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Lab on a Chip

Devices and applications at the micro- and nanoscale

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See Ye Wang *et al.*, pp. 3979–3992.
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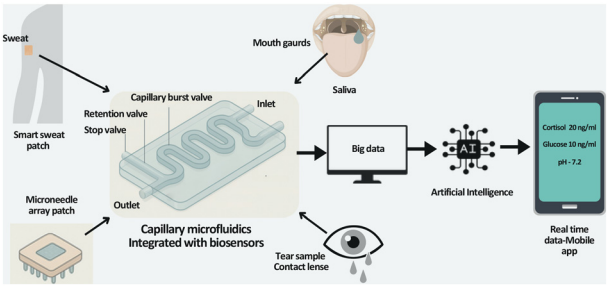
CRITICAL REVIEWS

3879

Autonomous wearable sensing enabled by capillary microfluidics: a review

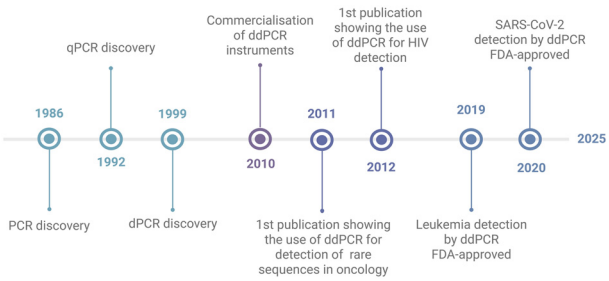
Kiran Kuruvinashetti, Amin Komeili* and Amir Sanati Nezhad*



3921

Digital PCR: from early developments to its future application in clinics

Amandine Trouchet, Guillaume Gines, Leonor Benhaim and Valerie Taly*



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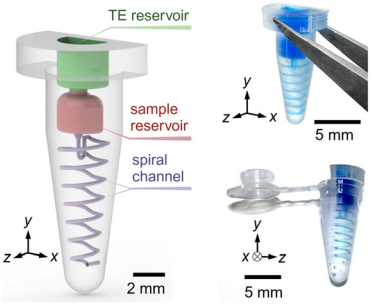
COMMUNICATION

3962

A three-dimensional microfluidic device embedded within a thermal cycler tube for electrokinetic DNA extraction

Qi Jiang, Xuehao Zang, Yilu Wang, Alexandre S. Avaro, Diego A. Huyke and Juan G. Santiago*



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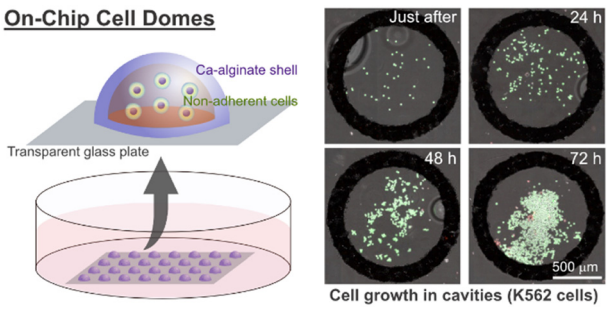
Development of on-chip cell domes using Ca-alginate hydrogel shells for non-adherent cell studies

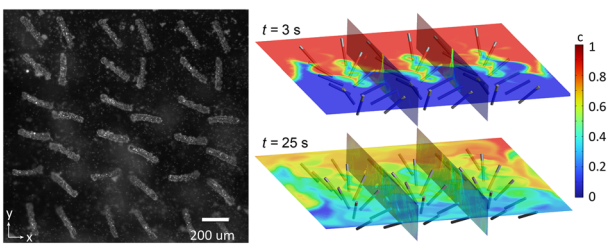
Shinji Sakai,* Hiroyuki Fujiwara, Ryotaro Kazama, Riki Toita and Satoshi Fujita*



3979

Designing enhanced mixing in stagnant microfluidic environments: an artificial cilia approach

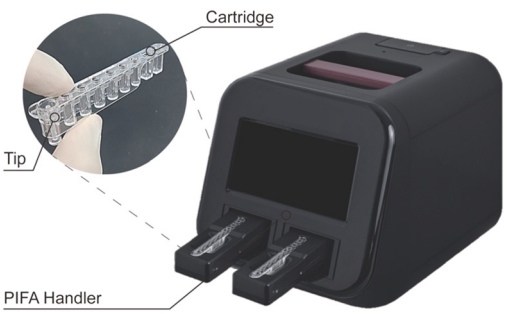
Tongsheng Wang, Ishu Aggarwal, Erik Steur, Tess Homan, Patrick R. Onck, Jaap M. J. den Toonder and Ye Wang*



3993

Portable platform for measuring amyloid beta 42/40 ratio *via* photooxidation-induced fluorescence amplification

Sanghag Ko, Hyunjun Bae, Daewon Kim, Yeonju Lee, Isaac Choi, Dain Lee, Dong hwan Choi, Hyung Chul Kim, Seo Young Sohn, Yohan Jeong,* Seok Chung* and Young Hee Jung*



