

Lab on a Chip

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

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IN THIS ISSUE

ISSN 1473-0197 CODEN LCAHAM 25(5) 731-1374 (2025)



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See W. Russ Algar *et al.*,
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PERSPECTIVES

741

Point-of-need diagnostics in a post-Covid world: an opportunity for paper-based microfluidics to serve during syndemics

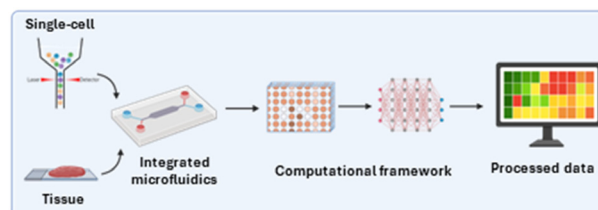
Maria-Nefeli Tsaloglou,* Dionysios C. Christodouleas, Jonathan Milette, Kendall Milkey, Isabelle C. Romine, Judy Im, Shefali Lathwal, Duraipandian Thava Selvam, Hadley D. Sikes and George M. Whitesides*



752

Microfluidics for morphometrics and spatial omics applications

Nishanth Venugopal Menon, Jeeyeon Lee, Tao Tang and Chwee Teck Lim*



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Fundamental questions
Elemental answers

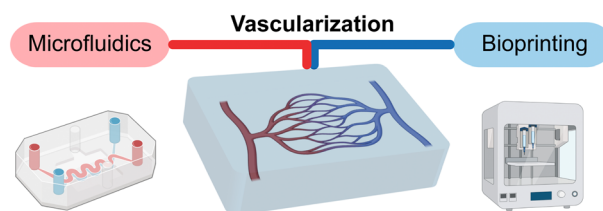
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764

Integrating microfluidic and bioprinting technologies: advanced strategies for tissue vascularization

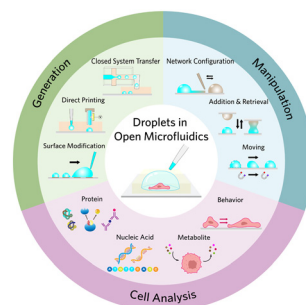
Xuan Mei, Ziyi Yang, Xiran Wang, Alan Shi, Joel Blanchard, Fanny Elahi, Heemin Kang,* Gorka Orive* and Yu Shrike Zhang*



787

Droplets in open microfluidics: generation, manipulation, and application in cell analysis

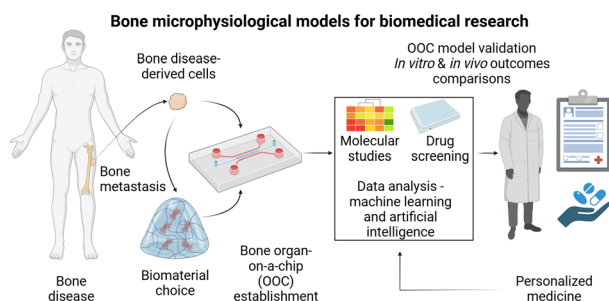
Jiaxu Lin, Ying Hou, Qiang Zhang and Jin-Ming Lin*



806

Bone microphysiological models for biomedical research

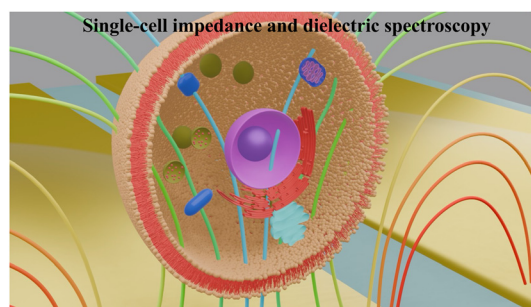
Francisco Verdugo-Avello,* Jacek K. Wychowaniec, Carlos A. Villacis-Aguirre, Matteo D'Este and Jorge R. Toledo



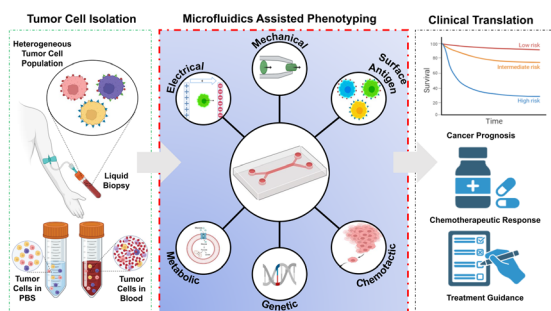
837

Tutorial on impedance and dielectric spectroscopy for single-cell characterisation on microfluidic platforms: theory, practice, and recent advances

