Lab on a Chip

Devices and applications at the micro- and nanoscale

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See Jesse Greener *et al.*, pp. 4201–4212.
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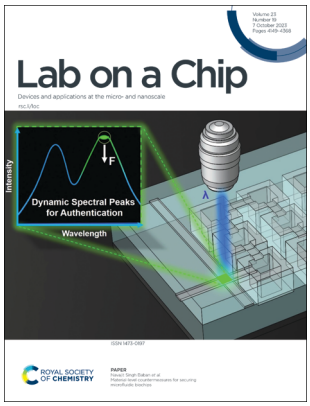

Inside cover
See Navajit Singh Baban *et al.*, pp. 4213–4231.
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EDITORIAL

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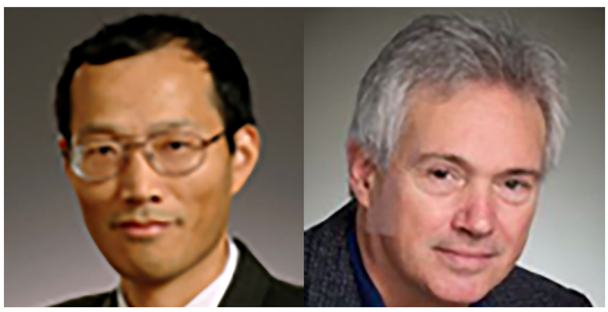
Celebrating the 30th anniversary of a pioneering microfluidics paper

Z. Hugh Fan* and D. Jed Harrison*



CRITICAL REVIEWS

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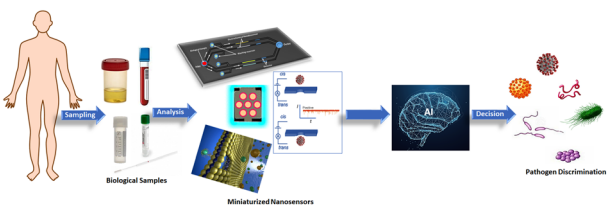
Advances in miniaturized nanosensing platforms for analysis of pathogenic bacteria and viruses

Abdallah M. Zeid, Islam M. Mostafa, Baohua Lou* and Guobao Xu*



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CRITICAL REVIEWS

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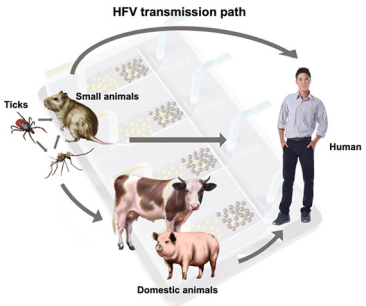
Micro- and nanosystems for the detection of hemorrhagic fever viruses

Mengdi Bao, Jacob Waitkus, Li Liu, Yu Chang, Zhiheng Xu, Peiwu Qin, Juhong Chen and Ke Du*



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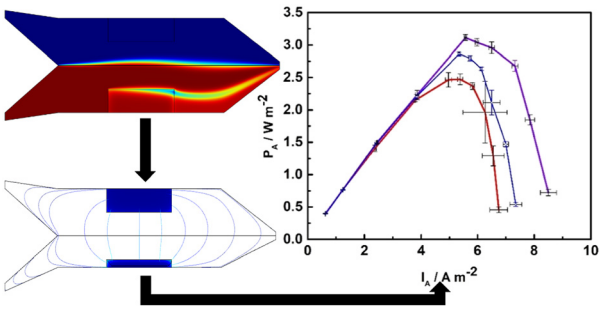
Microfluidic membraneless microbial fuel cells: new protocols for record power densities

Nastaran Khodaparastasgarabad, Jayesh M. Sonawane, Haleh Baghernavehsi, Lingling Gong, Linlin Liu and Jesse Greener*



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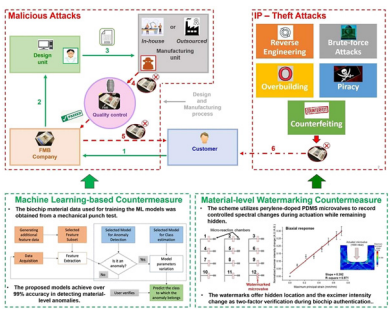
Material-level countermeasures for securing microfluidic biochips

Navajit Singh Baban,* Sohini Saha, Sofija Jancheska, Inderjeet Singh, Sachin Khapli, Maksat Khobdabayev, Jongmin Kim, Sukanta Bhattacharjee, Yong-Ak Song, Krishnendu Chakrabarty and Ramesh Karri



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Is AI essential? Examining the need for deep learning in image-activated sorting of *Saccharomyces cerevisiae*

