

# Lab on a Chip

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

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See Sihong Wang et al. from CCNY/CUNY, pp. 396–407.  
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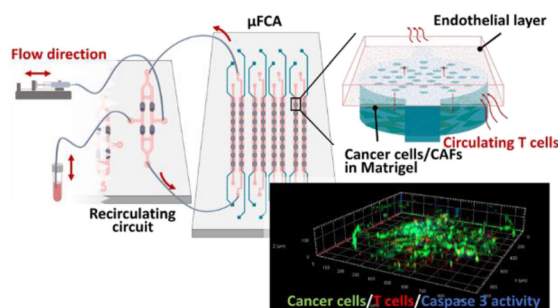
**Inside cover**  
See Hiroshi Kimura et al., pp. 408–421.  
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### PAPERS

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#### Enabling continuous immune cell recirculation on a microfluidic array to study immunotherapeutic interactions in a recapitulated tumour microenvironment

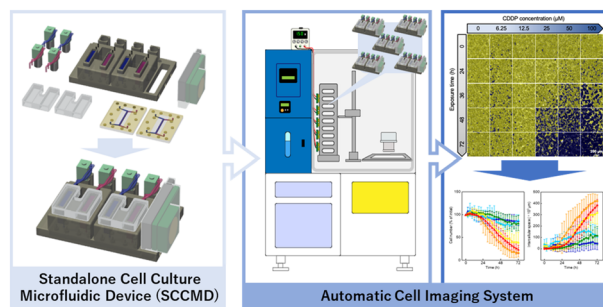
Chun-Wei Chi, Yeh-Hsing Lao, A. H. Rezwanuddin Ahmed, Siyu He, Taha Merghoub, Kam W. Leong and Sihong Wang\*



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#### Standalone cell culture microfluidic device-based microphysiological system for automated cell observation and application in nephrotoxicity tests

Hiroshi Kimura,\* Hiroko Nakamura, Tomomi Goto, Wakana Uchida, Takayuki Uozumi, Daniel Nishizawa, Kenta Shinha, Junko Sakagami and Kotaro Doi



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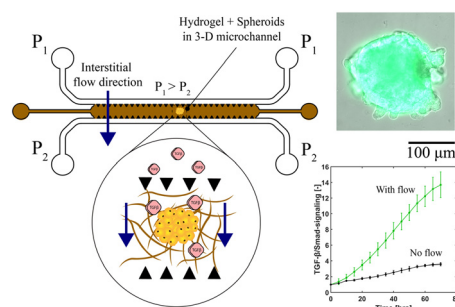
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### Interstitial flow potentiates TGF- $\beta$ /Smad-signaling activity in lung cancer spheroids in a 3D-microfluidic chip

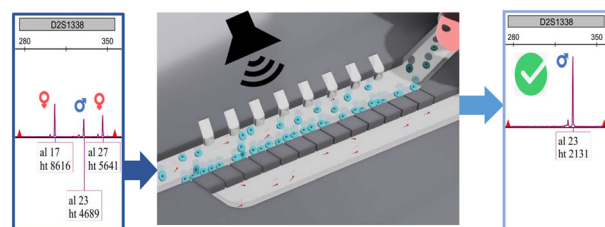
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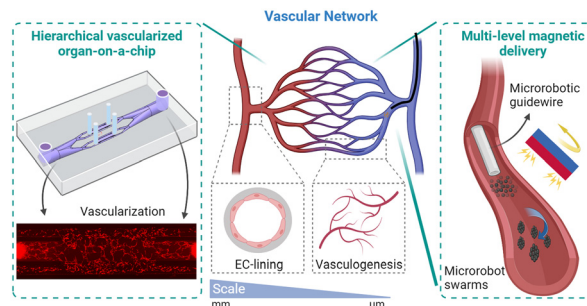
Ting-Yu Wan, Hsiao-Lin Hwa, Tsui-Ting Lee and Yen-Wen Lu\*



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### Multi-level magnetic microrobot delivery strategy within a hierarchical vascularized organ-on-a-chip

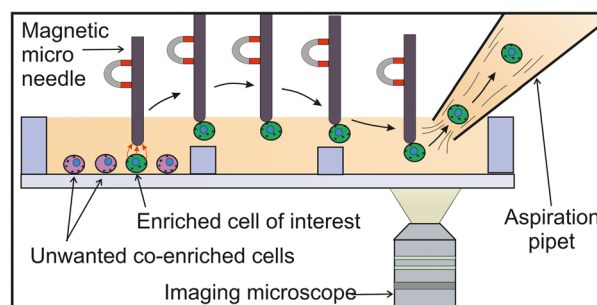
Kangyi Lu, Chenyang Zhou, Zhangjie Li, Yijun Liu, Feifan Wang, Lian Xuan and Xiaolin Wang\*



