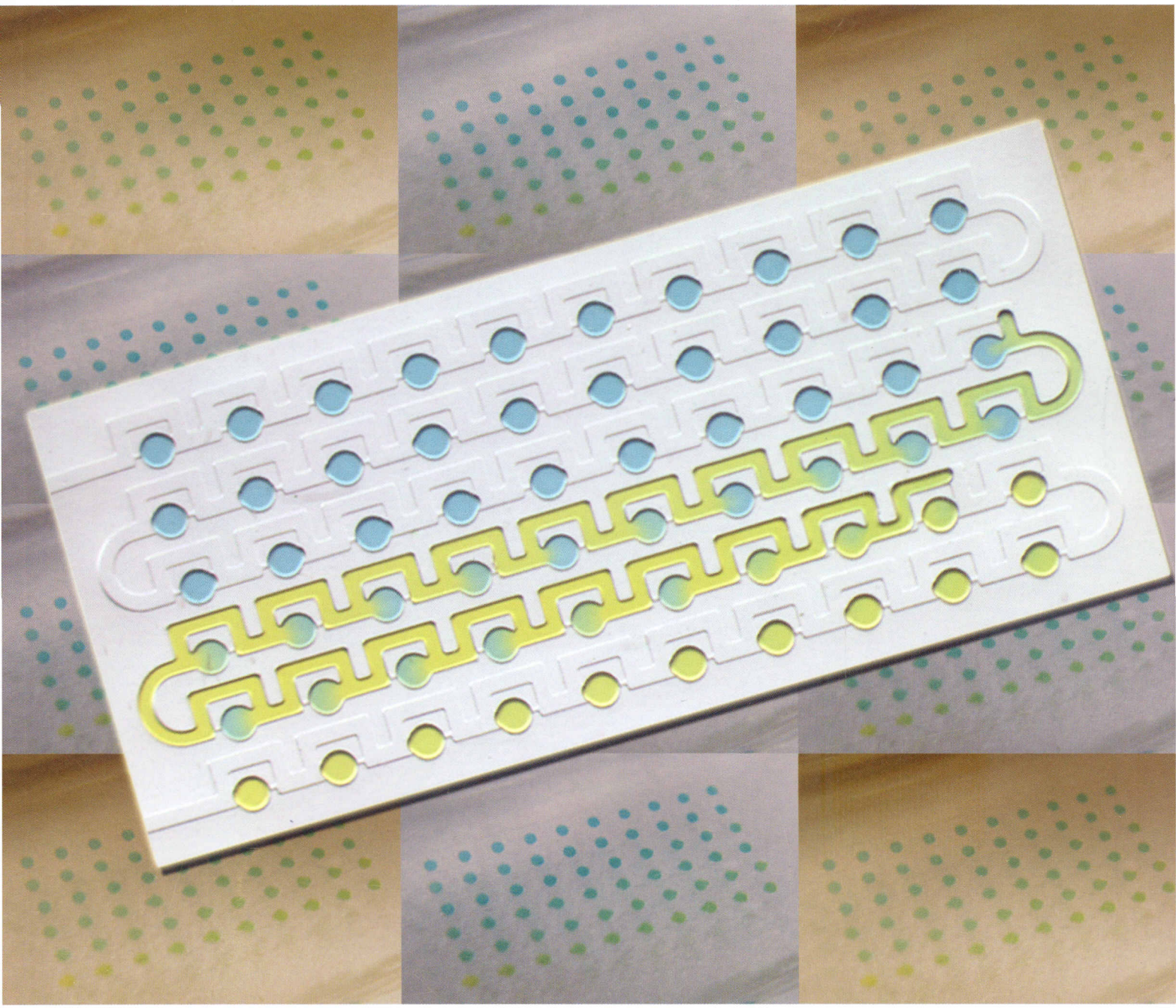

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COMMUNICATION

Vanapalli *et al.*

Microfluidic static droplet arrays with tuneable gradients in material composition

