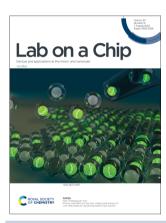
### Lab on a Chip

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

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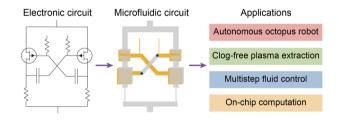
#### Cover

See Nam-Trung Nguyen et al., pp. 3353-3360. Image reproduced by permission of Nam-Trung Nguyen from Lab Chip, 2023, 23, 3353.

#### **CRITICAL REVIEWS**

#### Hydraulic-electric analogy for design and operation of microfluidic systems

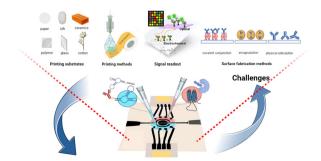
Zhenglin Li, Chao Liu and Jiashu Sun\*



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#### Printable biosensors towards next-generation pointof-care testing: paper substrate as an example

Yaolin Liu, Sheng Lu, Zhiheng Zhang, Zhugen Yang, Xiaolin Cui and Guozhen Liu\*



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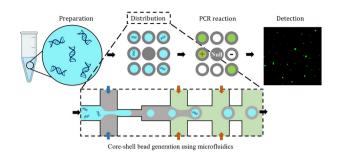
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Precise, wide field, and low-cost imaging and analysis of core-shell beads for digital polymerase chain reaction

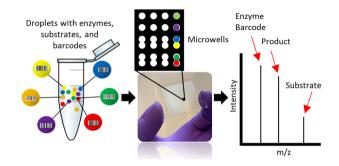
Ajeet Singh Yadav, Fariba Malekpour Galogahi, Du Tuan Tran, Aditya Vashi, Chin Hong Ooi, Kamalalayam Rajan Sreejith and Nam-Trung Nguyen\*



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#### A combinatorial droplet microfluidic device integrated with mass spectrometry for enzyme screening

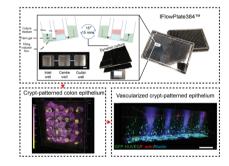
Noel S. Ha, Jenny R. Onley, Kai Deng, Peter Andeer, Benjamin P. Bowen, Kshitiz Gupta, Peter W. Kim, Nathaniel Kuch, Mark Kutschke, Alex Parker, Fangchao Song, Brian Fox, Paul D. Adams, Markus de Raad and Trent R. Northen\*



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#### A vascularized crypt-patterned colon model for high-throughput drug screening and disease modelling

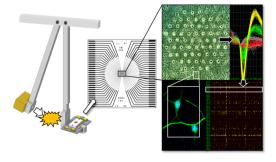
Alexander Sotra, Kimia Asadi Jozani and Boyang Zhang\*



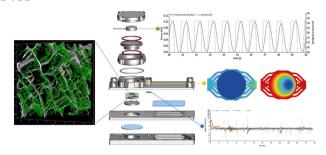
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Edmond A. Rogers, Timothy Beauclair, Jhon Martinez, Shatha J. Mufti, David Kim, Siyuan Sun, Rachel L. Stingel, Alexandra M. Dieterly, Nikita Krishnan, Jennifer Crodian and Riyi Shi\*



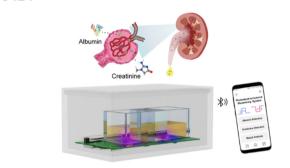
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Julia Scheinpflug,\* Chris Tina Höfer, Sarah S. Schmerbeck, Matthias Steinfath, Jennifer Doka, Yonatan Afework Tesfahunegn, Norman Violet, Kostja Renko, Konrad Gulich, Thilo John, Marlon R. Schneider, Elisa Wistorf, Gilbert Schönfelder and Frank Schulze\*

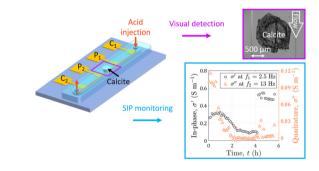
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Zhenghan Shi, Chaobo Dai, Peixue Deng, Yue Wu, Guang Liu, Zijian An, Hao Liang, Fenni Zhang, Yanli Lu\* and Qingjun Liu\*

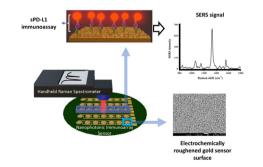
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### A microfluidic chip for geoelectrical monitoring of critical zone processes

Flore Rembert,\* Arnaud Stolz, Cyprien Soulaine and Sophie Roman

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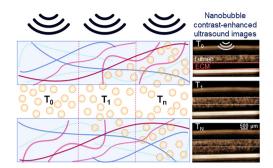
# Nanophotonic immunoarray with electrochemically roughened surfaces for handheld detection of secreted PD-L1 to predict immuno-oncology efficacy

Shuvashis Dey, Kevin M. Koo,\* Emtiaz Ahmed and Matt Trau\*

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Real-time imaging of nanobubble ultrasound contrast agent flow, extravasation, and diffusion through an extracellular matrix using a microfluidic model

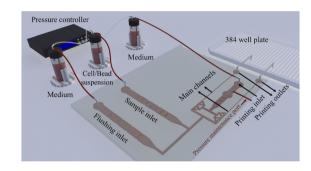
Michaela B. Cooley, William J. Wulftange, Dana Wegierak, Utku Goreke, Eric C. Abenojar, Umut A. Gurkan\* and Agata A. Exner\*



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Continuous trapping, elasticity measuring and deterministic printing of single cells using arrayed microfluidic traps

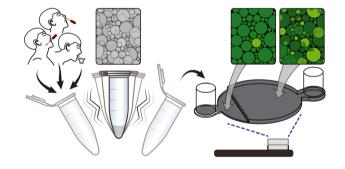
Yike Cai, En Yu, Jing Jin, Ya Liu and Huaying Chen\*



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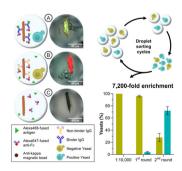
Daniel W. Weisgerber, Krzysztof Langer, Venice Servellita, Peng Xu, Charles Y. Chiu and Adam R. Abate\*



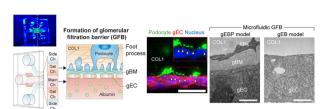
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Esteban Lebrun, Vasily Shenshin, Cécile Plaire, Vincent Vigneres, Théo Pizette, Bruno Dumas, Jean-Marc Nicaud and Guillaume Mottet\*



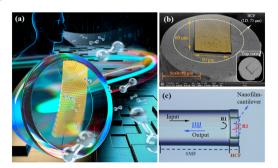
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Jaehoon Kim, Hyunho Kim, Jeong Suk Kang, Eun Soo Lee, Choon Hee Chung, Hyun Jeong Oh, YongTae Kim, Seok Chung\* and Eun Young Lee\*

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Junlan Zhong, Shengzhen Lu, Shen Liu,\* Peijing Chen, Junxian Luo, Yanping Chen, Guiqing Hong, Xizhen Xu, Junle Qu, Liwei Liu, Ying Wang and Yiping Wang