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Lab on a Chip

Devices and applications at the micro- and nanoscale

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See Ke Du *et al.*, pp. 2157–2167.
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See Alina Deipenbrock and Nicole E. Teusch *et al.*, pp. 2168–2181.
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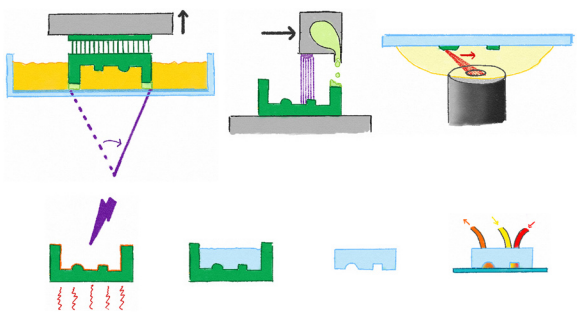
CRITICAL REVIEW

2129

Light-based 3D printing and post-treatments of moulds for PDMS soft lithography

Bastien Venzac

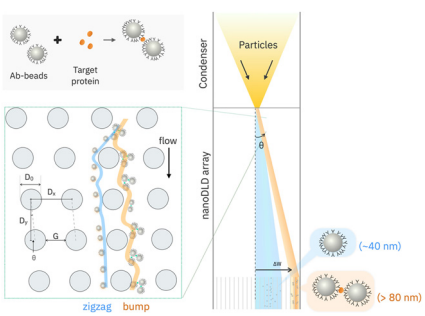


COMMUNICATION

2148

Bioselective agglutination induced nanoscale deterministic lateral displacement

Kuan Yu Hsieh, Joshua T. Smith, Sung-Cheol Kim, Stacey M. Gifford, Michael Pereira, Guan-Yu Chen* and Benjamin H. Wunsch*



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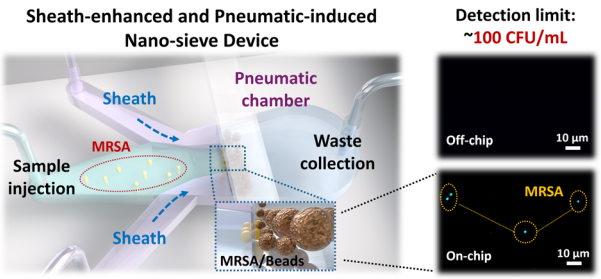
PAPERS

2157

Sheath-enhanced concentration and on-chip detection of bacteria from an extremely low-concentration level

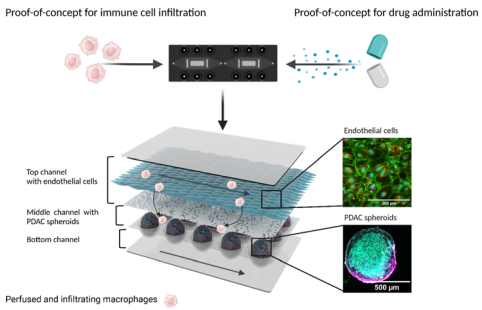
Xinye Chen, Ruonan Peng, Ruo-Qian Wang and Ke Du*



2168

Modelling of the multicellular tumor microenvironment of pancreatic ductal adenocarcinoma (PDAC) on a fit-for-purpose biochip for preclinical drug discovery

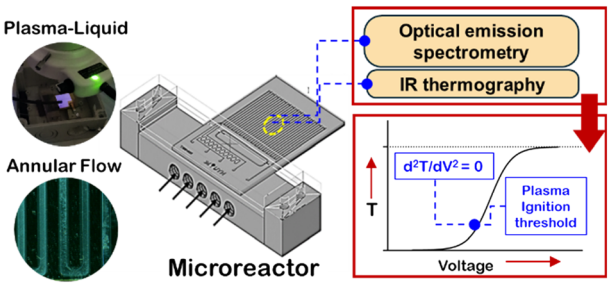
Alina Deipenbrock, Ben Eric Wilmes, Thomas Sommermann, Nader Abdo, Kyra Moustakas, Martin Raasch, Knut Rennert and Nicole E. Teusch*



