

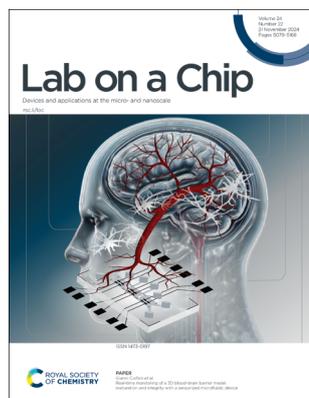
Lab on a Chip

Devices and applications at the micro- and nanoscale
rsc.li/loc

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1473-0197 CODEN LCAHAM 24(22) 5079-5168 (2024)



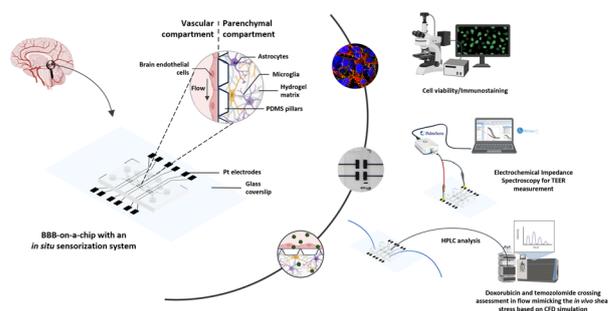
Cover
See Gianni Ciofani *et al.*,
pp. 5085–5100.
Image reproduced by permission
of Maria Cristina Ceccarelli from
Lab Chip, 2024, 24, 5085.

PAPERS

5085

Real-time monitoring of a 3D blood–brain barrier model maturation and integrity with a sensorized microfluidic device

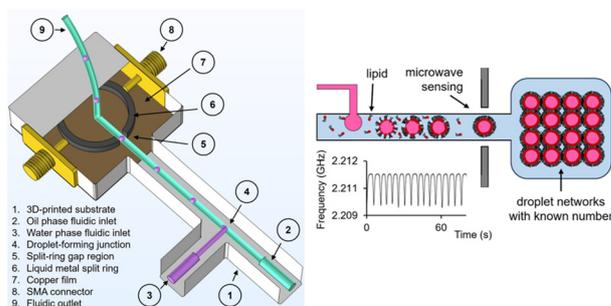
Maria Cristina Ceccarelli,* Marie Celine Lefevre, Attilio Marino, Francesca Pignatelli, Katarzyna Krukiewicz, Matteo Battaglini and Gianni Ciofani*



5101

3D-printed microfluidic–microwave device for droplet network formation and characterisation

Kai Silver, Jin Li,* Adrian Porch, William David Jamieson, Oliver Castell, Pantelitsa Dimitriou, Colin Kallnik and David Barrow





EES Batteries

Exceptional research on
batteries and energy storage

Part of the EES family

**Join
in** | Publish with us
rsc.li/EESBatteries

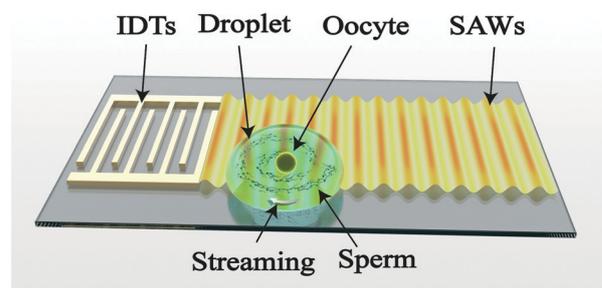
Registered charity number: 207890



5113

Acoustic enrichment of sperm for *in vitro* fertilization

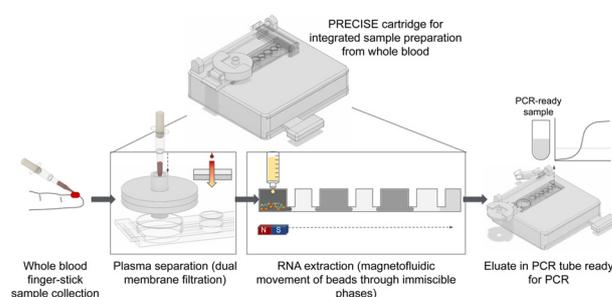
Chunqiu Zhang, Ning Rong, Ziyi Lin, Peng-Qi Li, Jingyao Shi, Wei Zhou, Lili Niu, Fei Li, Rongxin Tang,* Lei Li* and Long Meng*



5124

Integrated device for plasma separation and nucleic acid extraction from whole blood toward point-of-care detection of bloodborne pathogens

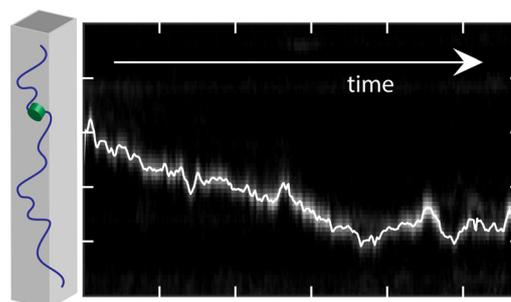
Abigail G. Ayers, Christia M. Victoriano and Samuel K. Sia*



5137

Effect of base methylation on binding and mobility of bacterial protein Hfq on double-stranded DNA

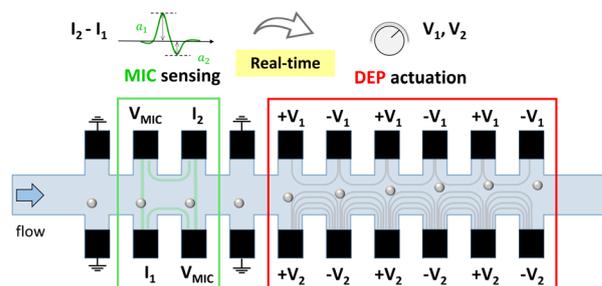
Jijo Easo George, Rajib Basak, Indresh Yadav, Chuan Jie Tan, Jeroen A. van Kan, Frank Wien, Véronique Arluison and Johan R. C. van der Maarel*



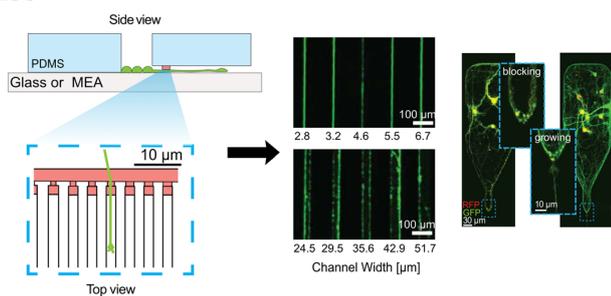
5145

Real-time impedance-activated dielectrophoretic actuation for reconfigurable manipulation of single flowing particles

Alexis Lefevre, Cristian Brandi, Adele De Ninno, Filippo Ruggiero, Enrico Verona, Michaël Gauthier, Paolo Bisegna, Aude Bolopion and Federica Caselli*



5155



Impact of microchannel width on axons for brain-on-chip applications

Katarina Vulić, Giulia Amos, Tobias Ruff, Revan Kasm, Stephan J. Ihle, Joël Küchler, János Vörös* and Sean Weaver*

