# Lab on a Chip

# Devices and applications at the micro- and nanoscale

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# PAPERS

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# Microfluidic single-cell migration chip reveals insights into the impact of extracellular matrices on cell movement

Mengli Zhou, Yushu Ma, Edwin C. Rock, Chun-Cheng Chiang, Kathryn E. Luker, Gary D. Luker and Yu-Chih Chen\*



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# Ultrathin SU-8 membrane for highly efficient tunable cell patterning and massively parallel large biomolecular delivery

Pallavi Shinde, Ashwini Shinde, Srabani Kar, Kavitha Illath, Moeto Nagai, Fan-Gang Tseng and Tuhin Subhra Santra\*



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# PAPERS

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# Proof-of-concept optimization of a coppermediated <sup>18</sup>F-radiosynthesis of a novel MAGL PET tracer on a high-throughput microdroplet platform and its macroscale translation

Yingging Lu,\* Yingfang He, Roger Schibli, Linjing Mu and R. Michael van Dam\*



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# A monolithic microfluidic probe for ambient mass spectrometry imaging of biological tissues

Li-Xue Jiang, Matthias Polack, Xiangtang Li, Manxi Yang, Detlev Belder\* and Julia Laskin\*



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# Amplification-free detection of telomerase activity at the single-cell level via Cas12a-lighting-up single microbeads (Cas12a-LSMBs)

Honghong Wang, Shuhui Wang, Hui Wang,\* Fu Tang, Desheng Chen, Yuanwen Liang and Zhengping Li\*



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# Rapid and easily identifiable blood typing on microfluidic cotton thread-based analytical devices

Shugiang Min, Tonghuan Zhan, Yang Lu, Deng Pan, Xiaoqing Chen\* and Bing Xu\*



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# *In situ* spatiotemporal characterization and analysis of chemical reactions using an ATR-integrated microfluidic reactor

K. Srivastava, N. D. Boyle, G. T. Flaman, B. Ramaswami, A. van den Berg, W. van der Stam, I. J. Burgess\* and M. Odijk\*



# Single-shot multi-channel plasmonic real-time polymerase chain reaction for multi-target pointof-care testing

Byoung-Hoon Kang, Kyung-Won Jang, Eun-Sil Yu, Hyejeong Jeong and Ki-Hun Jeong\*

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# A biomimetic renal fibrosis progression model onchip evaluates anti-fibrotic effects longitudinally in a dynamic fibrogenic niche

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