2182

Ignition of non-equilibrium methane dielectric barrier discharges in a multiphase plasma–liquid microfluidic device

Sudip Das, Mackenzie Meyer, Mark J. Kushner and Ryan L. Hartman*



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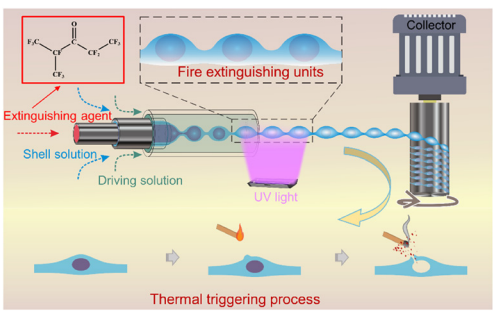
Array-structured microcapsule fibers for efficient fire extinguishing in confined spaces

Qiaosheng Pan, Ning Sang, Tianpei Zhou, Changzheng Wu, Ting Si, Fangsheng Huang* and Zhiqiang Zhu*



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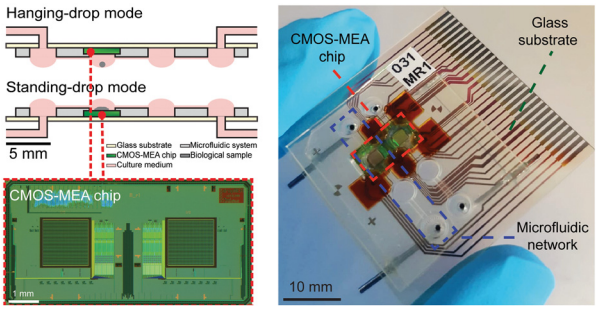

Seamless integration of CMOS microsensors into open microfluidic systems

Raziyeh Bounik, Alex E. Landolt, Jihyun Lee, Vijay Viswam, Fernando Cardes, Mario M. Modena* and Andreas Hierlemann

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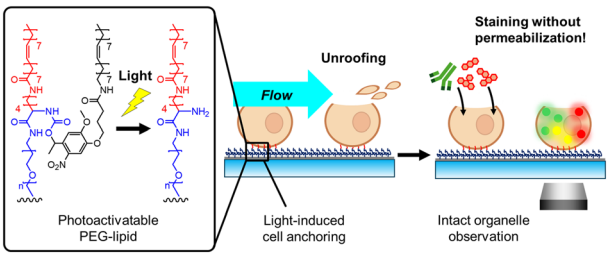

Microfluidic cell unroofing for the *in situ* molecular analysis of organelles without membrane permeabilization

Yuki Umeda, Shinya Yamahira, Koki Nakamura, Tomoko Takagi, Tomoko Suzuki, Kae Sato, Yusuke Hirabayashi, Akimitsu Okamoto and Satoshi Yamaguchi*

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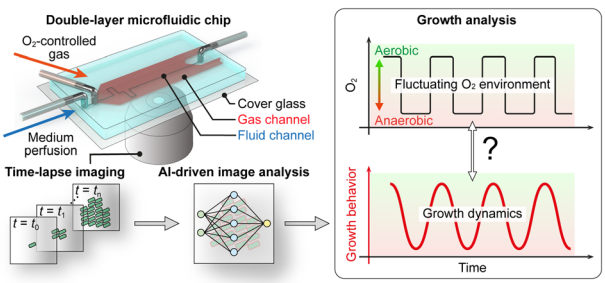

Unveiling microbial single-cell growth dynamics under rapid periodic oxygen oscillations

Keitaro Kasahara, Johannes Seiffarth, Birgit Stute, Eric von Lieres, Thomas Drepper, Katharina Nöh and Dietrich Kohlheyer*

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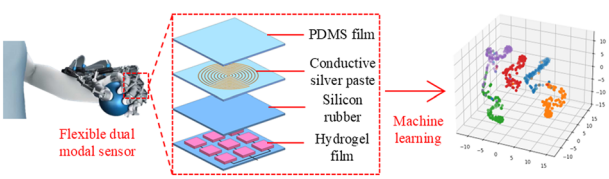

