

Lab on a Chip

Devices and applications at the micro- and nanoscale
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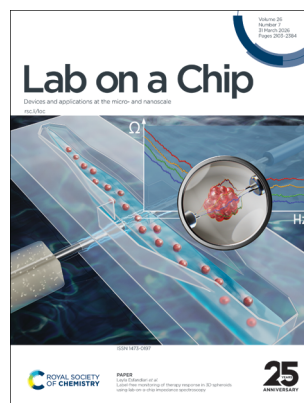
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See Junyi Yang and Peichun Amy Tsai, pp. 2146–2162.
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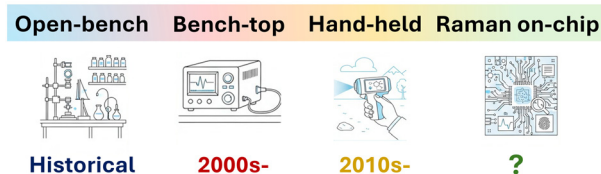
Inside cover
See Leyla Esfandiari *et al.*, pp. 2163–2172.
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CRITICAL REVIEW

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Miniaturisation of Raman spectroscopy systems: from benchtop to backpack

Mike Hardy,* Pooja P. Kanade, Emma Buchan, Pola Goldberg Oppenheimer, Cillian P. T. McPolin and Robert M. Bowman

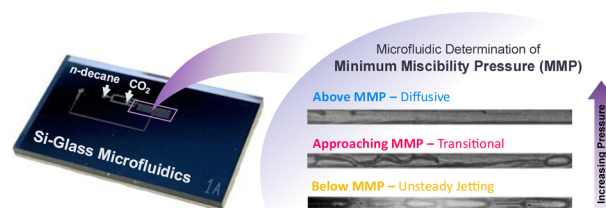


PAPERS

2146

Microfluidic determination of minimum miscibility pressure (MMP) in dynamic CO₂/n-decane flow

Junyi Yang and Peichun Amy Tsai*



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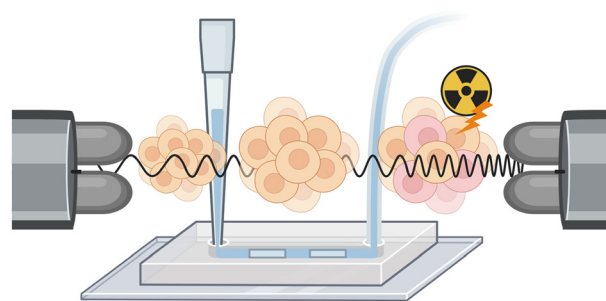
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2163

Label-free monitoring of therapy response in 3D spheroids using lab-on-a-chip impedance spectroscopy

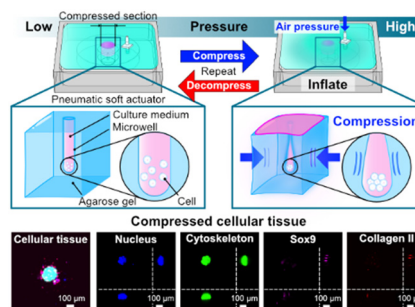
Gregory Macke, Maulee Sheth, Manju Sharma, Supasek Kongsomros, Maria Lehn, Trisha M. Wise-Draper, Vinita Takiar and Leyla Esfandiari*



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Hydrogel microwell with pneumatic soft actuator for compression formation of three-dimensional cellular tissue

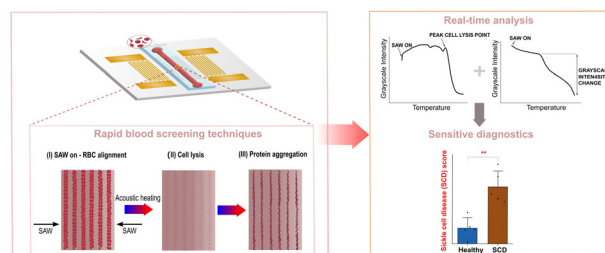
Ryota Kawamae, Atsushi Takata, Kenjiro Takemura and Yuta Kurashina*



