Lab on a Chip

Devices and applications at the micro- and nanoscale

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ISSN 1473–0197 CODEN LCAHAM 24(13) 3193–3316 (2024)

Cover
See Alisa Ugodnikov, Craig A. Simmons and Henrik Persson, pp. 3199–3225.
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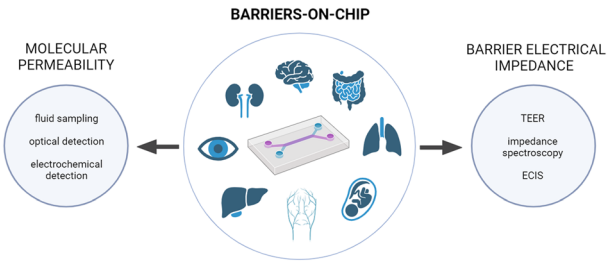
CRITICAL REVIEW

3199

Bridging barriers: advances and challenges in modeling biological barriers and measuring barrier integrity in organ-on-chip systems

Alisa Ugodnikov,* Henrik Persson and Craig A. Simmons*

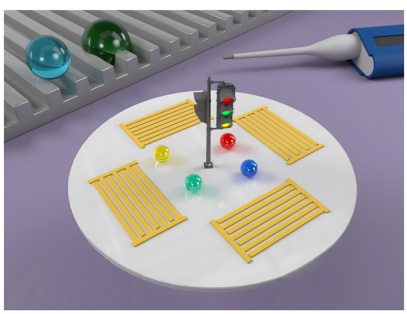


PAPERS

3226

Surface acoustic wave digital microfluidics with surface wettability gradient

Yaodong Zhang and Ying Yang*

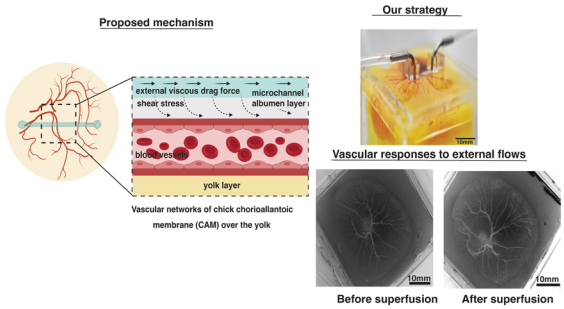


PAPERS

3233

Switching to external flows: perturbations of developing vasculature within chicken chorioallantoic membrane

Prasanna Padmanaban,* Danny van Galen, Nasim Salehi-Nik, Mariia Zakharova, Loes Segerink and Jeroen Rouwkema*



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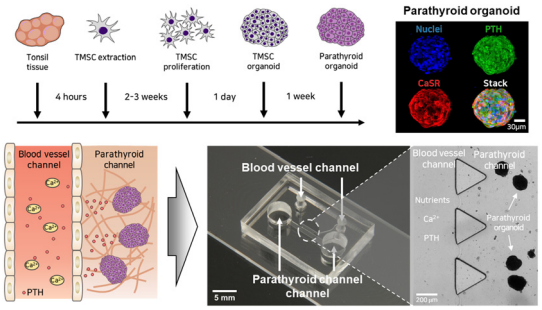
Parathyroid-on-a-chip simulating parathyroid hormone secretion in response to calcium concentration

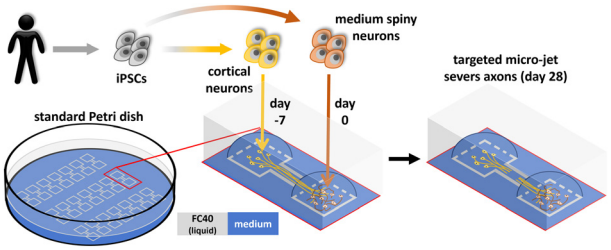
Sunghan Lee, Hyo-Il Jung, Jaehun Lee, Youngwon Kim, Jaewoo Chung, Han Su Kim, Jiseok Lim, Ki Chang Nam, Yun-Sung Lim,* Han Seok Choi* and Bong Seop Kwak*



3252

A fluid-walled microfluidic platform for human neuron microcircuits and directed axotomy