Machine learning-assisted flexible dual modal sensor for multi-sensing detection and target object recognition in the grasping process

Wentao Dong,* Kaiqi Sheng, Chang Chen and Xiaopeng Qiu

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PAPERS

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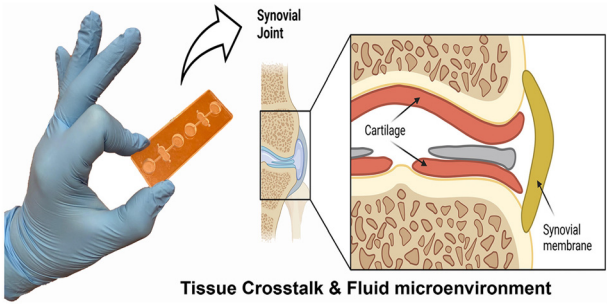
The effect of cyclic fluid perfusion on the proinflammatory tissue environment in osteoarthritis using equine joint-on-a-chip models

Johannes Heidenberger, Eva I. Reihs, Jonathan Strauss, Martin Frauenlob, Sinan Gültekin, Iris Gerner, Stefan Toegel, Peter Ertl, Reinhard Windhager, Florien Jenner and Mario Rothbauer*



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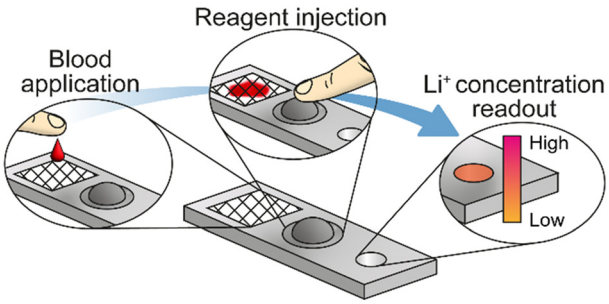
On-chip colorimetric assay for determining serum lithium concentration from whole blood

Carl Olsson, Janosch Hauser, Federico Ribet, Fredrik Wikström, André Görgens, Olof Beck, Martin Schalling, Lena Backlund and Niclas Roxhed*



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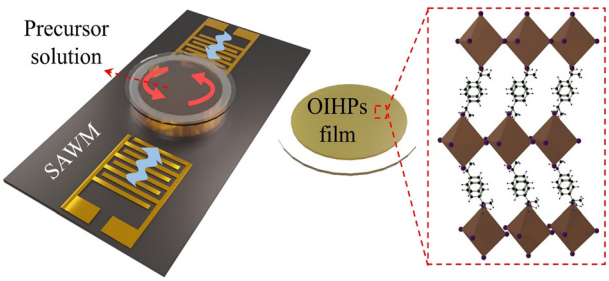
Chiral organic–inorganic hybrid perovskites synthesized using an acoustofluidic closed system

Tao Zhou, Yan Yu, Haonan Zhang, Chong Li, Ran Tao,* Fujian Ren, Chen Fu, Jingting Luo and Yongqing Fu



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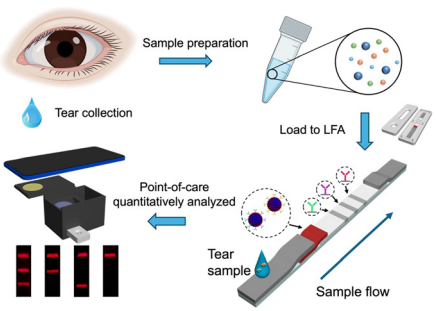
Dual lateral flow assay using quantum nanobeads for quantitative detection of BDNF and TNF-α in tears

Yue Wu, Yubing Hu, Nan Jiang, Maria W. Georgi, Ali K. Yetisen* and M. Francesca Cordeiro*



CORRECTION

2304

Correction: Functionality integration in stereolithography 3D printed microfluidics using a "print-pause-print" strategy

Matthieu Sagot, Timothée Derkenne, Perrine Giunchi, Yohan Davit, Jean-Philippe Nougayrède, Corentin Tregouet, Vincent Raimbault, Laurent Malaquin and Bastien Venzac*

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