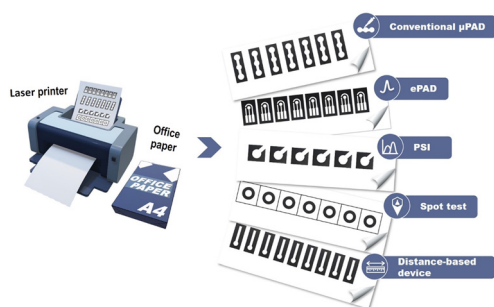
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### A magnetic microneedle to isolate single immunomagnetically labeled cells

Michiel Stevens,\* Philip Harder and Leon W. M. M. Terstappen



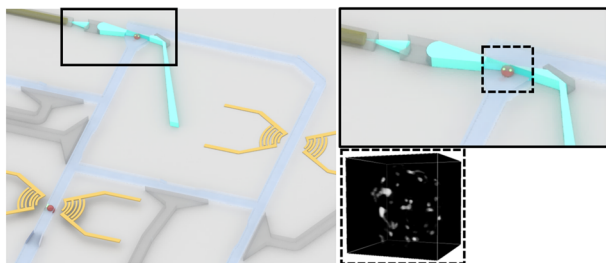
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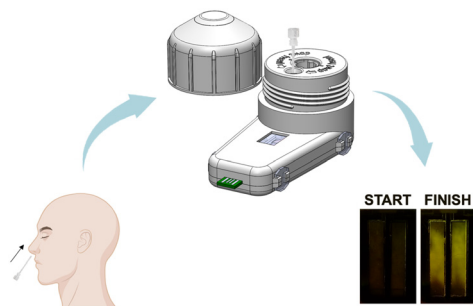
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Cynthia Richard, Erick J. Vargas-Ordaz, Yaqi Zhang, Jian Li, Victor J. Cadarso\* and Adrian Neild\*

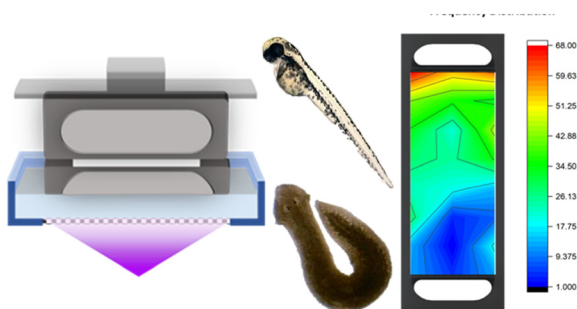
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Hari Kalathil Balakrishnan, Aaron G. Schultz, Soo Min Lee, Richard Alexander, Ludovic F. Dumée, Egan H. Doeven, Dan Yuan\* and Rosanne M. Guijt\*

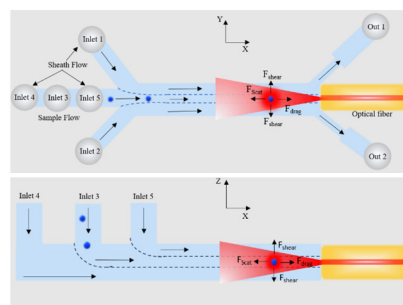




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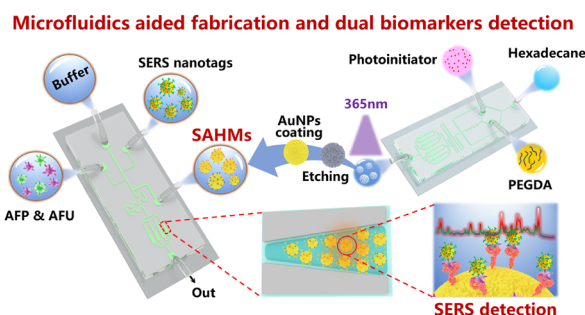
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Piotr Garstecki and Ladislav Derzsi\*



