

## **PROFESSIONAL EXPERIENCE**

- 2020-present Associate Professor, Mechanical and Industrial Engineering, University of Illinois at Chicago  
2014-2020 Assistant Professor, Mechanical and Industrial Engineering, University of Illinois at Chicago  
2015-present Adjunct Professor, Biomedical Engineering, University of Illinois at Chicago  
2015-present Faculty Fellow, Honors College, University of Illinois at Chicago  
2010-2014 Assistant Professor, Mechanical Engineering, Washington State University Vancouver  
2012-2014 Adjunct Professor, Chemical and Bioengineering, Washington State University Pullman

## **EDUCATION**

- 2010 Ph.D and MPhil, Mechanical Engineering, Columbia University, New York  
2006 MS, Mechanical Engineering, Columbia University, New York  
2005 BS, Thermal Engineering, Tsinghua University, Beijing

## **HONORS AND AWARDS**

- 2019 Researchers to Know, Illinois Science & Technology Coalition (*highlights outstanding researchers across the state's universities through a nomination process with university leadership*)  
2019 College of Engineering Teaching Award, UIC (*in recognition of outstanding teaching contributions*)  
2018 UIC Researcher and Scholar of the Year, Rising Star Category (*celebrates the efforts and commitment of individuals making exceptional progress advancing knowledge*)  
2018 College of Engineering Research Award, UIC (*in recognition of outstanding research contributions*)  
2017 NASA Early Career Faculty Award (*awarded to outstanding faculty researchers early in their careers as they conduct space technology development of high priority to NASA*)  
2016 Emerging Investigator, *Lab on a Chip* special issue (*celebrates the most promising and brightest amongst early career miniaturisation scientists around the world*)  
2013 Elected, member of Global Young Academy (*honors outstanding early-career scientists from around the world, 4-year term, membership caps at 200*)  
2012 Tony B. Academic Travel Award, Society for Laboratory Automation and Screening (*recognizes up-and-coming researchers who have demonstrated outstanding achievement in laboratory science and technology*)  
2011 DARPA Young Faculty Award, Department of Defense (*identifies and engages rising research stars in junior faculty positions at U.S. academic institutions, 39 awardees nationwide*)  
2011 New Faces of Engineering, National Engineers Week (*highlights the exciting and often unique work of young engineers and the resulting impact on society, 43 new faces nationwide*)

## **FUNDING**

<i>Duration</i>	<i>Agency/Program/Role/Project Title</i>	<i>Dollar Amount</i>
2020	Anthem, Inc., PI Advanced interpretation of human microvasclar blood rheology for	100,000

	cardiovascular disease diagnosis	
2019	NSF, Communications Circuits and Sensing-Systems, PI, (co-PIs: Kamesh Bikkavilli and Xiaolin Chen) Collaborative Research: Towards High-Throughput Label-Free Circulating Tumor Cell Separation using 3D Deterministic Dielectrophoresis (D-Cubed) (Project total: \$457,733)	277,733
2019	NSF, REU Supplemental Funding, Co-I, (PI: Ian Papautsky) This supplement supports two undergraduate students to work in Dr. Xu's lab	16,000
2019	NSF, INTERN Supplemental Funding, Co-I, (PI: Ian Papautsky) This supplement supports Dr. Xu's PhD student's internship at Beckman Coulter	55,000
2017-2018	CADMIM (an NSF I/UCRC center on microfluidics), co-PI, (PI: Ian Papautsky) Microfluidic chips for electrochemical metal extraction	45,000
2017-2018	UIC, Functional and Regenerative Materials Seed Grant, PI, (co-PI: Xuejun Li) Microfluidics with embedded liquid metal electrodes for human neurons stimulation	10,000
2017-2020	NASA, Early Career Faculty Award, Sole PI PIPES: Piezoelectric Instrument for Precision Exploration	600,000
2017-2020	NSF, Electronics, Photonics and Magnetic Devices, PI, (co-PIs: Lan Yang, Lev Deych, and Tal Carmon) Collaborative Research: NSF/ENG/ECCS-BSF: Complex liquid droplet structures as new optical and optomechanical materials (Project total: \$689,868)	148,108
2017-2019	Washington State University (NIH R21 subcontract), Co-I, (PI: Allison Coffin) Development of a novel high throughput zebrafish model for the study of noise-induced hearing loss (Project total: \$424,888)	18,388
2016-2017	DoD, Army Research Office (ARO), Equipment, Co-PI (PI: Didem Ozevin) C-Mode Scanning Acoustic Microscope for Understanding Fundamentals of Failure in Military Relevant Materials	304,997
2016-2019	NSF, Manufacturing Machines and Equipment, Co-PI (PI: Yayue Pan) Layerless Additive Manufacturing of 3D Objects with Wide Solid Cross Sections	295,310
2015-2016	UIC, College of Engineering (COE) Annual Fund, Sole PI A versatile portable microfluidics workstation for hands-on learning of microfluidics at both undergraduate and graduate levels	24,900
2015-2016	UIC, Curriculum and Instruction Grant (CIG), Sole PI Developing a new hands-on laboratory to teach microfluidics concepts to undergraduate students	11,416
2014-2016	Amazon, AWS in Education Grant, Sole PI Continuation project: cloud computing of molecular dynamics simulation	8,000
2014	Amazon, AWS in Education Faculty grant, Sole PI Using cloud computing for nanotechnologies	1,600
	UIC Total	<u>1,916,452</u>
<b>Before joining UIC</b>		
2013-2014	WSU Faculty Seed Grant, Participant (PI: Allison Coffin) Developing a zebrafish model for noise-induced hearing loss	28,497
2013-2014	WSUV Faculty Research Mini-Grant, Co-PI (PI: Alex Dimitrov) iChem: Interactive Chemistry Module	4,500
2012-2013	TeloVISION, Research fund, Sole PI Microfluidic devices for cancer cell detection	10,000