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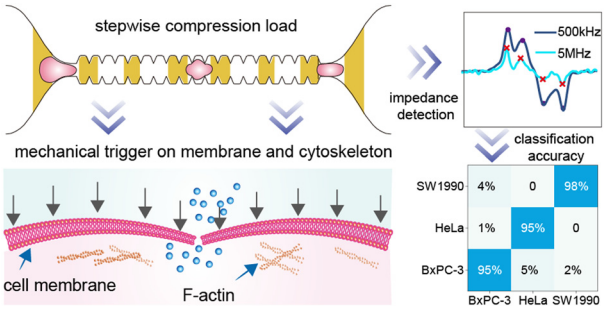

Quantifying mechanical opacity as a novel indicator for single-cell phenotyping *via* integrated dynamic mechanical compression and impedance flow cytometry

Shan-Shan Li, Chun-Dong Xue,* Si-Yu Hu, Yong-Jiang Li, Xu-Qu Hu, Zhuo Yang and Kai-Rong Qin*

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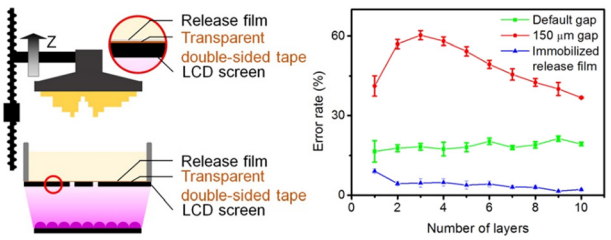

Enhancing microscale printing accuracy in LCD-based 3D printing using an immobilized release film

Chang Tian,* Chaojie Shao, Tiantian Li, Wenya Tang, Peiqi Wu, Qian Xu, Wei Li* and Fen Zhang*

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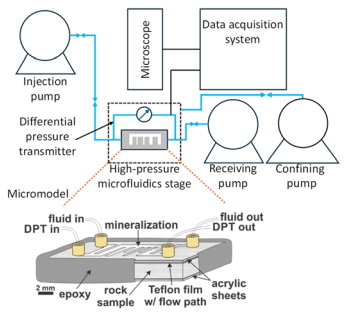

Mechanistic understanding of carbon mineralization in fracture systems using microfluidics

Haylea Nisbet, Ruoyu Li, Prakash Purswani,* Michael Chen, Weipeng Yang, Chelsea Neil, Qinjun Kang, Kishore Mohanty, Peter K. Kang and Hari Viswanathan

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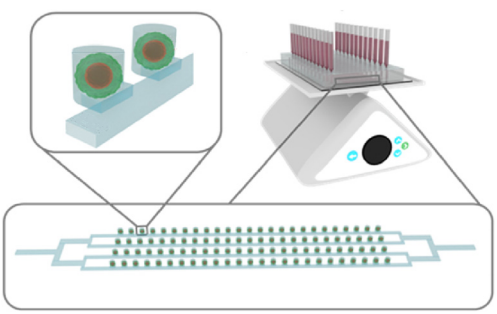

Spheroid-based skin-on-a-chip platform for the evaluation of the toxicity of small molecules and nanoparticles

Dianoosh Kalhori, Faeze Rakhshani, Yingshan Ma, Ilya Yakavets, Sina Kheiri, Ophelie Zeyons, Susanne N. Kolle, Ted Deisenroth, Liangliang Qu, Zhengkun Chen* and Eugenia Kumacheva*

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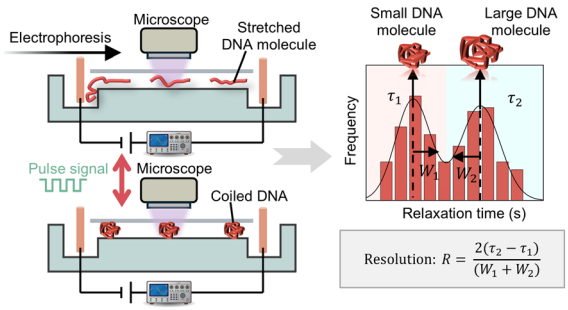
Size analysis of large DNA molecules by relaxation time measurement using a nanoslit channel

Hongdong Yi, Shintaro Itoh,* Kenji Fukuzawa, Hedong Zhang and Naoki Azuma



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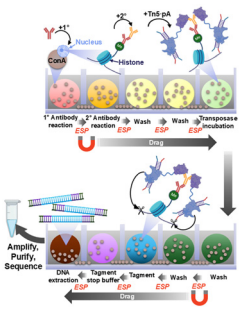
Lossless Altered Histone Modification Analysis System (LAHMAS)

Zachary J. Kauffman, Kevin Koesser, Kyle T. Helzer, Marina N. Sharifi, Erika Heninger, Chao Li, Duane S. Juang, David F. Jarrard, Shuang G. Zhao, Michael C. Haffner, David J. Beebe, Joshua M. Lang and Jamie M. Sperger*