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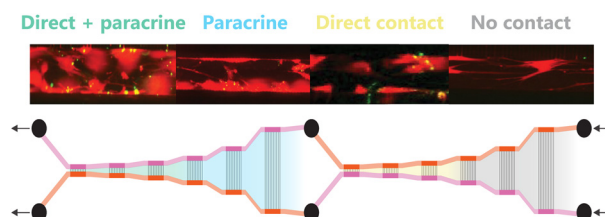
Changbiao Zhan, Zihao Guan, Liandong Yu,\*  
Tongmei Jing, Huakun Jia, Xiaozhe Chen  
and Rongke Gao\*



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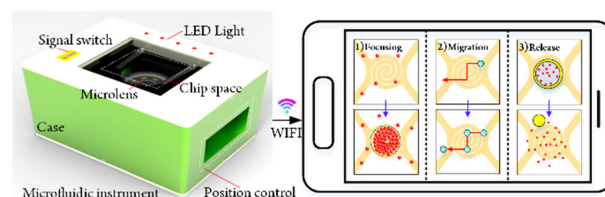
Ellen A. Otte, Taryn N. Smith, Nick Glass,  
Ernst J. Wolvetang and Justin J. Cooper-White\*



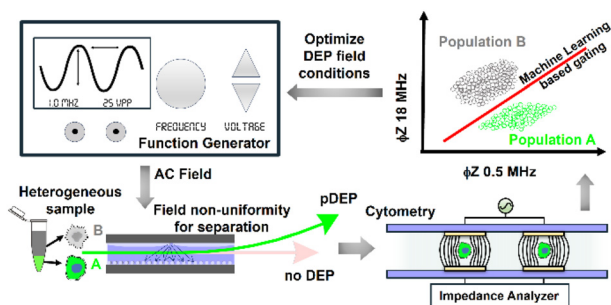
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### A portable microfluidic device for thermally controlled granular sample manipulation

Kailiang Zhang, Wei Xiang, Na Jia, Mingyu Yu, Jiuqing Liu  
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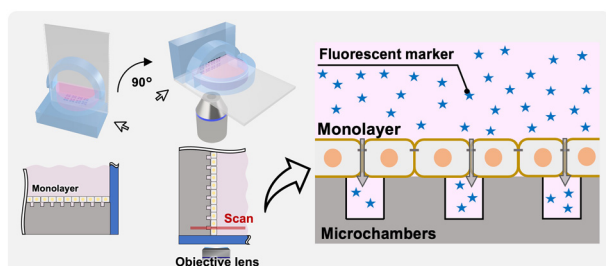
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Aditya Rane, Javad Jarmoshti, Abdullah-Bin Siddique, Sara Adair, Karina Torres-Castro, Carlos Honrado, Todd W. Bauer and Nathan S. Swami\*

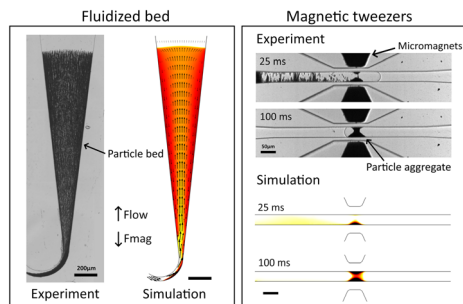
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### Horizontal and vertical microchamber platforms for evaluation of the paracellular permeability of an epithelial cell monolayer

Ryuya Kida, Mamiko Tsugane and Hiroaki Suzuki\*

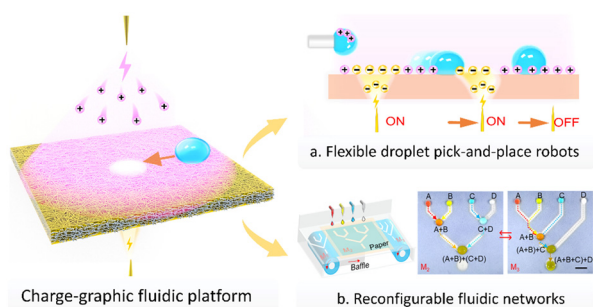
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Simon Dumas\* and Stéphanie Descroix

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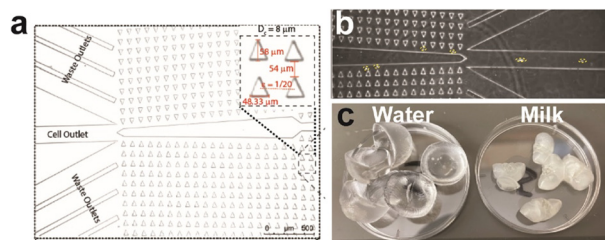
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