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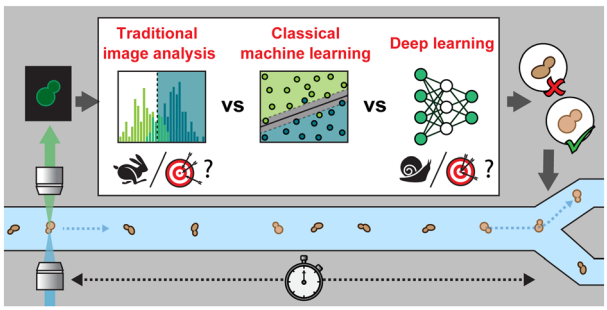

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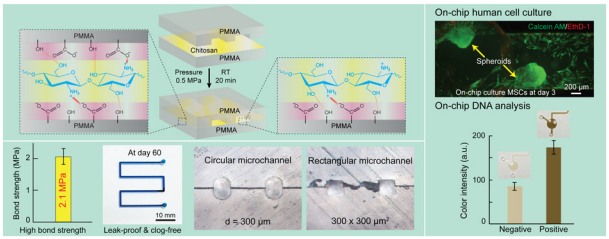

Chitosan: a green adhesive for surface functionalization and fabrication of thermoplastic biomedical microdevices

Kieu The Loan Trinh, Duc Anh Thai, Da Hyun Yang and Nae Yoon Lee*

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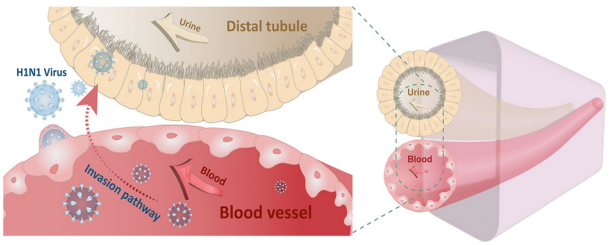

Distal renal tubular system-on-a-chip for studying the pathogenesis of influenza A virus-induced kidney injury

Yueyue Huangfu, Ji Wang, Jiao Feng and Zhi-Ling Zhang*

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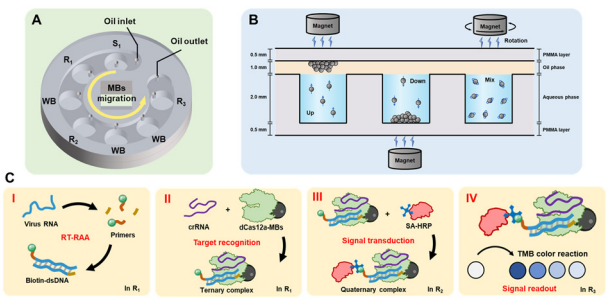

Magnetofluid-integrated biosensors based on DNase-dead Cas12a for visual point-of-care testing of HIV-1 by an up and down chip

Di Huang, Yekai Zhao, Mengjun Fang, Peijie Shen, Hu Xu, Yichen He, Shengfu Chen, Zhenjun Si and Zhinan Xu*

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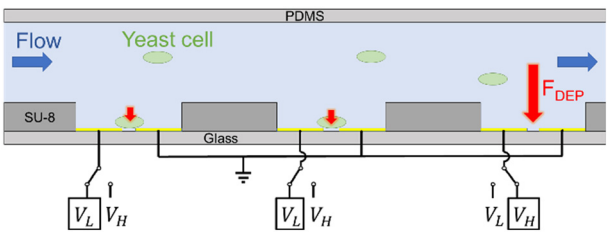

Full-electric microfluidic platform to capture, analyze and selectively release single cells

Ruben Van den Eeckhoudt,* An-Sofie Christiaens, Frederik Ceyssens, Vasileios Vangalis, Kevin J. Verstrepen, Nico Boon, Filip Tavernier, Michael Kraft and Irene Taurino

PAPERS

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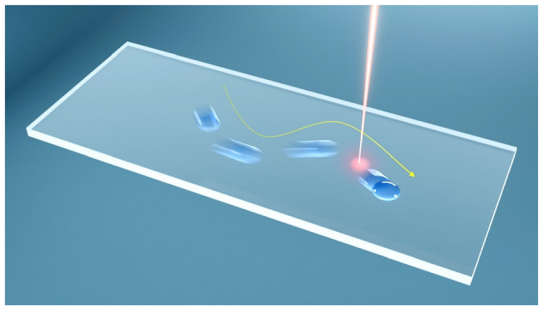
Light-manipulated binary droplet transport on a high-energy surface

Wei Li, Dongliang Li, Xun Zhu, Dingding Ye, Yang Yang, Hong Wang, Rong Chen* and Qiang Liao