Fatemeh Dadkhah Tehrani, Michael D. O'Toole* and David J. Collins



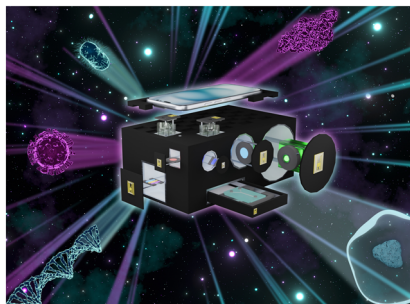
856



Advances in microfluidic platforms for tumor cell phenotyping: from bench to bedside

Rutwik Joshi, Hesaneh Ahmadi, Karl Gardner, Robert K. Bright, Wenwen Wang and Wei Li*

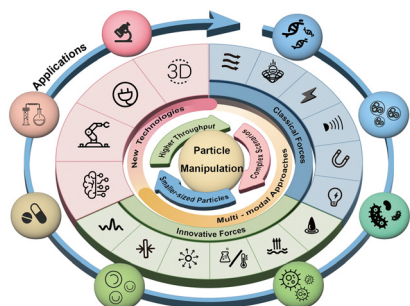
884



Smartphones as a platform for molecular analysis: concepts, methods, devices and future potential

Daina V. Baker, Jasmine Bernal-Escalante, Christine Traaseth, Yihao Wang, Michael V. Tran, Seth Keenan and W. Russ Algar*

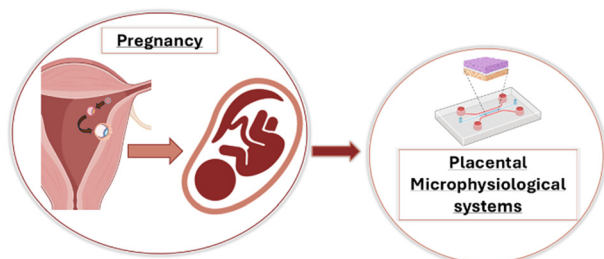
956



Particle manipulation under X-force fields

Chundong Xue, Yifan Yin, Xiaoyu Xu, Kai Tian, Jinghong Su and Guoqing Hu*

979



Placental microphysiological systems: new advances on promising platforms that mimic the microenvironment of the human placenta

Inês M. Gonçalves, Muhammad Afzal, Nithil Kennedy, Ana Moita, Rui Lima, Serge Ostrovidov, Takeshi Hori, Yuji Nashimoto and Hirokazu Kaji*

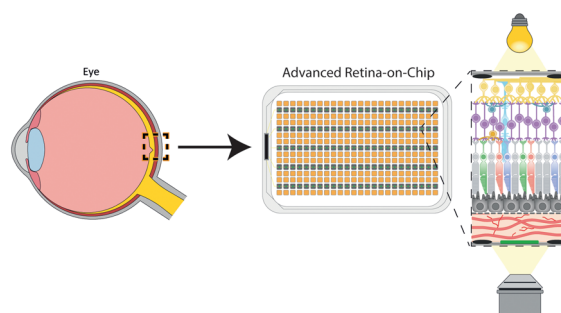


CRITICAL REVIEWS

996

Retina-on-chip: engineering functional *in vitro* models of the human retina using organ-on-chip technology

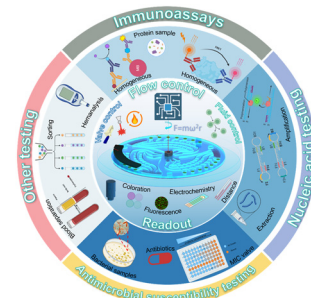
Tarek Gensheimer, Devin Veerman, Edwin M. van Oosten, Loes Segerink, Alejandro Garanto and Andries D. van der Meer*



1015

Recent advances in centrifugal microfluidics for point-of-care testing

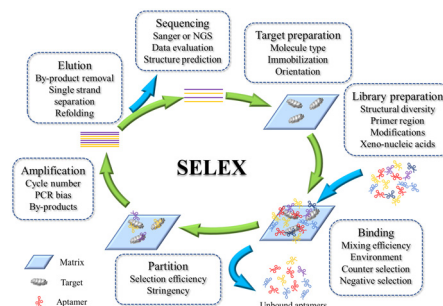
Huijuan Yuan, Zeyu Miao, Chao Wan, Jingjing Wang, Jinzhi Liu, Yiwei Li, Yujin Xiao,* Peng Chen* and Bi-Feng Liu*