2012-2013	WSUV, Faculty Research Mini-Grant, Sole PI Friction reduction by Leidenfrost levitation	3,525
2012-2013	Amazon, AWS in Education Grant, Sole PI Continuation project: cloud computing of molecular dynamics simulation	7,500
2011-2013	DoD, DARPA Young Faculty Award, Sole PI Ear on a Chip: microfluidic characterization and control of hair cells	193,261
2011-2012	WSUV, Faculty Research Mini-Grant, Sole PI Control and acoustic excitation of micro bubbles for hearing study	4,931
2011	Amazon, AWS in Education Grant, Sole PI Cloud computing of molecular dynamics simulation	7,500
2010-2011	WSUV, Undergrad Res. Mini-Grants, Sole PI Evaporation of liquid marbles and developing a graphene sensor	1,300

### **EDITORIAL EXPERIENCE**

#### Editorial Board Member

Frontiers in Mechanical Engineering

Scientific Reports

#### Guest Editor

Special issue “Microfluidic Sensors” in “Micromachines”

Special issue “Microfluidic Sensors II” in “Micromachines”

### **PUBLICATIONS** (Citations: >3000, H-index: 28, according to Google Scholar)

#### **Book Chapters**

[6] 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

[5] N. Lei, P. Li, A. Hashmi, W. Xue and J. Xu, *Graphene Chemiresistors as pH sensors: Fabrication and Characterization*, Graphene Science Handbook, Taylor & Francis Group – CRC Press, 2016, 309-318

[4] J. Xu and D. Attinger, *Piezoelectric Actuation in Multiphase Microfluidics*, Encyclopedia of Microfluidics and Nanofluidics, Springer, 2014

[3] J. Xu, *Liquid marbles*, Encyclopedia of Microfluidics and Nanofluidics, Springer, 2014

[2] J. Xu, *Microfluidics "lab-on-a-chip" system for food chemical hazard detection*, Food Chemical hazard detection: development and application of new technologies, Wiley-Blackwell, 2014

[1] P. Li, N. Lei, J. Xu and W. Xue, *High-yield dielectrophoretic deposition and ion sensitivity of graphene*, Nanoelectronic Device Applications Handbook, Taylor & Francis Group – CRC Press, 2013

#### **Peer-Reviewed Journal Articles**

[73] D. Gritsenko, R. Paoli and J. Xu, *The effect of acceleration on the separation force in constrained-surface stereolithography*, under review

[72] Y. Gao, M. Wu, Y. Lin, and J. Xu, *Trapping and control of bubbles in various microfluidic applications*, **Lab on a Chip**, 2020, 20, 4512-4527

[71] Y. Gao, M. Wu, Y. Lin, and J. Xu, *Acoustic Microfluidic Separation Techniques and Bioapplications: A Review*, **Micromachines**, 2020, 11(10), 921

[70] D. Gritsenko, J. Xu and R. Paoli, *Transverse vibrations of cantilever beams: analytical solutions with general steady-state forcing*, **Applications in Engineering Science**, 2020, 3, 100017

[69] A. Taj, R. Zia, J. Xu, S. Younis, P. Estrela, A. Mahmood, A. Rehman, W. S. Khan, and S. Z. Bajwa, *Biogenic*

- preparation of doughnut shaped manganese nanograins embellished on graphene for superior interfacial binding of biomarkers*, **Journal of Materials Research and Technology**, 2020, 9(5), 9896-9906
- [68] M. Wu, A.A. Yazdi, D. Attinger, and J. Xu, *Energy-harvesting bioreactors: toward self-powered microfluidic devices, a mini-review*, **Microfluidics and Nanofluidics**, 2020, 24, 51 (IF: 2.437)
- [67] Y. Gao, M. Wu, Y. Lin, W. Zhao, and J. Xu, *Acoustic bubble-based bidirectional micropump*, **Microfluidics and Nanofluidics**, 2020, 24, 29 (IF: 2.437)
- [66] W. Zhao, Y. Xing, Y. Lin, Y. Gao, M. Wu, and J. Xu, *Monolayer graphene chemiresistive biosensor for rapid bacteria detection in a microchannel*, **Sensors and Actuators Reports**, 2020, 2, 100004 (IF: N/A)
- [65] 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, 3045-3053 (IF: 6.914)
- [64] A. Taj, A. Shaheen, J. Xu, P. Estrela, A. Mujahid, T. Asim, M. Z. Iqbal, W. S. Khan, S. Bajwa, *In-situ synthesis of 3D ultra-small gold augmented graphene hybrid for highly sensitive electrochemical binding capability*, **Journal of Colloid and Interface Science**, 2019, 553, 289-297 (IF: 6.361)
- [63] L. Lu, Z. Zhang, J. Xu, and Y. Pan, *3D-printed polymer composites with acoustically assembled multidimensional filler networks for accelerated heat dissipation*, **Composites Part B**, 2019, 174, 106991 (IF: 6.864)
- [62] Y. Lin, C. Gao, Y. Gao, M. Wu, A.A Yazdi, and J. Xu, *Acoustofluidic micromixer on lab-on-a-foil devices*, **Sensors and Actuators B**, 2019, 287, 312-319 (IF: 6.393)
- [61] M. Aghaamoo, A. Aghilinejad, X. Chen, and J. Xu, *On the Design of Deterministic Dielectrophoresis for Continuous Separation of Circulating Tumor Cells from Peripheral Blood Cells*, **Electrophoresis**, 2019, 40, 1486-1493 (IF: 2.754)
- [60] Z. Zhang, C. Drapaca, D. Gritsenko, and J. Xu, *Pressure of a viscous droplet squeezing through a short circular constriction: An analytical model*, **Physics of Fluids**, 2018, 30, 102004 (IF: 2.627)
- [59] Z. Zhang, J. Xu and C. Drapaca, *Particle squeezing in narrow confinements*, **Microfluidics and Nanofluidics**, 2018, 22, 120 (IF: 2.437)
- [58] 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 (IF: 4.713)
- [57] Y. Lin, C. Gao, D. Gritsenko, R. Zhou, and Jie Xu, *Soft lithography based on photolithography and two-photon polymerization*, **Microfluidics and Nanofluidics**, 2018, 22, 97 (IF: 2.437)
- [56] P. M. Uribe, B. K. Villapando, K. J. Lawton, Z. Fang, D. Gritsenko, A. Bhandiwad, J. A. Sisneros, J. Xu, and A. B. Coffin, *Larval Zebrafish Lateral Line as a Model for Acoustic Trauma*. **eNeuro**, 2018, 5(4) (IF: N/A)
- [55] D. Gritsenko, Y. Lin, V. Hovorka, Z. Zhang, A. A. Yazdi, and J. Xu, *Vibrational modes prediction for water-air bubbles trapped in circular microcavities*, **Physics of Fluids**, 2018, 30, 082001 (IF: 2.627)
- [54] Y. Li, F. Ye, J. Xu, W. Zhang, P. X.-L. Feng, and X. Zhang, *Gate-tuned temperature in a hexagonal boron nitride-encapsulated 2-D semiconductor devices*, **IEEE Transactions on Electron Devices**, 2018, 65(10), 4068-4072 (IF: 2.704)
- [53] H. He, J. Xu, X. Yu, and Y. Pan, *Effect of Constrained Surface Texturing on Separation Force in Projection Stereolithography*, **Journal of Manufacturing Science and Engineering**, 2018, 140(9), 091007 (IF: 2.616)
- [52] H. He, Y. Pan, A. Feinerman, and J. Xu, *Air-diffusion-channel Constrained Surface based Stereolithography for Three-Dimensional Printing of Objects with Wide Solid Cross Sections*, **Journal of Manufacturing Science and Engineering**, 2018, 140(6), 061011 (IF: 2.616)
- [51] 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 (IF: 7.125)