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Acoustic probing of new biomarkers for rapid sickle cell disease screening

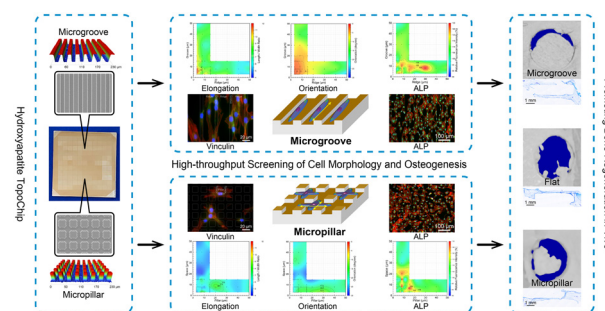
Nakul Sridhar, Meiou Song, Michael H. B. Stowell, Kathryn L. Hassell and Xiaoyun Ding*



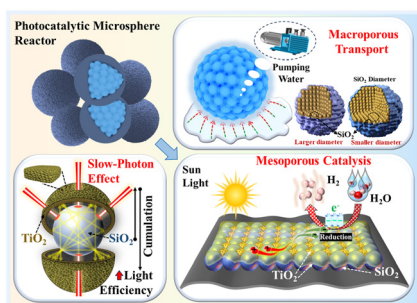
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TopoChip-based high-throughput screening of micropatterned hydroxyapatite to guide stem cell behavior and accelerate bone regeneration

Yada Li, Chuanxin Zhong, Mingyu Zhu, Junqin Wang, Qiming Zhuang, Yuqi Tang, Jianfeng Yan, Xiang Ge, Ju Fang* and Fuzeng Ren*



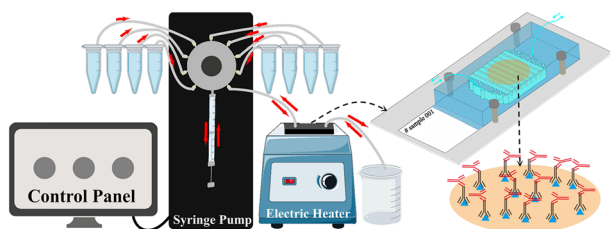
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Macroporous transport – mesoporous catalysis: a rapid microfluidic-fabricated biomimetic sponge photocatalytic microsphere reactor

Qikai Wang, Wenwen Shi, Qihang Yang, Feng Teng* and Qihong Cui*

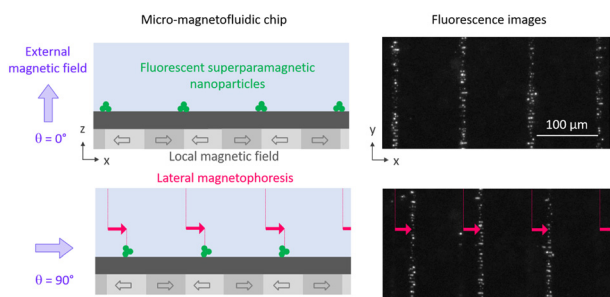
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An automated microfluidic system based on V-groove chip for rapid immunohistochemistry

Lu Zhong, Hang Chen, Hong-Lei Chen, Jun Peng and Zhi-Ling Zhang*

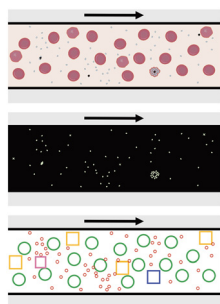
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Fast and precise magnetophoresis of superparamagnetic nanoparticles on a micro-magnetic substrate in a static liquid environment

Elise Bou,* Claudia de la Fuente, Etienne Orsini, Sarah Delshadi, Orphée Cugat* and Franz Bruckert*