1047

Aptamer selection *via* versatile microfluidic platforms and their diverse applications

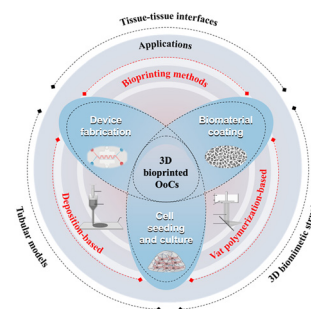
Yi-Da Chung, Yi-Cheng Tsai, Chi-Hung Wang and Gwo-Bin Lee*



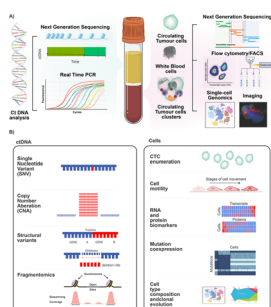
1081

Developing 3D bioprinting for organs-on-chips

Zhuhao Wu, Rui Liu, Ning Shao and Yuanjin Zhao*



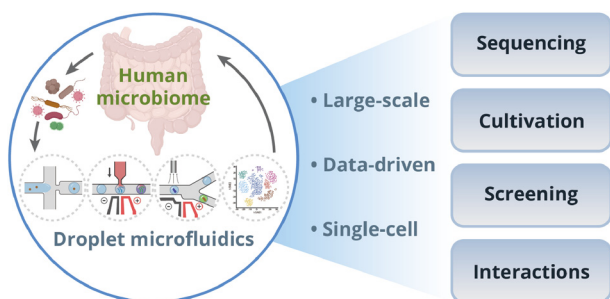
1097



Challenges in blood fractionation for cancer liquid biopsy: how can microfluidics assist?

Robert Salomon,* Sajad Razavi Bazaz, Kirk Mutafoopoulos, David Gallego-Ortega, Majid Warkiani, David Weitz and Dayong Jin

1128

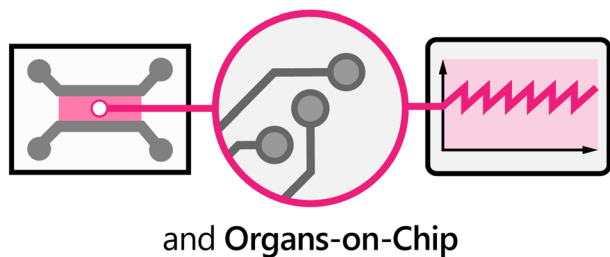


Droplet microfluidics: unveiling the hidden complexity of the human microbiome

Yibin Xu, Zhiyi Wang, Caiming Li, Shuiquan Tian and Wenbin Du*

1149

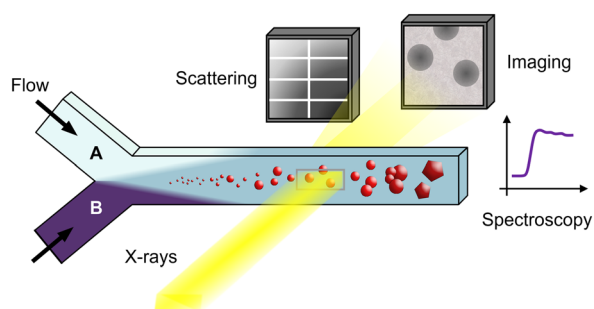
Microsensors for Cell Cultures



Microsensor systems for cell metabolism – from 2D culture to organ-on-chip (2019–2024)

Johannes Dornhof, Jochen Kieninger, Stefan J. Rupitsch and Andreas Weltin*

1169



Micro- and milli-fluidic sample environments for *in situ* X-ray analysis in the chemical and materials sciences

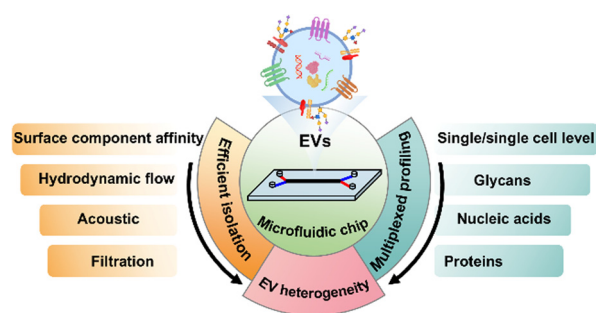
Mark A. Levenstein,* Corinne Chevallard, Florent Malloggi, Fabienne Testard and Olivier Taché



