Lab on a Chip

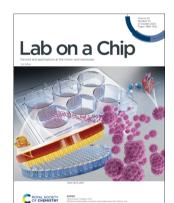
Devices and applications at the micro- and nanoscale

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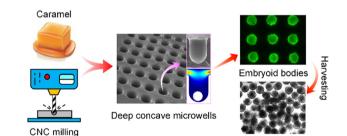
Cover See Qiang Zhao, Gang Li *et al.*, pp. 4378–4389. Image reproduced by permission of Gang Li from *Lab Chip*, 2023, **23**, 4378.

PAPERS

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Reflow-molded deep concave microwell arrays for robust and large-scale production of embryoid bodies

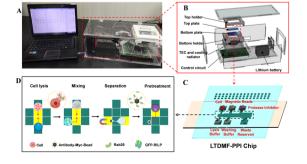
Xue Han, Qi Zhang, Hui He, Qiang Zhao* and Gang Li*



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A low-temperature digital microfluidic system used for protein-protein interaction detection

Jienan Shen, Jiaqi Liao, Huiying Liu, Chunyan Liu, Chonghao Li, Hao Cheng, Hui Yang* and Hong Chen*



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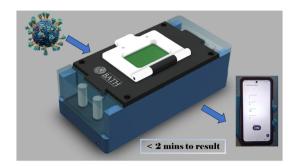
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LoCKAmp: lab-on-PCB technology for <3 minute virus genetic detection

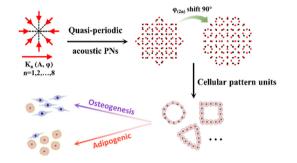
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Acoustic quasi-periodic bioassembly based diverse stem cell arrangements for differentiation guidance

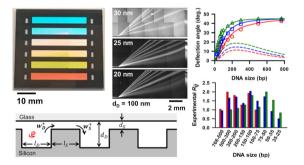
Xiaoqi Gao, Xuejia Hu, Dongyong Yang, Qinghao Hu, Jingjing Zheng, Shukun Zhao, Chengliang Zhu, Xuan Xiao* and Yi Yang*



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Continuous-flow macromolecular sieving in slanted nanofilter array: stochastic model and coupling effect of electrostatic and steric hindrance

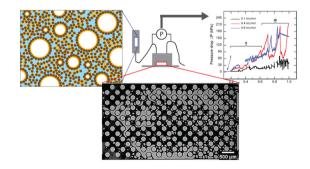
Sung Hee Ko,* Pyeong Jun Park* and Jongyoon Han

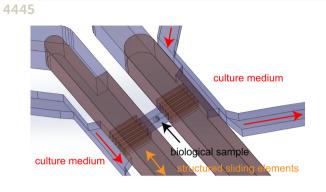


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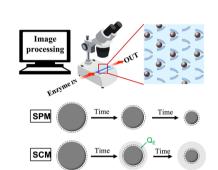
Bubble-particle dynamics in multiphase flow of capillary foams in a porous micromodel

Omotola Okesanjo, Guillaume Aubry, Sven Behrens,* Hang Lu* and J. Carson Meredith*





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Dynamic Perfusion

Time

Multiparametric Imaging

Insulin

A microfluidic mechano-chemostat for tissues and organisms reveals that confined growth is accompanied with increased macromolecular crowding

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Mechanism and kinetics of enzymatic degradation of polyester microparticles using a shrinking particle-shrinking core model

Hooman Torabi, Farhad Javi, Ted W. Deisenroth, Toan V. Pho, Victoria Barbright and Alireza Abbaspourrad*

Islet-on-chip: promotion of islet health and function *via* encapsulation within a polymerizable fibrillar collagen scaffold

Emma L. Vanderlaan, Joshua Sexton, Carmella Evans-Molina, Adrian Buganza Tepole and Sherry L. Voytik-Harbin*

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Easy to Fabricate

3D-Printed Chip

Mechanobiological Support of

Ex-Vivo Islet Survival and Function

Fibrillar Collagen Scaffold Integrin Signaling



An all-in-one platform to deplete pathogenic bacteria for rapid and safe enrichment of plantderived extracellular vesicles

Zhihao Wen, Jianning Yu, Hyorim Jeong, Dong-Uk Kim, Ji Yeong Yang, Kyung-A Hyun, Seoyeon Choi,* Sunyoung Park* and Hyo-Il Jung*