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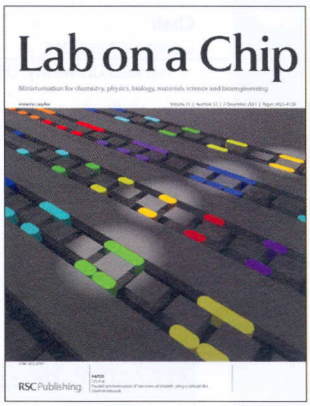
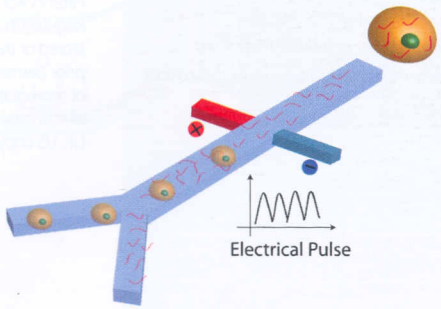
Cover
See Vanapalli *et al.*, pp. 3949–3952. Image reproduced by permission of Siva A. Vanapalli from *Lab Chip*, 2011, **11**, 3949.

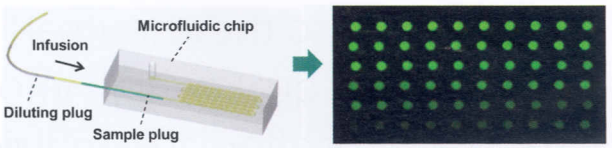


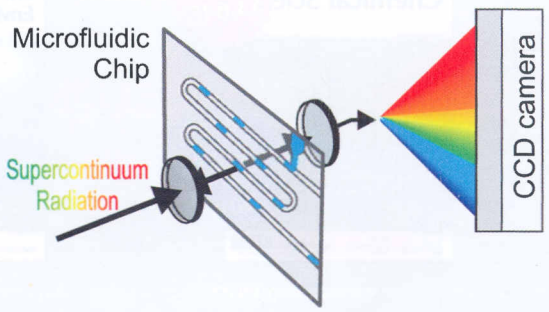
Inside cover
See Oh *et al.*, pp. 3956–3962. Image reproduced by permission of Kwang W. Oh from *Lab Chip*, 2011, **11**, 3956.