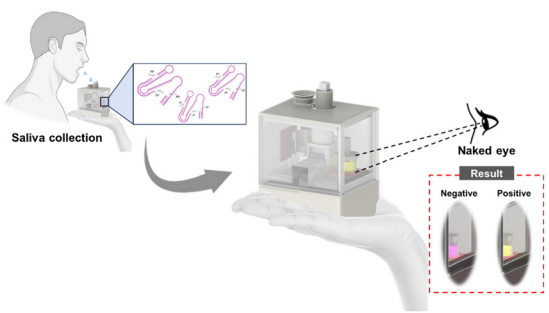
Federico Nebuloni, Quyen B. Do, Peter R. Cook, Edmond J. Walsh* and Richard Wade-Martins*



3265

Hand-held all-in-one (HAO) self-test kit for rapid and on-site detection of SARS-CoV-2 with colorimetric LAMP

Qingyang Wang, Woong Heo, Seoyeon Choi, Woongsik Jang, Chae Seung Lim and Hyo-Il Jung*



PAPERS

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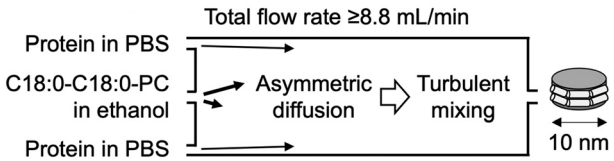

Microvortex-induced turbulent mixing for reconstitution of high-density lipoprotein-mimicking nanoparticles with aggregation-prone phosphatidylcholine

Koji Takata, Shiori Shibukawa, Chika Morimoto, Shingi Hashioka and Tatsuya Murakami*

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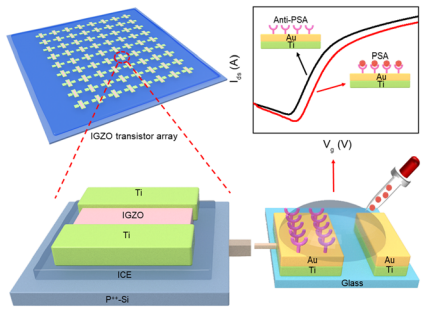

Electrolyte-gated amorphous IGZO transistors with extended gates for prostate-specific antigen detection

Xuemei Yin, Xingqi Ji, Wenlong Liu, Xiaoqian Li, Mingyang Wang, Qian Xin, Jiawei Zhang, Zhuocheng Yan* and Aimin Song*

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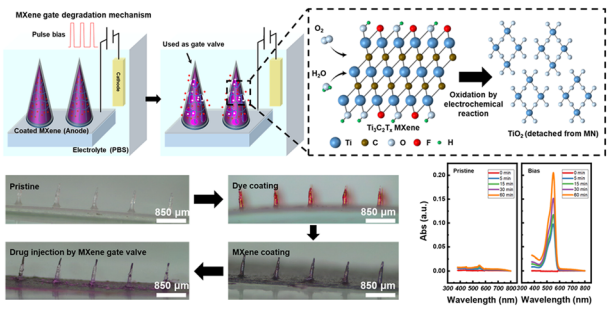

On-demand drug delivery bioelectronics through a water-processable low dimensional highly conductive MXene layer

Hyeok-jin Kwon, Yizhang Wu, Yuan Li, Gongkai Yuan, Rene Lopez, Ke Huang and Wubin Bai*

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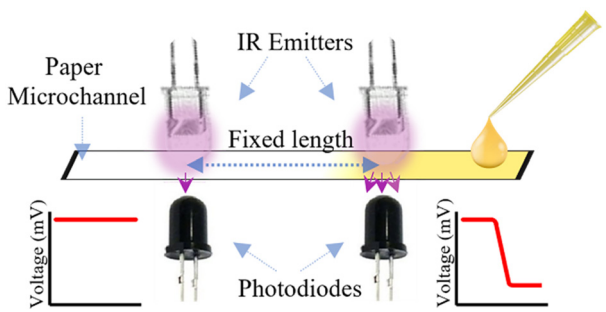

Optoelectronic microfluidic device for point-of-care blood plasma viscosity measurement

Somayyeh Bakhtiaridoost, Cristian Musuroi, Marius Volmer* and Monica Florescu*