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Microfluidic platform for automatic quantification of malaria parasite invasion under physiological flow conditions

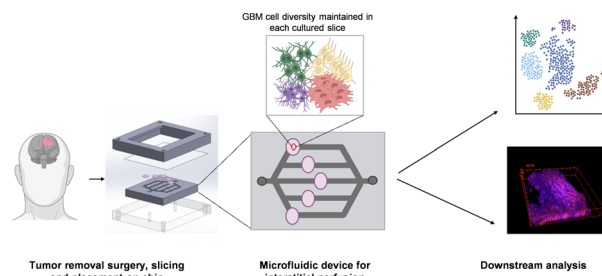
Emma Kals,* Morten Kals, Viola Introini, Boyko Vodenicharski, Jurij Kotar, Julian C. Rayner* and Pietro Cicuta*



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Dissociable perfusion chip (DPC): perfusable microfluidic chip for single-cell screening of anti-cancer drugs in live glioblastoma explants

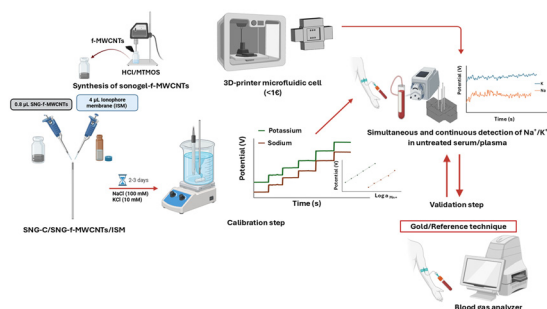
Darragh G. Kennedy, Wenting Zhao, Terry L. Chern, Michael Yang, Nicolas Acosta, Siddarth Arumugam, Pavan Upadhyayula, Julia Furnari, Athanassios Dovas, Jeffrey N. Bruce, Peter Canoll, Samuel K. Sia* and Peter A. Sims*



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Integrated microfluidic platform based on potentiometric Sonogel-Carbon sensors for the simultaneous determination of Na⁺ and K⁺ in untreated human plasma and serum

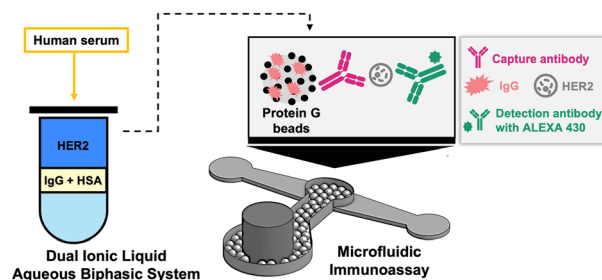
Álvaro Jesús Sainz-Calvo, Álvaro Cordero-Hernández, Marina Jiménez-Rodríguez, Virginia García-Rodríguez, Juan José García-Guzmán,* Dolores Bellido-Milla,* José María Palacios-Santander and Laura Cubillana-Aguilera



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Integrated strategy for breast cancer biomarker analysis using dual ionic liquid aqueous biphasic systems and microfluidic immunoassays

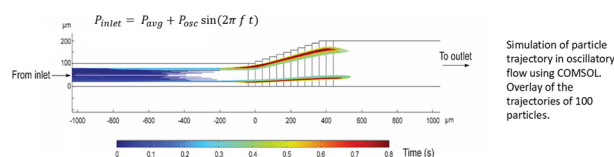
Maria S. M. Mendes, Inês Agostinho, Maria C. Souza, Virginia Chu, Mara G. Freire, Francisca A. e Silva* and João P. Conde*



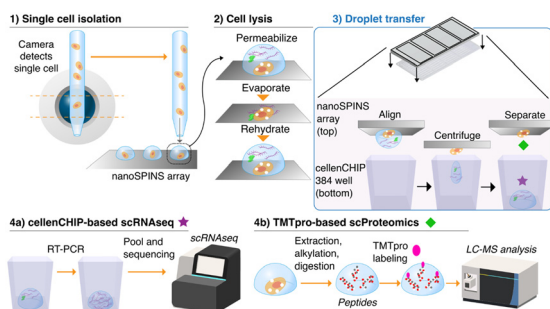
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Oscillatory flow for contactless particle trapping