- [50] A. A. Yazdi, and J. Xu, *Nitrogen-doped graphene approach to enhance the performance of a membraneless enzymatic biofuel cell*, **Frontiers in Energy**, 2018, 12(2), 233-238 (IF: 1.701)
- [49] 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 (IF: 8.063)
- [48] A. Aghilinejad, M. Aghaamoo, X.L. Chen, and J. Xu, *Effects of Electrothermal Vortices on Insulator-Based Dielectrophoresis for Circulating Tumor Cell Separation*, **Electrophoresis**, 2018, 39(5-6), 869-877 (IF: 2.754)
- [47] 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 (IF: 7.173)
- [46] L. Majidi, D. Gritsenko, and J. Xu, *Gallium based room-temperature liquid metals: actuation and manipulation of droplets and flows*, **Frontiers in Mechanical Engineering**, 2017, 3, 9 (IF: N/A)
- [45] Z. Zhang, C. Drapaca, X. Chen, and J. Xu, *Droplet squeezing through a narrow constriction: minimum impulse and critical velocity*, **Physics of Fluids**, 2017, 29, 072102 (IF: 2.627)
- [44] Y. Pan, H. He, J. Xu, and A. Feinerman, *Study of separation force in constrained surface projection stereolithography*, **Rapid Prototyping Journal**, 2017, 23(2), 353-361 (IF: 2.801)
- [43] A. A. Yazdi, R. Preite, R. Milton, D. Hickey, S. Minteer and J. Xu, *Rechargeable membraneless glucose biobattery: Towards solid-state cathodes for implantable enzymatic devices*, **Journal of Power Sources**, 2017, 343, 103-108 (IF: 7.467)
- [42] 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 (IF: 6.393)
- [41] J. Feng, G. Lamour, R. Xue, M.N. Mirvakliki, S.G. Hatzikiriakos, J. Xu, H. Li, S. Wang and X. Lu, *Chemical, physical and morphological properties of bacterial biofilms affect survival of encased Campylobacter jejuni F38011 under aerobic stress*, **International Journal of Food Microbiology**, 2016, 238, 172-182 (IF: 4.006)
- [40] 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 (IF: 8.456)
- [39] A. A. Yazdi, L. D'Angelo, N. Omer, G. Windiasti, X. Lu and J. Xu, *Carbon nanotube modification of microbial fuel cell electrodes*, **Biosensors & Bioelectronics**, 2016, 85, 536-552 (IF: 9.518)
- [38] Y. Lin, D. Gritsenko, S. Feng, Y. C. Teh, X. Lu and J. Xu, *Detection of heavy metal by paper-based microfluidics*, **Biosensors & Bioelectronics**, 2016, 83, 256-266 (IF: 9.518)
- [37] A. A. Yazdi, A. Popma, W. Wong, T. Nguyen, Y. Pan, and J. Xu, *3D printing: an emerging tool for novel microfluidics and lab on a chip applications*, **Microfluidics and Nanofluidics**, 2016, 20(3), 50 (IF: 2.437)
- [36] Y. Chen, Z. Fang, B. Merritt, D. Strack, J. Xu and S. Lee, *Onset of Particle Trapping and Release via Acoustic Bubble*, **Lab on a Chip**, 2016, 16, 3024-3032 (IF: 6.914)
- [35] L. Guo, J. Feng, Z. Fang, J. Xu, and X. Lu, *Application of Microfluidic "Lab-on-a-Chip" for the Detection of Mycotoxins in Foods*, **Trends in Food Science & Technology**, 2015, 46(2), 252-263 (IF: 8.519)
- [34] M. Aghaamoo, Z. Zhang, X. Chen, and J. Xu, *Deformability-based circulating tumor cell separation with conical-shaped microfilters: concept, optimization and design criteria*, **Biomicrofluidics**, 2015, 9, 034106 (IF: 2.531)
- [33] J. Feng, C. de la Fuente-Núñez, M. Trimble, J. Xu, R. Hancock, and X. Lu, *An In-situ Raman spectroscopy-based microfluidic "lab-on-a-chip" platform for non-destructive and continuous characterization of Pseudomonas aeruginosa biofilms*, **Chemical Communications**, 2015, 51, 8966-8969 (IF: 6.164)
- [32] J. Xu, *Liquid metal robotics: a new category of soft robotics on the horizon*, **Science Bulletin**, 2015, 60(11), 1047-1048 (Invited) (IF: 6.277)
- [31] C. Rivera, H-J Kwon, A. Hashmi, G. Yu, J. Zhao, J. Gao, J. Xu, W. Xue, and A. Dimitrov, *Towards a dynamic*

