

Lab on a Chip

Devices and applications at the micro- and nanoscale
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Cover

See Lawrence G. Welch,
Emma L. Talbot *et al.*,
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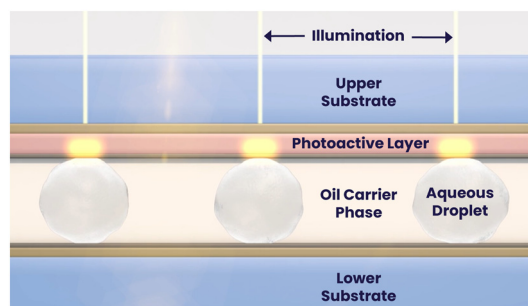
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A programmable and automated optical electrowetting-on-dielectric (oEWOD) driven platform for massively parallel and sequential processing of single cell assay operations

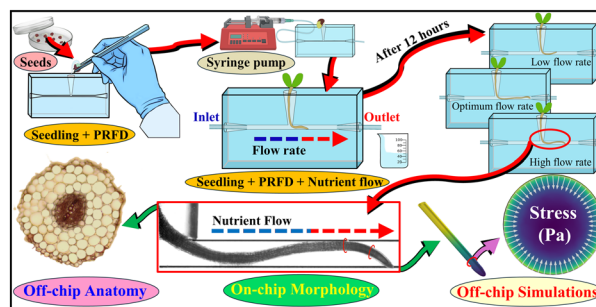
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A. Shibahara, B. W. Longbottom, C. E. Bryant
and E. L. Talbot*



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Unveiling nutrient flow-mediated stress in plant roots using an on-chip phytofluidic device

Kaushal Agarwal, Sumit Kumar Mehta
and Pranab Kumar Mondal*



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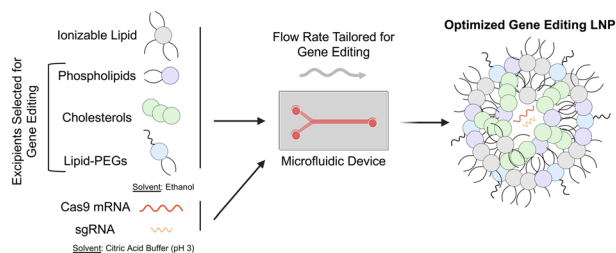


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Optimized microfluidic formulation and organic excipients for improved lipid nanoparticle mediated genome editing

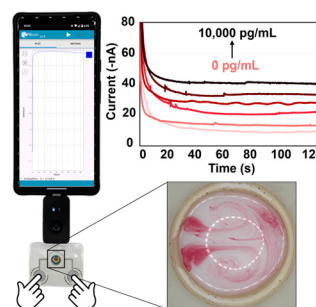
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Microfluidic finger-actuated mixer for ultrasensitive electrochemical measurements of protein biomarkers for point-of-care testing

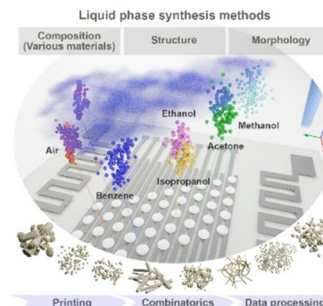
Benjamin Utzinger, Desh Deepak Dixit and Peter B. Lillehoj*



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Multioxide combinatorial libraries: fusing synthetic approaches and additive technologies for highly orthogonal electronic noses

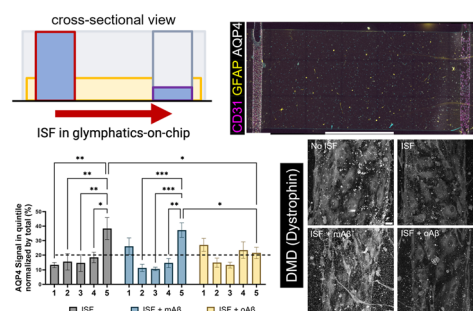
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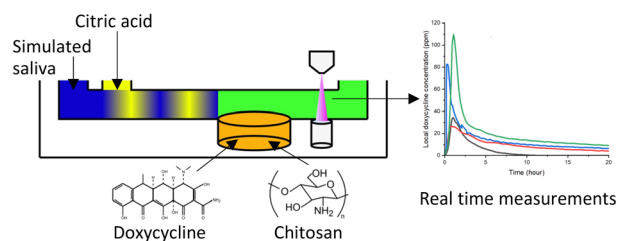
Monomeric and oligomeric amyloid- β cause distinct Alzheimer's disease pathophysiological characteristics in astrocytes in human glymphatics-on-chip models