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In situ synthesis of [Cu(BODN)·5H₂O]_n@nano-Al composite energetic films with tunable properties in pyro-MEMS

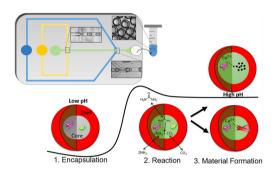
Wei Liu, Yongan Feng, Yapeng Yao, Zihang Liang, Fei Xiao and Zhongliang Ma*



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A microfluidic double emulsion platform for spatiotemporal control of pH and particle synthesis

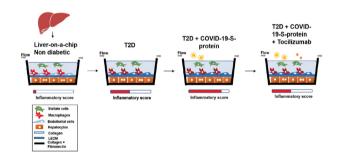
Maheen Rana, Raheel Ahmad and Annette F. Taylor*



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Modeling mechanisms underlying differential inflammatory responses to COVID-19 in type 2 diabetes using a patient-derived microphysiological organ-on-a-chip system

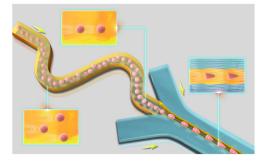
Vinny Negi, Dillon Gavlock, Mark T. Miedel, Jeong Kyung Lee, Tongying Shun, Albert Gough, Lawrence Vernetti, Andrew M. Stern, D. Lansing Taylor and Vijay K. Yechoor*



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High-throughput adjustable deformability cytometry utilizing elasto-inertial focusing and virtual fluidic channel

Zheng Zhou, Chen Ni, Zhixian Zhu, Yao Chen, Zhonghua Ni and Nan Xiang*



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SMCs in

collagen gel

media

arteriole

microfluidic chip

collagen gel

··· ÉC monolaver

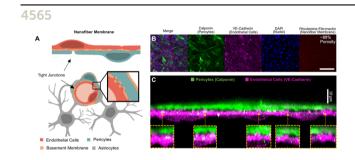
venule

Enhanced cardiomyocyte structural and functional anisotropy through synergetic combination of topographical, conductive, and mechanical stimulation

Jongyun Kim, Arunkumar Shanmugasundaram, Cheong Bin Lee, Jae Rim Kim, Jeong Jae Park, Eung-Sam Kim, Bong-Kee Lee and Dong-Weon Lee*

Development of a perfusable, hierarchical microvasculature-on-a-chip model

Sophia W. Chen, Adriana Blazeski, Shun Zhang, Sarah E. Shelton* Giovanni S. Offeddu* and Roger D. Kamm*



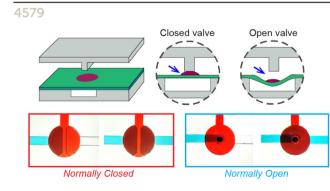
fibroblasts in

fibrin ael

capillary bed

Ultra-thin and ultra-porous nanofiber networks as a basement-membrane mimic

Philip M. Graybill, Edward J. Jacobs IV, Aniket Jana, Atharva Agashe, Amrinder S. Nain* and Rafael V. Davalos*



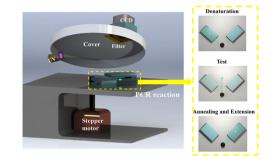
Millifluidic valves and pumps made of tape and plastic

Josue U. Amador-Hernandez, Pablo E. Guevara-Pantoja, Diana F. Cedillo-Alcantar, Gabriel A. Caballero-Robledo and Jose L. Garcia-Cordero*

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Portable rotary PCR system for real-time detection of *Pseudomonas aeruginosa* in milk

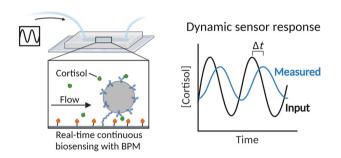
Weidu Song, Chuanhao Zhang, Huichao Lin, Taiyi Zhang, Haixia Liu and Xiaowen Huang*



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Real-time continuous monitoring of dynamic concentration profiles studied with biosensing by particle motion

Max H. Bergkamp, Sebastian Cajigas, Leo J. van IJzendoorn and Menno W. J. Prins*



RETRACTION

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Retraction: A new polymer lab-on-a-chip (LOC) based on a microfluidic capillary flow assay (MCFA) for detecting unbound cortisol in saliva

Vinitha T. U., Sthitodhi Ghosh, Alexander Milleman, Thinh Nguyen and Chong H. Ahn*