- clamp for neurochemical modalities*, **Sensors**, 2015, 15(5), 10465-10480 (IF: 3.031)
- [30] Z. Zhang, X. Chen, and J. Xu, *Entry effects of droplet in a micro confinement: implications for deformation-based circulating tumor cell microfiltration*, **Biomicrofluidics**, 2015, 9, 024108 (IF: 2.531)
- [29] J. Chen, S. Feng, F. Gao, E. Grant, J. Xu, Q. Huang, and X. Lu, *Fabrication of SERS-Active Substrates Using Silver Nanofilm-Coated Porous Anodic Aluminum Oxide for Detection of Antibiotics*, **Journal of Food Science**, 2015, 80(4), N834-N840 (**Cover article**) (IF: 2.081)
- [28] J.-W. Jeon, L. Zhang, D.D. Laskar, J.P. Lemmon, D. Choi, M.I. Nandasiri, A. Hashmi, J. Xu, R.K. Motkuri, C.A. Fernandez, J. Liu, J.L. Lutkenhaus, M.P. Tucker, P.B. McGrail, B. Yang, and S.K. Nune, *Controlling Porosity in Lignin-Derived Nanoporous Carbon for Supercapacitor Applications*, **ChemSusChem**, 2015, 8(3): 428-432. (**Cover article**) (IF: 7.804)
- [27] A. Hashmi and J. Xu, *On the quantification of mixing in microfluidics*, **Journal of Laboratory Automation**, 2014, 19(5), 488-491 (**Cover article, author spotlight and podcast**) (IF: 2.241)
- [26] Z. Zhang, J. Xu, B. Hong and X.L. Chen, *The effects of 3D channel geometry on CTC passing pressure – towards deformability-based cancer cell separation*, **Lab on a Chip**, 2014, 14, 2576-2584 (IF: 6.914)
- [25] H.-J. Kwon, Y. Xu, S. Solovitz, W. Xue, A. Dimitrov, A. Coffin, and J. Xu, *Design of a microfluidic device with a non-traditional flow profile for on-chip damage to zebrafish sensory cells*, **Journal of Micromechanics and Microengineering**, 2014, 24, 017001 (IF: 2.141)
- [24] X. Lu, D. R. Samuelson, Y. Xu, H. Zhang, S. Wang, B. A. Rasco, J. Xu and M. E. Konkel, *Detecting and tracking nosocomial methicillin-resistant Staphylococcus aureus using a microfluidic SERS biosensor*, **Analytical Chemistry**, 2013, 85(4): 2320-2327 (IF: 6.350)
- [23] Y. Xu, A. Hashmi, G. Yu, X. Lu, H.-J. Kwon, X.L. Chen and J. Xu, *Microbubble array for on-chip worm processing*, **Applied Physics Letters**, 2013, 102(2): 023702 (IF: 3.521)
- [22] S. A. Solovitz, J. Zhao, W. Xue, and J. Xu, *Uniform Flow Control for a Multipassage Microfluidic Sensor*, **Journal of Fluids Engineering**, 2013, 135(2): 021101 (IF: 1.720)
- [21] A. Hashmi, G. Heiman, G. Yu, M. Lewis, H.-J. Kwon and J. Xu, *Oscillating bubbles in teardrop cavities for microflow control*, **Microfluidics and Nanofluidics**, 2013, 14: 591-596 (IF: 2.437)
- [20] A. Hashmi, Y. Xu, B. Coder, P. Osborne, J. Spafford, G. Michael, G. Yu and J. Xu, *Leidenfrost levitation: beyond droplets*, **Scientific Reports**, 2012, 2, 797 (IF: 4.011)
- [19] A. Bajwa, Y. Xu, A. Hashmi, M. Leong, L. Ho and J. Xu, *Liquid Marbles with In-flows and Out-flows: Characteristics and Performance Limits*, **Soft Matter**, 2012, 8, 11604-11608 (IF: 3.399)
- [18] A. Hashmi, G. Yu, M. Reilly-Collette, G. Heiman and J. Xu, *Oscillating Bubbles: a Versatile Tool for Lab on a Chip Applications*, **Lab on a Chip**, 2012, 12, 4216-4227 (IF: 6.914)
- [17] X. Lu, Q. Huang, W. Miller, D. Aston, J. Xu, F. Xue, H. Zhang, B. Rasco, S. Wang and M. Konkel, *Comprehensive Detection and Discrimination of Campylobacter Species by Use of Confocal Micro-Raman Spectroscopy and Multilocus Sequence Typing*, **Journal of Clinical Microbiology**, 2012, 50, 2932-2946 (IF: 4.959)
- [16] A. Hashmi, A. Strauss and J. Xu, *Freezing of a Liquid Marble*, **Langmuir**, 2012, 28: 10324-10328 (IF: 3.683)
- [15] J. Zhao, A. Hashmi, J. Xu and W. Xue, *A compact lab-on-a-chip nanosensor for glycerol detection*, **Applied Physics Letters**, 2012, 100(24):243109 (IF: 3.521)
- [14] P. Li, N. Lei, J. Xu and W. Xue, *High-Yield Fabrication of Graphene Chemiresistors with Dielectrophoresis*, **IEEE Transactions on Nanotechnology**, 2012, 11(4): 751-759 (IF: 2.292)
- [13] P. Li, N. Lei, D. Sheadel, J. Xu and W. Xue, *Integration of nanosensors into a sealed microchannel in a hybrid lab-on-a-chip device*, **Sensors and Actuators B: Chemical**, 2012, 166-167: 870-877 (IF: 6.393)
- [12] A. Baldwin, J. Xu and D. Attinger. *How to cool a burn: a heat transfer point of view*, **Journal of Burn Care**