Aria R. Yslas, Rena Park, Nozomi Nishimura and Esak Lee*



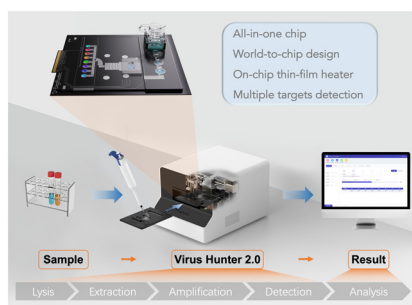
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Tests in dynamic conditions

A novel microfluidic tool for the evaluation of local drug delivery systems in simulated *in vivo* conditions

William A. Oates and Antonios D. Anastasiou*

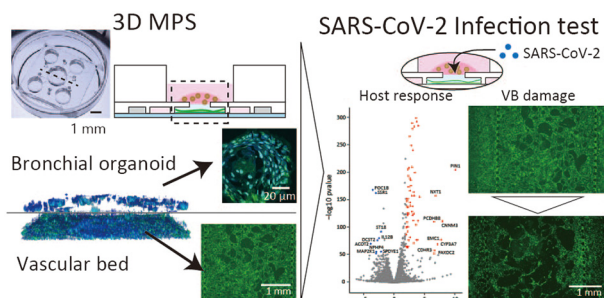
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A syndromic diagnostic assay on a macrochannel-to-digital microfluidic platform for automatic identification of multiple respiratory pathogens

Cheng Dong, Fei Li, Yun Sun, Dongling Long, Chunzhao Chen, Mengyan Li, Tao Wei, Rui P. Martins, Tianlan Chen* and Pui-In Mak*

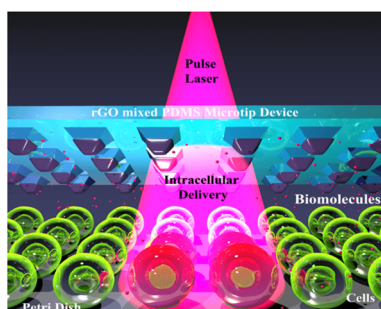
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SARS-CoV-2-induced disruption of a vascular bed in a microphysiological system caused by type-I interferon from bronchial organoids

Kazuya Fujimoto, Yoshikazu Kameda, Yuta Nagano, Sayaka Deguchi, Takuya Yamamoto, Rafal P. Krol, Peter Gee, Yasufumi Matsumura, Toru Okamoto, Miki Nagao, Kazuo Takayama* and Ryuji Yokokawa*

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Ultra-low intensity light pulses for large cargo delivery into hard-to-transfect cells using an rGO mixed PDMS microtip device

Hima Harshan Padma, Kavitha Illath, Donia Dominic, Hwan-You Chang, Moeto Nagai, Rajdeep Ojha, Srabani Kar and Tuhin Subhra Santra*

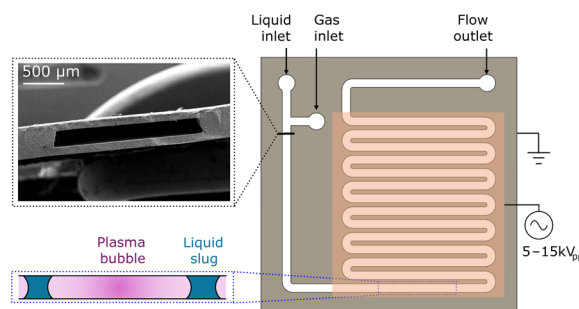


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Microreactor designed for efficient plasma–liquid segmented flows