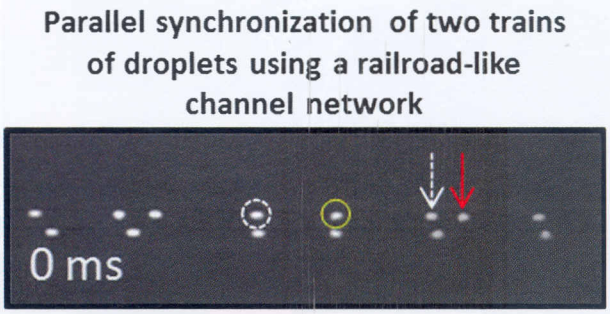
HIGHLIGHT

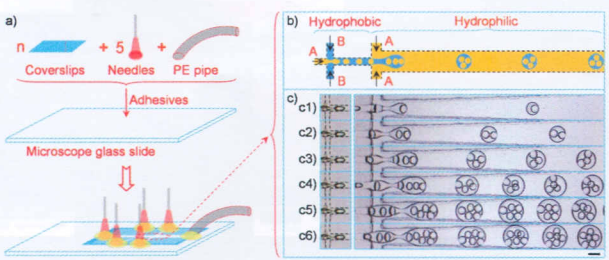
CRITICAL REVIEW

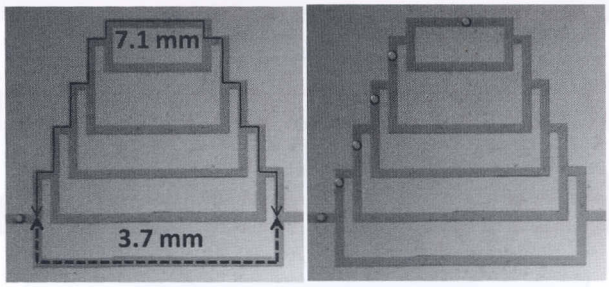


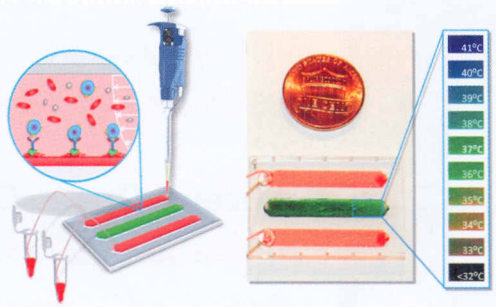


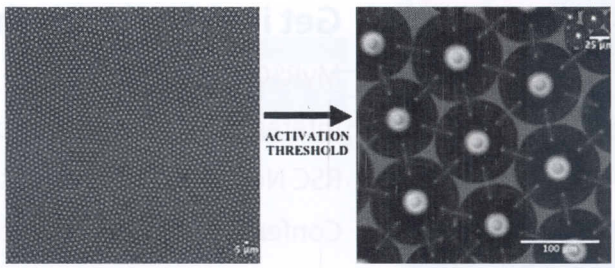


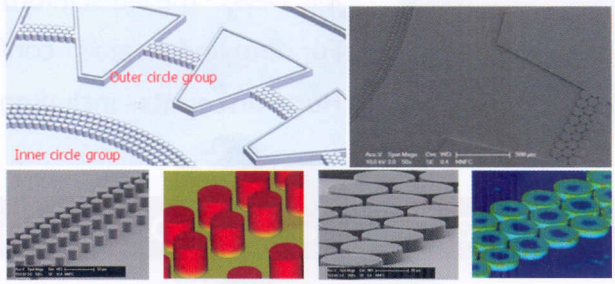


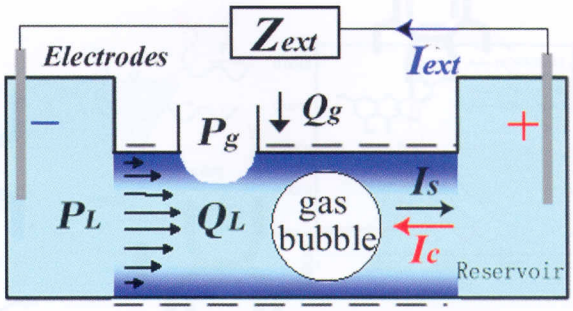


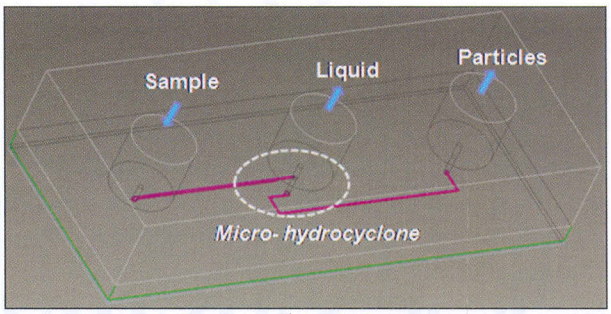


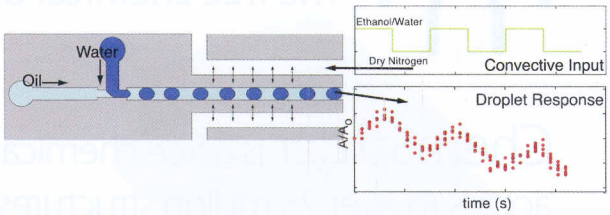


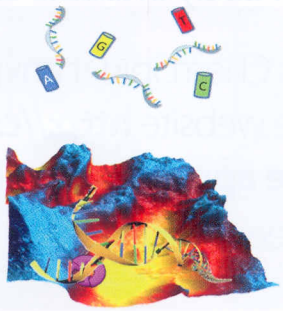


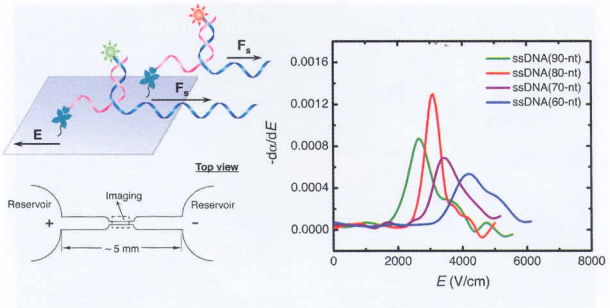


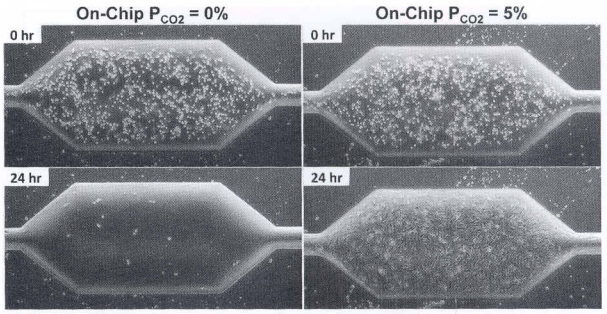


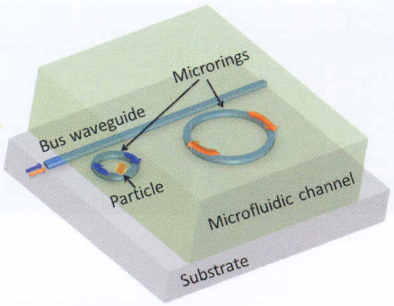


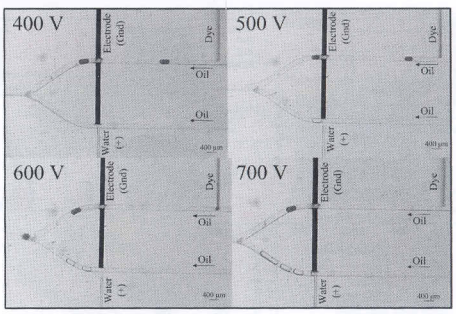




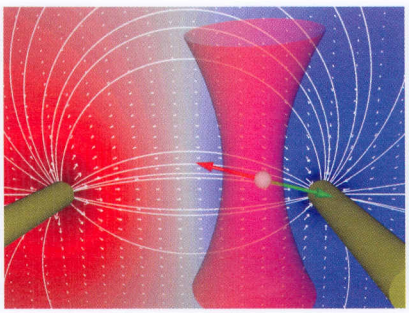








4113

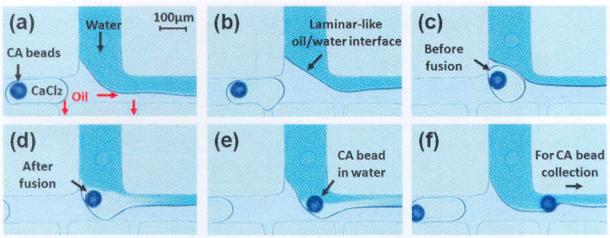


Mapping electric fields generated by microelectrodes using optically trapped charged microspheres

Giuseppe Pesce,* Biagio Mandracchia, Emanuele Orabona, Giulia Rusciano, Luca De Stefano and Antonio Sasso