- & Research**, 2012, 33(2), 176-187 (IF: 1.538)
- [11] C. Aberle, M. Lewis, G. Yu, N. Lei and J. Xu, *Liquid marbles as thermally robust droplets: coating-assisted Leidenfrost-like effect*, **Soft Matter**, 2011, 7: 11314-11318 (IF: 3.399)
- [10] G. Yu, X. Chen and J. Xu, *Acoustophoresis in Various Shaped Liquid Droplets*, **Soft Matter**, 2011, 7: 10063-10069 (IF: 3.399)
- [9] N. Lei, P. Li, W. Xue and J. Xu, *Simple graphene chemiresistors as pH sensors: fabrication and characterization*, **Measurement Science and Technology**, 22(10): p107002 (2011) (IF: 1.861)
- [8] G. Garty, M. Grad, B.K. Jones, Y. Xu, J. Xu, G. Randers-Pehrson, D. Attinger and D.J. Brenner, *Design of a novel flow-and shoot microbeam*, **Radiation Protection Dosimetry**, 2011, 143(2-4): 344-348 (IF: 0.831)
- [7] A. Betz, J. Xu, H. Qiu and D. Attinger. *Do surfaces with mixed hydrophilic and hydrophobic areas enhance pool boiling?* **Applied Physics Letters**, 2010, 97: 141909 (IF: 3.521)
- [6] J. Xu, R. Vaillant and D. Attinger. *Use of a porous membrane for gas removal in microfluidic channels: physical mechanisms and design criteria*, **Microfluidics and Nanofluidics**, 2010, 9: p 765-772 (IF: 2.437)
- [5] J. Xu and D. Attinger, *Drop on demand in a microfluidic chip*. **Journal of Micromechanics Microengineering**, 2008. 18: p. 065020. **(IOP select paper, JMM 2008 Highlights paper)** (IF: 2.141)
- [4] J. Xu and D. Attinger, *Acoustic excitation of superharmonic capillary waves on a meniscus in a planar microgeometry*. **Physics of Fluids**, 2007. 19: p. 108107 (IF: 2.627)
- [3] J. Xu and D. Attinger, *Control and ultrasonic actuation of a gas-liquid interface in a microfluidic chip*. **Journal of Micromechanics and Microengineering**, 2007. 17(3): p. 609-616 (IF: 2.141)
- [2] J. Kao, X. Wang, J. Warren, J. Xu, and D. Attinger, *A bubble-powered micro-rotor: conception, manufacturing, assembly and characterization*. **Journal of Micromechanics and Microengineering**, 2007. 17(12): p. 2454-2460 (IF: 2.141)
- [1] I. Conte, J.-H. Xie, J. Xu, and X.-F. Peng, *Thermal Conductivity and Moisture Absorption of Biomass Materials as Thermal Insulators* (In Chinese). **Industrial Heating**, 2005. 34(3): p. 1-4. (IF: N/A)
- Conference Articles and Presentations**
- [82] Mohammed Khan, Xiaolin Chen and Jie Xu, *Separation of Nonviable Chinese Hamster Ovary (Cho) Cells Using Dielectrophoresis in a Deterministic Lateral Displacement Ratchet*, ASME IMECE, 2020 Virtual Conference
- [81] Amirreza Ghaznavi, Yang Lin, Tal Carmon, Lev Deych, Lan Yang and Jie Xu, *A Novel Monolithic 3d Printed Axisymmetric Co-Flow Single and Double Emulsion Generator*, ASME IMECE, 2020 Virtual Conference
- [80] Yuan Gao, Mengren Wu, Yang Lin, Weiqi Zhao, and Jie Xu, *Acoustofluidic bidirectional micropump*, Acoustofluidics 2020, Virtual Conference
- [79] 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
- [78] Yang Lin, Yuan Gao, Mengren Wu, and Jie Xu, *Acoustofluidic micromixer on lab-on-a-foil devices*, ASME IMECE, 2019, Salt Lake City
- [77] Yang Lin, Can Gao, and Jie Xu, *Soft lithography based on photolithography and two-photon polymerization*, AIChE Midwest Regional Conference, 2019, Chicago
- [76] 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
- [75] Jie Xu, *On-chip manipulation of worms and fish using acoustofluidics*, 6<sup>th</sup> Institute of Biomaterials, Tribocorrosion and Nanomedicine (IBTN) Research Symposium, 2018, Chicago IL, USA
- [74] 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*, 21st International Conference on Miniaturized Systems for Chemistry and Life Sciences (MicroTAS 2017), Savannah, Georgia, USA
- [73] Jie Xu, Andrea De Vellis, and Dmitry Gritsenko, *Drastic sensing enhancement using acoustic bubble-induced agitation*, Acoustofluidics 2017, San Diego
- [72] H. He, Y. Pan, J. Xu and X. Yu, *Effect of Constrained Surface Texturing on Separation Force in Projection Stereolithography*, 2017 Annual International Solid Freeform Fabrication Symposium, Austin TX
- [71] Allison B. Coffin, Jie Xu, and Phillip M. Uribe, *Zebrafish hair cell mechanics and physiology through the lens of noise-induced hair cell death*, Mechanics of Hearing workshop, 2017, Ontario, Canada
- [70] Dmitry Gritsenko, Andrea De Vellis, Yang Lin and Jie Xu, *Use Of Acoustic Microstreaming For Drastic Sensing Enhancement*, AIChE Midwest Regional Conference, 2017, Chicago
- [69] Alireza Ahmadianyazdi, Roberto Preite, Jie Xu, Ross D. Milton, David P. Hickey and Shelley D. Minter, *A Rechargeable Membraneless Enzymatic Fuel Cell for use as an Implantable Device*, AIChE Midwest Regional Conference, 2017, Chicago
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- [67] H. He, Y. Pan, J. Xu, X. Yu and V. Botton, *Effect of Surface Texturing on Separation Force in Projection Stereolithography*, 11th International Conference on Micro Manufacturing, 2016, Orange County, California
- [66] P. Uribe, B. Villalpando, Z. Fang, A. Bhandiwad, J. Sisneros, J. Xu and A. Coffin, *Larval Zebrafish Lateral Line as a Model for Acoustic Trauma*, ARO Annual MidWinter Meeting, 2016, San Diego
- [65] X. Xu, G. Dunham, X. Zhao, D. Chiu and J. Xu, *Modeling Parallel Molecular Simulations on Amazon EC2*, International Conference on Cloud Computing and Big Data (CCBD), 2015, Shanghai (**CCBD Travel Award**)
- [64] Z. Zhang, J. Xu, and X.L. Chen, *Compound droplet modelling of Circulating Tumor Cell (CTC) microfiltration*, ASME IMECE, 2015, Houston
- [63] M. Aghaamoo, J. Xu, and X.L. Chen, *A Computational Study on Non-Uniform Cross-Sectional Deformability-based CTC Separation Devices*, ASME IMECE, 2015, Houston (**Student Paper Competition Winner** awarded to M. Aghaamoo)
- [62] J. Lechowicz, J. Xu, S. Alford and A. Linninger, *Microfluidic Platform For The Study Of Water Transport In Astrocytes*, BMES Annual Meeting, 2015, Tampa, Florida
- [61] P. Uribe, Z. Fang, J. Xu and A. Coffin, *Larval Zebrafish Lateral Line as a Model for Acoustic Trauma*, ARO Annual MidWinter Meeting, 2015, Baltimore, Maryland
- [60] Z. Fang and J. Xu, *Particle-Laden Leidenfrost Droplets: Final-Stage Observations*, APS March Meeting, 2015, San Antonio
- [59] Z. Zhang, J. Xu and X. Chen, *Parametric study of Newtonian droplet entering smaller confinement – a numerical study*, APS March Meeting, 2015, San Antonio (**APS Travel Grant awarded to Z. Fang**)
- [58] Y. Chen, Z. Fang, B. Merritt, D. Saadat-Moghaddam, D. Strack, J. Xu and S. Lee, *Theoretical and experimental investigation of particle trapping via acoustic bubbles*, 67th Annual Meeting of the APS Division of Fluid Dynamics, Volume 59, Number 20, 2014, San Francisco (**APS DFD Travel Grant awarded to Z. Fang**)
- [57] Z. Zhang, J. Xu, and X.L. Chen, *Flow regime and dynamic critical pressure of droplet entering confined microchannel*, 67th Annual Meeting of the APS Division of Fluid Dynamics, Volume 59, Number 20, 2014, San Francisco
- [56] Z. Fang, Z. Zhang, X.L. Chen, and J. Xu, *Inertial Microfluidic Spiral CTCs Filter with Micropillars*, IEEE EMBS Special Topic Conference on Healthcare Innovation & Point-of-Care Technologies, 2014, Seattle
- [55] Z. Zhang, J. Xu, and X.L. Chen, *Modeling cell deformation in CTC microfluidic filters*, ASME IMECE, 2014, Montreal



