

Yang Lin

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PROFESSIONAL EXPERIENCE

Assistant Professor in Mechanical Engineering August 2020 to Present
The University of Rhode Island Rhode Island, USA

EDUCATION

Postdoctoral Research Associate 2020
The University of Illinois at Chicago Chicago, USA

Doctor of Philosophy in Mechanical Engineering 2019
The University of Illinois at Chicago Chicago, USA

Master of Science in Mechatronic Engineering 2015
Beijing Information Science and Technology University Beijing, China

Bachelor of Science in Mechanical Design Manufacturing and Automation 2012
Beijing Information Science and Technology University Beijing, China

TEACHING EXPERIENCE

The University of Rhode Island
MCE 354 Fluid Mechanics Fall 2020

RESEARCH INTERESTS

Micro/nanofluidics, Acoustofluidics and Magnetofluidics;
Paper based microfluidics, Low-cost microfluidics and Biosensors;
BioMEMS, Micro/nanofabrication and Additive manufacturing;
Machine learning driven microfluidics, Micromachines and Flexible electronics.

PUBLICATIONS

(one first-authored book chapter with 15+ journal publications including 8 first-authored papers; more than 350 citations at [Google Scholar](#))

Thesis

[1] **Y. Lin**, Microfluidics with Nanoscale Additive Manufacturing: Devices and Applications, Doctoral Dissertation

Book Chapter

[1] **Y. Lin** and J. Xu, *Paper-fluidic based sensing in food safety and quality analysis*, **Sensing Techniques for Food Safety and Quality Control**, Royal Society of Chemistry, 2017, 95-120

Peer-Reviewed Journal Articles

- [16] Microfluidic Devices for Magnetic Separation of Biological Particles: A Review, submitted
- [15] Y. Gao, M. Wu, **Y. Lin**, W. Zhao, and J. Xu, *Acoustic bubble-based bidirectional micropump*, **Microfluidics and Nanofluidics**, 2020, 24, 29 (Impact factor: 2.384)
- [14] W. Zhao, Y. Xing, **Y. Lin**, and J. Xu, *Monolayer graphene chemiresistive biosensor for rapid bacteria detection in a microchannel*, **Sensors and Actuators Reports**, 2020, 2, 100004
- [13] R. Zhou, A. Surendran, M. Mejulu, and **Y. Lin**, *Rapid microfluidic mixer based on ferrofluid and integrated microscale NdFeB-PDMS magnet*, **Micromachines**, 2020, 11(1), 29 (Impact factor: 2.426)
- [12] **Y. Lin**, Y. Gao, M. Wu, R. Zhou, D. Chung, G. Piso, and J. Xu, *Acoustofluidic stick-and-play micropump built on foil for single-cell trapping*, **Lab on a Chip**, 2019, 19(18), 3045-3053 (Impact factor: 6.914)
- [11] **Y. Lin**, C. Gao, Y. Gao, M. Wu, A.A. Yazdi, and J. Xu, *Acoustofluidic micromixer on Lab-on-a-Foil devices*, **Sensors & Actuators: B. Chemical**, 2019, 287, 312-319 (Impact factor: 6.393)
- [10] **Y. Lin**, R. Zhou, and J. Xu, *Superhydrophobic surfaces based on fractal and hierarchical microstructures using two-photon polymerization: toward flexible superhydrophobic films*, **Advanced Materials Interfaces**, 2018, 1801126 (Impact factor: 4.834)
- [9] **Y. Lin**, C. Gao, D. Gritsenko, R. Zhou, and J. Xu, *Soft lithography based on photolithography and two-photon polymerization*, **Microfluidics and Nanofluidics**, 2018, 22, 97 (Impact factor: 2.384)
- [8] D. Gritsenko, **Y. Lin**, V. Hovorka, Z. Zhang, A. A. Yazdi, and J. Xu, *Vibrational modes analysis for water-air bubbles trapped on circular microcavities*, **Physics of Fluids**, 2018, 30, 082001 (Impact factor: 2.279)
- [7] **Y. Lin** and J. Xu, *Microstructures Fabricated by Two-Photon Polymerization and Their Remote Manipulation Techniques: Towards 3D Printing of Micromachines*, **Advanced Optical Materials**, 2018, 6, 1701359 (Impact factor: 7.125)
- [6] J. R. Choi, K. W. Yong, J. Y. Choi, A. Nilghaz, **Y. Lin**, J. Xu, and Xiaonan Lu, *Black Phosphorus and its Biomedical Applications*, **Theranostics**, 2018, 8(4), 1005-1026 (Impact factor: 8.063)
- [5] D. Gritsenko, A. A. Yazdi, **Y. Lin**, V. Hovorka, Y. Pan, and J. Xu, *On characterization of separation force for resin replenishment enhancement in 3D printing*, **Additive Manufacturing**, 2017, 17, 151-156 (Impact factor: 7.173)
- [4] A. De Vellis, D. Gritsenko, **Y. Lin**, Z. Wu, X. Zhang, Y. Pan, W. Xue and J. Xu, *Drastic sensing enhancement using acoustic bubbles for surface-based microfluidic sensors*, **Sensors and Actuators B**, 2017, 243, 298-302 (Impact factor: 6.393)
- [3] **Y. Lin**, D. Gritsenko, Q. Liu, X. Lu and J. Xu, *Recent advancements in functionalized paper based electronics*, **ACS Applied Materials & Interfaces**, 2016, 8(32), 20501-20515 (Impact factor: 8.456)
- [2] **Y. Lin**, D. Gritsenko, S. Feng, Y. C. Teh, X. Lu and J. Xu, *Detection of heavy metal by paper-based microfluidics*, **Biosensors and Bioelectronics**, 2016, 83, 256-266 (Impact factor: 9.518)
- [1] **Y. Lin**, J. Gao, C. Ma, Z. Wang, X. Xu, *Research of Infrared Image Acquisition and Control System* (In Chinese), **Journal of Beijing Information Science and Technology University (natural science)**, 2014, 06: 56-59.