A charged microscopic particle held in optical tweezers is able to measure the electric field generated by microelectrodes.

4117

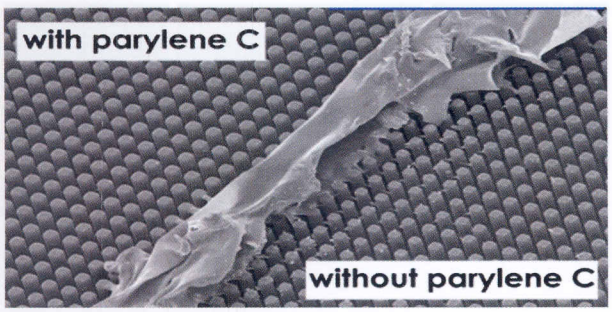


Rapid purification of cell encapsulated hydrogel beads from oil phase to aqueous phase in a microfluidic device

Yuliang Deng, Nangang Zhang, Libo Zhao, Xiaolei Yu, Xinghu Ji, Wei Liu, Shishang Guo,* Kan Liu* and Xing-Zhong Zhao*

We demonstrate a new type of microfluidic chip that can realize continuous flow purification of hydrogel beads from a carrier oil into aqueous solution by using a laminar-like oil/water interface.

4122



Parylene C coating for high-performance replica molding

Kevin A. Heyries and Carl L. Hansen*

Poly(chloro-*p*-xylylene) (parylene C) coating promotes mold release for enhanced master durability and high-performance soft lithography.