- [54] Z. Zhang, J. Xu, and X.L. Chen, *Predictive model for the cell passing pressure in deformation-based CTC chips*, ASME IMECE, 2014, Montreal
- [53] Y. Chen, Z. Fang, B. Merritt, D. Saadat-Moghadam, D. Strack, J. Xu and S. Lee, *Oscillating Bubbles for Microfluidic Manipulation – A Theoretical Approach*, ASME IMECE Society-Wide Micro Nano Forum, 2014, Montreal
- [52] Z. Zhang, J. Xu and X.L. Chen, *CFD design of deformation based cancer cell micro filtration*, ASME IMECE Society-Wide Micro Nano Forum, 2014, Montreal
- [51] J. Zhou, A. Hashmi, J. Xu and P. Sekhar, *An active micromixer based on reverse piezoelectricity effect*, 225th ECS Meeting, 2014, Orlando
- [50] G. Yip, D. Ionescu, E. Johnson, M. Dick, Z. Fang, W. Harb, B. Hong and J. Xu, *High throughput size and deformability based cancer cell filtration*, AACR Annual Meeting, 2014, San Diego
- [49] G. Dunham, D. Chiu, X. Zhao and J. Xu, *Putting molecular dynamics simulation on cloud*, ASME IMECE Micro Nano Forum, 2013, San Diego
- [48] A. Hashmi, G. Heiman, L. Ho, M. Janghorban, K. Taylor, W. Harb, B. Hong and J. Xu, *Deformability based separation of cancer cells from normal cells in a flow*, ASME IMECE Micro Nano Forum, 2013, San Diego
- [47] A. Hashmi, R. Cheng, L. Mao and J. Xu, *Freezing of a ferrofluid marble*, ASME IMECE Micro Nano Forum, 2013, San Diego
- [46] A. Dimitrov, W. Xue, J. Xu, C. Rivera, G. Yu, J. Zhao and H.-J. Kwon, *Towards a dynamic clamp for neuro-chemical modalities*, 22<sup>nd</sup> Annual Computational Neuroscience Meeting, 2013, Paris, France
- [45] G. Heiman, A. Hashmi, L. Ho, M. Janghorban, K. Taylor, W. Harb, B. Hong and J. Xu, *Cancer Cell Separation Using Size and Deformability Based Filtration*, AACR Annual Meeting, 2013, Washington, DC
- [44] J. Xu, G. Yu, A. Hashmi, H.-J. Kwon, and X.L. Chen, *A Bjerknes Force Based Microfluidic Platform for On-Chip Trapping, Enriching, Sorting and Manipulating Caenorhabditis elegans*, SLAS conference 2013, Orlando. **(Tony B. Academic Travel Award)**
- [43] Y. Xu, A. Bajwa, A. Hashmi, M. Leong, L. Ho and J. Xu, *Liquid Marbles with In-flows and Out-flows: Characteristics and Performance Limits*, ASME IMECE Micro Nano Forum, 2012, Houston
- [42] A. Hashmi and J. Xu, *Freezing of a Liquid Marble*, ASME IMECE Micro Nano Forum, 2012, Houston **(NSF Student Travel Award, awarded to A. Hashmi)**
- [41] G. Heiman, A. Hashmi, H.-J. Kwon and J. Xu *Microflow Control using Oscillating Bubbles in Teardrop Shaped Cavities*, ASME IMECE Micro Nano Forum, 2012, Houston
- [40] A. Hashmi, B. Coder, Y. Xu, G. Yu, J. Spafford, G. Michael, P. Osborne and J. Xu, *Leidenfrost Cart*, ASME IMECE, 2012, Houston
- [39] H.-J. Kwon, Y. Xu, S. Solovitz, W. Xue, A. Dimitrov, A. Coffin, and J. Xu, *Design of a microfluidic device to induce noise damage in hair cells of a zebrafish lateral line*, ASME IMECE, 2012, Houston
- [38] A. Hashmi, G. Heiman, G. Yu, H.-J. Kwon, and J. Xu, *Microfluidic flow control and particle transport using acoustically actuated bubbles in teardrop shaped cavities*, ASME IMECE, 2012, Houston
- [37] G. Yu, A. Hashmi, Y. Xu, H.-J. Kwon, X.L. Chen and J. Xu, *Microbubble array as a versatile tool for on-chip worm processing*, ASME IMECE, 2012, Houston **(Best Presentation Award, awarded to A. Hashmi)**
- [36] N. Lei, Z. Chen, D. Kim, W. Xue and J. Xu *Maskless fabrication of graphene nano-ribbons using focused-ion beam*, ASME IMECE Micro Nano Forum, 2012, Houston
- [35] B. Coder, G. Michael, J. Spafford, P. Osborne and J. Xu *Using Leidenfrost Vapor for Frictionless Motion*, ASME IMECE Undergraduate Expo, 2012, Houston
- [34] N. Lei, P. Li, W. Xue and J. Xu, *A graphene-based chemiresistor for microfluidic sensing*, The 3<sup>rd</sup> International Conference on Advances in Microfluidics & Nanofluidics, 2012, Dalian, China