Gabrielle Saint-Girons, Kaustav A. Gopinathan, Sajad Razavi Bazaz, Li Zhan, Jon F. Edd* and Mehmet Toner*



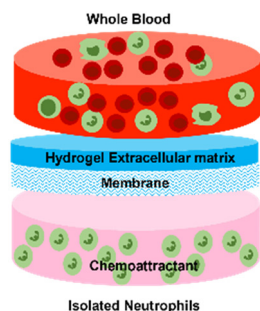
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High-throughput single-cell proteomics and transcriptomics from same cells with a nanoliter-scale, spin-transfer approach

Pranav Dawar, Lye Meng Markillie, Sarah M. Williams, Hugh D. Mitchell, Johannes W. Bagnoli, Joshua Cantlon-Bruce, Anjali Seth, Carter C. Bracken, Ljiljana Paša-Tolić, Ying Zhu and James M. Fulcher*

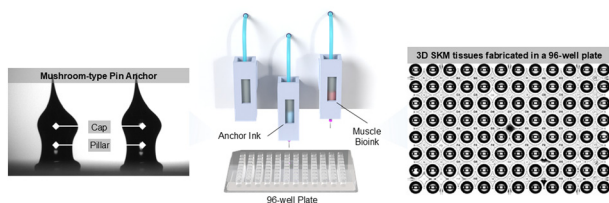
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3D ECM-inflammation model on a microfluidic chip for neutrophil transmigration from whole blood investigations

Shide Bakhtiari,* Vanessa Velasco and Ronald W. Davis

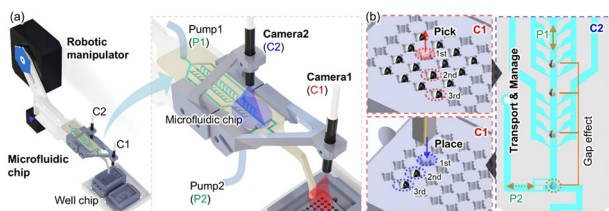
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High-throughput and efficient fabrication of engineered skeletal muscle tissue *via* streamlined 3D multimaterial bioprinting

Tae-Eun Lim, Ashfaq Ahmad, Yeong-Jin Choi* and Hee-Gyeong Yi*

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Dual vision-equipped microfluidic chip for spatiotemporal sequential pick-and-place of oocytes

Shuzhang Liang, Hao Mo, Yuguo Dai, Hirotaka Sugiura, Satoshi Amaya and Fumihito Arai*



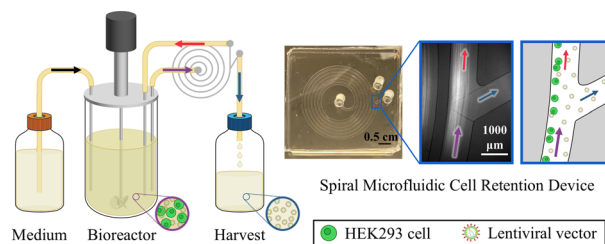
PAPERS

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Intensified lentiviral vector perfusion bioprocessing with a spiral inertial microfluidic cell retention device

Alexander Bevacqua, Fuguo Liu, Jianzhu Chen and Jongyoon Han*

Perfusion culture with a spiral microfluidic cell retention device



CORRECTION

2380

Correction: A gut-brain axis on-a-chip platform for drug testing challenged with donepezil

Francesca Fanizza, Simone Perottoni, Lucia Boeri, Francesca Donnalaja, Francesca Negro, Francesca Pugli, Gianluigi Forloni, Carmen Giordano* and Diego Albani