1228

Demystifying EV heterogeneity: emerging microfluidic technologies for isolation and multiplexed profiling of extracellular vesicles

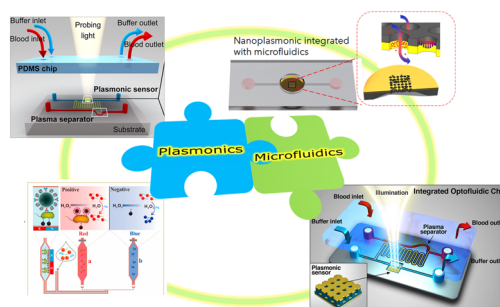
Guihua Zhang, Xiaodan Huang, Sinong Liu, Yiling Xu, Nan Wang, Chaoyong Yang and Zhi Zhu*



1256

Synergizing microfluidics and plasmonics: advances, applications, and future directions

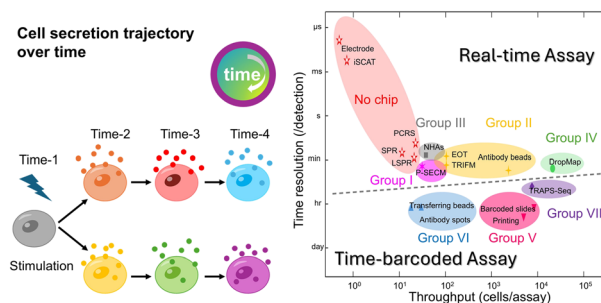
C. Escobedo* and A. G. Brolo*



1282

Time-resolved single-cell secretion analysis *via* microfluidics

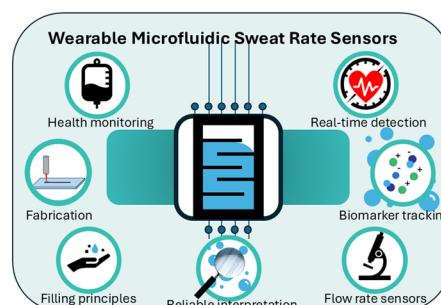
Ying Xu, Mei Tsz Jewel Chan, Ming Yang, Heixu Meng and Chia-Hung Chen*



1296

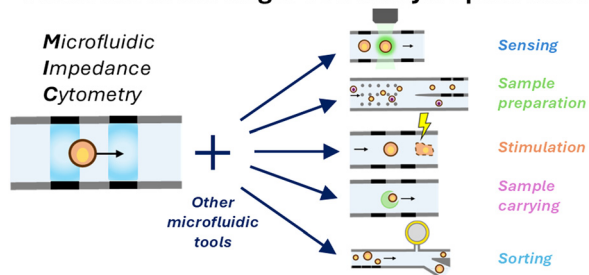
Worth your sweat: wearable microfluidic flow rate sensors for meaningful sweat analytics

R. F. R. Ursem, A. Steijlen,* M. Parrilla,* J. Bastemeijer, A. Bossche and K. De Wael*



1316

Multifunctional single-cell analysis platforms

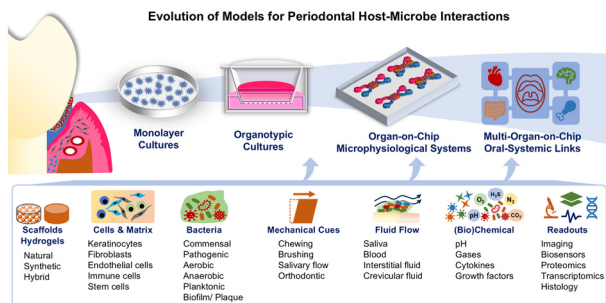


Integrating impedance cytometry with other microfluidic tools towards multifunctional single-cell analysis platforms

Marta Righetto, Cristian Brandi, Riccardo Reale and Federica Caselli*

1342

Evolution of Models for Periodontal Host-Microbe Interactions



Advances in modeling periodontal host-microbe interactions: insights from organotypic and organ-on-chip systems

Hardik Makkar and Gopu Sriram*