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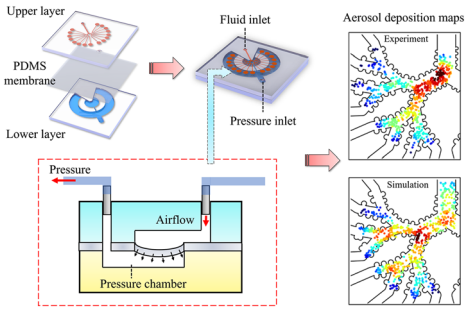
Design of a multilayer lung chip with multigenerational alveolar ducts to investigate the inhaled particle deposition

Yan Qiu, Chao Lu, Fubing Bao and Guoqing Hu*



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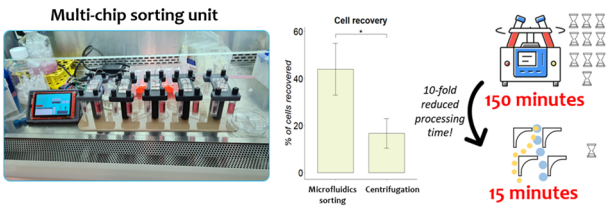
Scalable mesenchymal stem cell enrichment from bone marrow aspirate using deterministic lateral displacement (DLD) microfluidic sorting

Nicholas Tan Kwan Zen, Kerwin Kwek Zeming, Kim Leng Teo, Mavis Loberas, Jialing Lee, Chin Ren Goh, Da Hou Yang, Steve Oh, James Hui Hoi Po, Simon M. Cool, Han Wei Hou* and Jongyoon Han*



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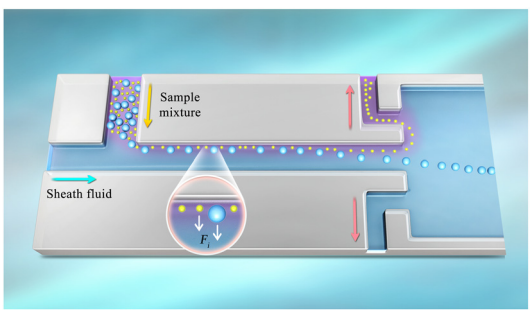
Reverse flow enhanced inertia pinched flow fractionation

Saijie Wang, Quanchen Xu, Zhihan Zhang, Shengbo Chen, Yizhou Jiang, Zhuowei Feng, Dou Wang* and Xingyu Jiang*



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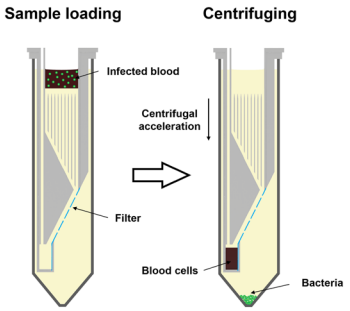

Efficient filter-in-centrifuge separation of low-concentration bacteria from blood

Kaiyang Zeng, Mohammad Osaid and Wouter van der Wijngaart*

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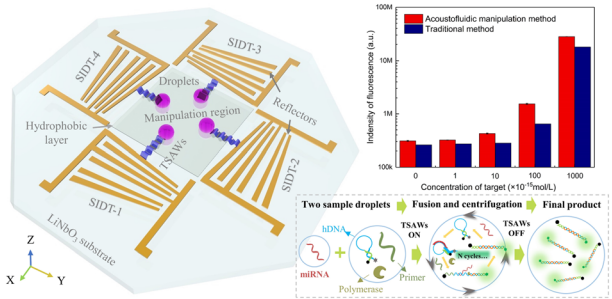

Acoustofluidics for simultaneous droplet transport and centrifugation facilitating ultrasensitive biomarker detection

Jingui Qian, Huaize Lan, Liang Huang, Shaohui Zheng, Xuefeng Hu,* Minghui Chen,* Joshua E.-Y. Lee and Wei Zhang*

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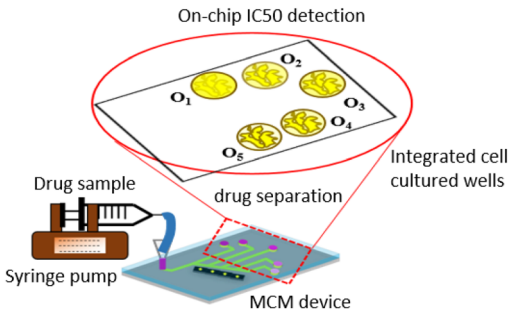

A magnetically controlled microfluidic device for concentration dependent *in vitro* testing of anticancer drug

Vinit Kumar Yadav, Preetha Ganguly, Prashant Mishra, Samaresh Das and Dhiman Mallick*

CORRECTION

4366

Correction: Design and validation of a flowless gradient generating microfluidic device for high-throughput drug testing

Ketaki Bachal, Shital Yadav, Prasanna Gandhi and Abhijit Majumder*