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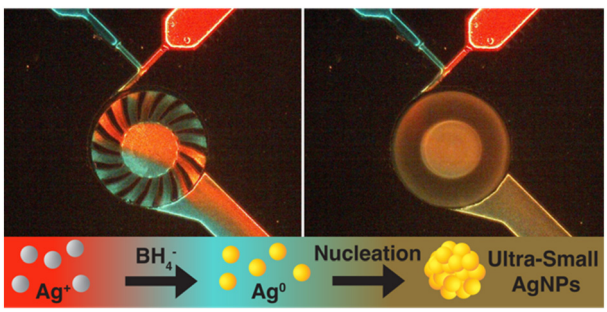
High speed microturbine mixer for kinetically controlled synthesis

Avery E. England,* Scott D. Collins, Christopher L. Emmerling, Michael D. Mason and Rosemary L. Smith*



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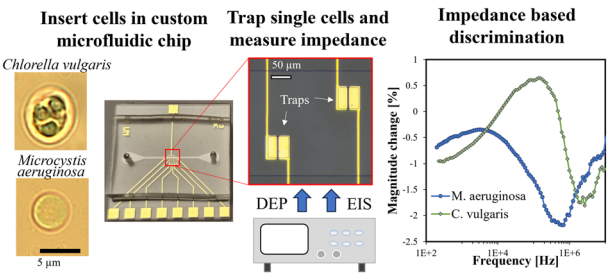
Harnessing intrinsic biophysical cellular properties for identification of algae and cyanobacteria *via* impedance spectroscopy

Ruben Van den Eeckhoudt,* Naras R. H. Rao, Koenraad Muylaert, Filip Tavernier, Michael Kraft and Irene Taurino



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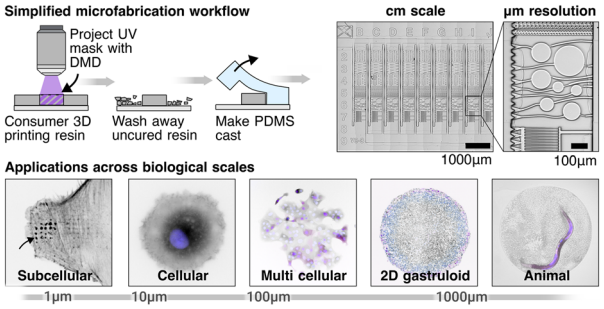

Teach your microscope how to print: low-cost and rapid-iteration microfabrication for biology

Lucien Hinderling,* Remo Hadorn, Moritz Kwasny, Joël Frei, Benjamin Grädel, Sacha Psalmon, Yannick Blum, Rémi Berthoz, Alex E. Landolt, Benjamin D. Towbin, Daniel Riveline and Olivier Pertz*

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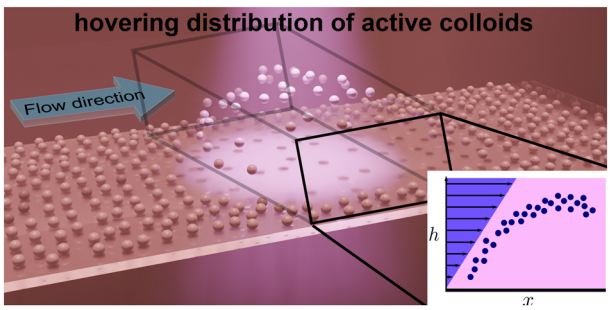

Statistical distribution of elevation from a planar interface of phoretically active microparticles

Fabian Rohne, Daniela Vasquez Muñoz, Isabel Meier, Nino Lomadze, Svetlana Santer and Marek Bekir*

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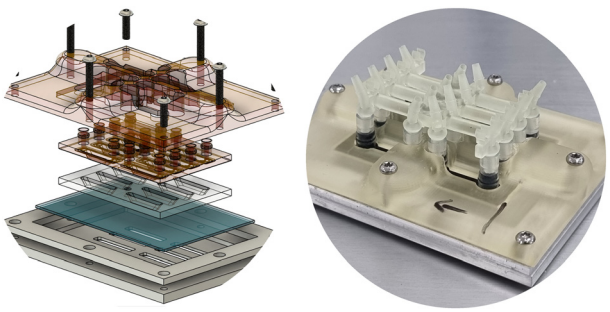

Fabrication of a bioreactor combining soft lithography and vat photopolymerisation to study tissues and multicellular organisms under dynamic culture conditions

Thomas Meynard, Félix Royer, Robin Houssier, Orégane Bajeux, Sonia Paget, Fatima Lahdaoui, Alejandra Mogrovejo Valdivia, Nathalie Maubon, Jérôme Vicogne, Isabelle Van Seuningen and Vincent Senez*

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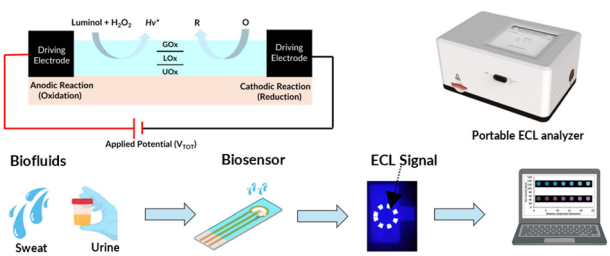

Fully automated standalone microfluidic integrated electrochemiluminescence platform for sample-to-answer detection of diabetes complication markers

Abhishek Kumar and Sanket Goel*

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