- [33] G. Yu, Y. Xu, X.L. Chen and J. Xu, *Ultrasonic manipulation in free-surface microfluidics*, The 3<sup>rd</sup> International Conference on Advances in Microfluidics & Nanofluidics, 2012, Dalian, China
- [32] J. Zhao, J. Xu, W. Xue, *A novel compact lab-on-a-chip nanosensor for in-channel liquid viscosity detection*, Nanotech proceedings, 2012, Santa Clara
- [31] N. Lei, Z. Chen, D. Kim, W. Xue and J. Xu, *Mechanical fabrication of graphene devices using focused-ion beam: deposition and milling*, Nanotech proceedings, 2012, Santa Clara
- [30] G. Yu, N. Lei, X.L. Chen, W. Xue and J. Xu, *Free-surface microfluidics: exploring new actuation and sensing methods*, Nanotech proceedings, 2012, Santa Clara
- [29] G. Yu, A. Hashmi, X.L. Chen, and J. Xu, *Microfluidic manipulation of Caenorhabditis elegans using acoustic radiation forces*, Nanotech proceedings, 2012, Santa Clara
- [28] Li, P., N. Lei, J. Xu and W. Xue, *High-Yield Deposition and Characterization of Graphene and Carbon Nanotubes*, ASME Society-Wide Micro & Nano Technology Forum 2011, Denver
- [27] P. Li, N. Lei, J. Xu and W. Xue, *Integration of Carbon Nanotubes Sensors and Microfluidics in a Hybrid Lab-on-a-Chip Device*, ASME Society-Wide Micro & Nano Technology Forum 2011, Denver
- [26] C. Aberle, M. Lewis, G. Yu, N. Lei, and J. Xu, *Thermally Robust Droplets: Liquid Marbles*, ASME Society-Wide Micro & Nano Technology Forum 2011, Denver
- [25] G. Yu, X. Chen and J. Xu, *Particle Control in Free-Surface Microfluidics Using Acoustic Radiation Force*, ASME Society-Wide Micro & Nano Technology Forum 2011, Denver
- [24] Lei, N., P. Li, W. Xue and J. Xu, *Fabrication of Simple Graphene pH Sensors with Focused Ion Beam*, ASME Society-Wide Micro & Nano Technology Forum 2011, Denver
- [23] N. Lei, P. Li, W. Xue and J. Xu, *Gate-free graphene-based sensor for pH monitoring*, ASME IMECE proceedings, 2011, Denver
- [22] G. Yu, X. Chen and J. Xu, *Acoustic manipulation of particles in variously shaped liquid droplets*, ASME IMECE proceedings, 2011, Denver
- [21] C. Aberle, M. Lewis, G. Yu, N. Lei, and J. Xu, *Evaporation of liquid marbles on a heated surface: coating-assisted Leidenfrost phenomenon*, ASME IMECE proceedings, 2011, Denver
- [20] P. Li, N. Lei, J. Xu and W. Xue, *A lab-on-a-chip device using a dielectrophoresis-aligned carbon nanotube sensor array*, ASME IMECE proceedings, 2011, Denver
- [19] P. Li, N. Lei, J. Xu and W. Xue, *Large-scale deposition of graphene with dielectrophoresis*, ASME IMECE proceedings, 2011, Denver
- [18] P. Li, N. Lei, J. Xu and W. Xue, *High-Yield Dielectrophoretic Deposition and Ion Sensitivity of Graphene*, IEEE Nano, 2011, Portland
- [17] A. Betz, J. Xu, H. Qiu and D. Attinger, *Hydrophobic patterning to enhance pool boiling*, Nanotech, 2011, Boston
- [16] A. Betz, J. Jenkins, J. Xu, H. Qiu, C.-J. Kim, D. Attinger, *Drastic Enhancements of Boiling Heat Transfer with Micro- and Nano-Engineering of Surface Wettability*, ASME Society-Wide Micro & Nano Technology Forum 2010, Vancouver, British Columbia (**Honorable Mention for Best Poster Award**)
- [15] J. Xu, R. Vaillant and D. Attinger, *Use of porous membrane for gas bubble removal in microfluidic channels: physical mechanisms and design criteria*. 63<sup>rd</sup> Annual Meeting of the APS Division of Fluid Dynamics, Volume 55, Number 16, 2010, Long Beach
- [14] J. Xu, G. Garty, D. Brenner and D. Attinger, *Single-cell isolating and dispensing in a microfluidic system for microbeam irradiation*. US National Congress of Theoretical and Applied Mechanics 2010, State College
- [13] J. Xu, R. Vaillant and D. Attinger, *Porous membrane for bubbles removal in microfluidic channels: physical mechanisms and design criteria*. US National Congress of Theoretical and Applied Mechanics 2010, State