Peer-Reviewed Conference Articles

- [2] C. Ma, **Y. Lin**, S. Wang, Z. Wang, L. Liu, *Nonlinear dynamic analysis on unity of loose support and rub-impact of double axis system with different velocities*. **Proceedings of the Fifth International Symposium on Test Automation & Instrumentation** (Vol.1), 2014: 5.
- [1] **Y. Lin**, J. Gao, C. Ma, *Research and Application of Wireless Telemetry Image Acquisition and Control System* (In Chinese), **Computer Engineering and Applications**, 2014, 50 (S1): 226-229.

INVITED TALKS

- [2] *Towards Fully Integrated Microfluidic Analytical Systems*, College of Engineering, The University of Rhode Island, South Kingstown, Rhode Island, 04/03/2020
- [1] *Microfluidic Components Built Using Advanced Manufacturing Technologies: Towards Fully Automated Microfluidic Systems*, Department of Mechanical and Manufacturing Engineering, Miami University, Oxford, Ohio, 01/10/2020

CONFERENCE PRESENTATIONS

- [7] **Yang Lin**, Yuan Gao, Mengren Wu, Weiqi Zhao, and Jie Xu, *Acoustofluidic micropump on lab-on-a-foil devices*, ASME IMECE, 2019, Salt Lake City
- [6] **Yang Lin**, Yuan Gao, Mengren Wu, and Jie Xu, *Acoustofluidic micromixer on lab-on-a-foil devices*, ASME IMECE, 2019, Salt Lake City
- [5] **Yang Lin**, Can Gao, and Jie Xu, *Soft lithography based on photolithography and two-photon polymerization*, AIChE Midwest Regional Conference, 2019, Chicago
- [4] **Yang Lin**, Can Gao, and Jie Xu, *Soft lithography based on photolithography and two-photon polymerization*, Lab-on-a-Chip and Microfluidics World Congress 2018, Coronado Island, San Diego
- [3] Dmitry Gritsenko, Andrea De Vellis, **Yang Lin** and Jie Xu, *Use of Acoustic Microstreaming for Drastic Sensing Enhancement*, AIChE Midwest Regional Conference, 2017, Chicago
- [2] Sébastien Méance, **Yang Lin**, Meghana Machireddy, Panfeng Fu, Vadim Gaponenko, Steven J. Ackerman, Viswanathan Natarajan and Jie Xu, *Fabrication of Extracellular Matrix Coated Membranes in Lung-on-Chips using Two-photon Polymerization*, MicroTAS 2017, Savannah, Georgia, USA
- [1] Andrea De Vellis, Dmitry Gritsenko, **Yang Lin**, Zhenping Wu, Xian Zhang, Yayue Pan, Wei Xue and Jie Xu, *Acoustic bubbles for microfluidic sensing enhancement*, Microfluidics Congress: USA, 2016, Philadelphia

SERVICES AND AFFILIATIONS

Reviewer for Journals

- | | |
|--------------------------------|------------------------------------|
| ➤ Advanced Intelligent Systems | ➤ Advanced Materials Technologies |
| ➤ Applied Physics Letters | ➤ Applied Sciences |
| ➤ Biomicrofluidics | ➤ Engineering |
| ➤ Journal of Applied Physics | ➤ Journal of Electronic Packaging |
| ➤ Lab on a Chip | ➤ Materials |
| ➤ Mathematics | ➤ Micromachines |
| ➤ Research | ➤ Review of Scientific Instruments |
| ➤ Scientific Reports | ➤ Sensors |

Guest Editor

- Micromachines Special Issue “Microfluidic Sensors II”

Reviewer for Conferences

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| ➤ ASME ICNMM2018 | ➤ ASME Turbo Expo 2019 |
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Professional Memberships

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| ➤ Sigma Xi - The Scientific Research Society | ➤ American Society of Mechanical Engineers |
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HONORS, AWARDS AND ACCOMPLISHMENTS

- Graduate Student Council Travel Award 2019, University of Illinois at Chicago 2019
- Research featured: [*Advances in 3D Printed Micromachines by UIC Researchers*](#) 2019
- Inducted, full member of Sigma Xi - The Scientific Research Society 2018
- Supervised senior design team and won the 1st place Globe Award in Senior Design Competition 2017
- Academic Scholarship, Beijing Information Science and Technology University 2015
- Outstanding student fellowship, Beijing Information Science and Technology University 2008-2012
- National Motivational Scholarship, China 2010
- 2nd Prize in the University's Mechanical Innovation Design Competition 2010

TECHNICAL SKILLS/LANGUAGES

Microfabrication: photolithography, soft lithography, electron beam lithography, plasma-enhanced chemical vapor deposition, electron beam physical vapor deposition, (deep) reactive-ion etching, wet etching, anodic bonding, etc.

Additive Manufacturing: stereolithography, two-photon polymerization, fused filament fabrication, etc.

Microscopy: fluorescent microscopy, scanning electron microscope, transmission electron microscopy, atomic force microscopy, Raman microscopy, etc.

Software: SolidWorks, AutoCAD, COMSOL, ANSYS, Python, C/C++, LabVIEW, MATLAB, Origin, ImageJ, etc.

Biology: qPCR, LAMP, ELISA, spectrophotometer, electrophoresis system, cell and bacterial culture, etc.

Language: Chinese and Japanese