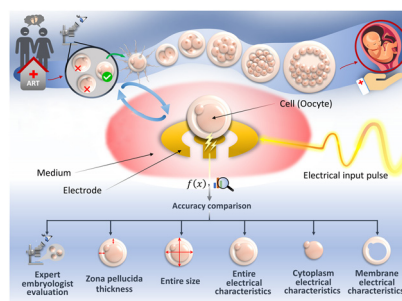
Pierre Dedieu, Gabriel Morand, Karine Loubière, Stéphanie Ognier* and Michael Tatoulian



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Simple bioelectrical microsensor: oocyte quality prediction via membrane electrophysiological characterization

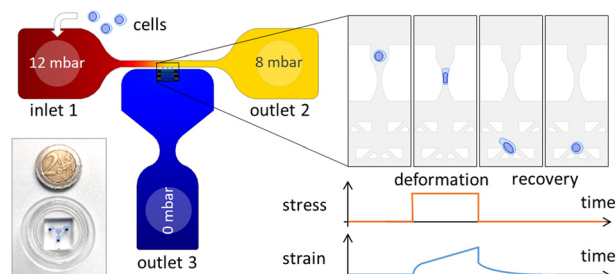
Peyman Palay, Davood Fathi,* Hassan Saffari, Fatemeh Hassani, Samira Hajiaghalou and Rouhollah Fathi*



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Deformation under flow and morphological recovery of cancer cells

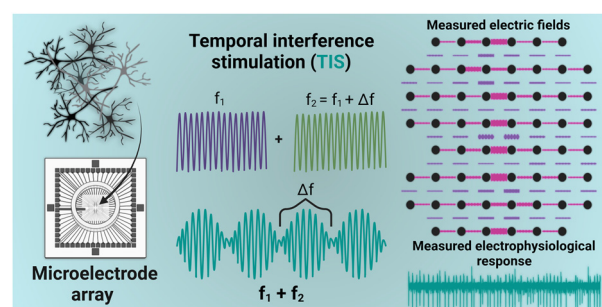
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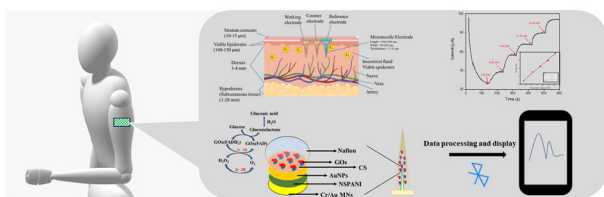
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Electric field temporal interference stimulation of neurons *in vitro*

Annika Ahtiainen,* Lilly Leydolph, Jarno M. A. Tanskanen, Alexander Hunold, Jens Haueisen and Jari A. K. Hyttinen



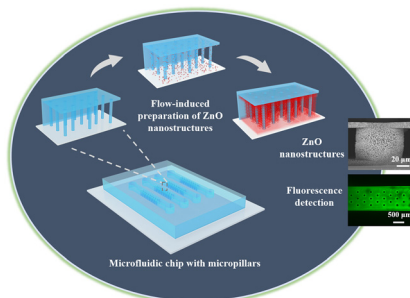
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Early detection of hypo/hyperglycemia using a microneedle electrode array-based biosensor for glucose ultrasensitive monitoring in interstitial fluid

Samar H. Tawakey, Mohammad Mansour, Ahmed Soltan and Alyaa I. Salim*

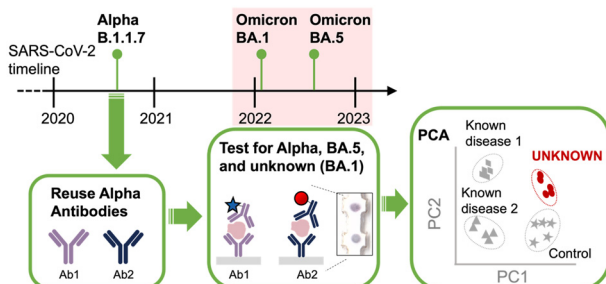
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Flow-induced fabrication of ZnO nanostructures in pillar-arrayed microchannels

Ruyi Xu, Siyu Li, Sai-Xi Yu, Yan-Jun Liu, Wenhui Xie, Qingfeng Zhan, Zhenjie Zhao* and Xin Li*

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A novel immunoassay technique using principal component analysis for enhanced detection of emerging viral variants

Josselyn Mata Calidonio, Arianna I. Maddox and Kimberly Hamad-Schifferli*