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- [12] G. Garty, M. Grad, B.K. Jones, Y. Xu, J. Xu, G. Randers-Pehrson, D. Attinger and D.J. Brenner, *Design of a novel flow-and shoot (FAST) microbeam*, International Symposium on Microdosimetry, 2009, Verona, Italy
- [11] J. Xu, R. Vaillant and D. Attinger, *Degassing membrane for bubble removal*. ASME Society-Wide Micro & Nano Technology Forum 2009, Lake Buena Vista.
- [10] J. Xu and D. Attinger, *On demand generation of drop and bubble in a microfluidic chip*. AIChE Annual Meeting Proceedings 2008, 133981, Philadelphia.
- [9] J. Xu and D. Attinger, *Dispensing individual fluid particles on demand in a microfluidic chip*, MicroTAS proceedings, 2008. 2: p. 1378-1380, San Diego.
- [8] J. Xu and D. Attinger, *Generation of picoliter and nanoliter drops on-demand in a microfluidic chip*. Nanotech proceedings. 2008. 3: p. 269-272, Boston.
- [7] J. Xu and D. Attinger. *Dynamics of a gas-liquid meniscus in complex micro-geometries, and potential actuation applications*. 1st Annual Liberty Metro Area MEMS/NEMS workshop, 2007, Stevens Institute of Technology, Hoboken
- [6] J. Xu, M. Dhur and D. Attinger, *Bubble-based actuation schemes for microfluidic chips*, Nanotech, 2007, Santa Clara.
- [5] J. Xu and D. Attinger, *Dynamics of the interface of a gas-liquid meniscus in complex PDMS micro-geometries*. ASME proceedings. 2006. IMECE2006-14656, Chicago.
- [4] J. Kao, J. Warren, J. Xu, and D. Attinger. *A bubble-powered micro-rotor: manufacturing, assembly and characterization*. ASME proceedings. 2006. IMECE2006-14675, Chicago. **(Best student paper, Awarded to J. Kao)**
- [3] J. Kao, J. Warren, J. Xu, and D. Attinger, *A bio-inspired rotor powered by a micro-bubble*. Nanotech proceedings. 2006. 3: p. 332-335, Boston.
- [2] J. Xu, X. Wang, and X.-F. Peng, *Dynamic interfacial properties of noncrystals during melting and solidification processes* (In Chinese). Proceedings of 11th Annual Meeting of Chinese Engineering Thermophysics Society. 2005. p 486-489, Beijing.
- [1] I. Conte, X.-F. Peng, D.M. Christopher, J. Xie, and J. Xu, *Transport properties of biomass materials as thermal insulators*. Proceedings of 7th Asian Thermophysical properties Conference. 2004, p. 63.

**Patents and Invention Disclosures**

- [14] A. Ghaznavi and J. Xu, "A novel 3D printed device for generating single and double emulsions", provisional patent, 2020
- [13] M. Krivchenia, B. Gaynes, J. Xu, and M. Wu, "Advanced interpretation of human microvasclar blood rheology", Invention disclosure, 2019
- [12] A. Coffin, P. M. Uribe, J. Xu and Z. Fang, "Acoustic trauma system for larval fish", Provisional patent, 2019
- [11] J. Xu, A. Ahmadianyazdi, and P. Roger, "Multifunctional Contact Lens", Invention disclosure, 2018
- [10] J. Xu, D. Gritsenko, J. Komperada, V. Horovka, K. Trevino, and W. Lai, "Soundproofing metamaterials based on structurally-trapped bubbles in liquid environment", Invention disclosure, 2016
- [9] M. Aghamoo, X. Chen and J. Xu, "High-Throughput Label-Free Circulating Tumor Cell Separation using 3D Deterministic Dielectrophoresis (D-Cubed)", Invention disclosure, 2015
- [8] J. Xu, "Oil and liquid metal mixture for cooling enhancement", Invention disclosure, 2015
- [7] Y. Pan and J. Xu, "A Method and Apparatus for Continuous 3D Printing", Provisional Patent, 2015
- [6] J. Xu and B. Yang, "A Hybrid Bioelectrochemical-Biofuel Generator For Next Generation Transportation", Provisional Patent, 2015
- [5] J. Xu, B. Coder, G. Michael, P. Osborne and J. Spafford, "Using Leidenfrost vapor as a lubrication film for

- fiction reduction*”, Invention disclosure, 2012
- [4] J. Xu, X.L. Chen, and G. Yu, “*Using oscillating bubbles for enriching, separating and manipulating micro-objects including worms*”, Invention disclosure by WSU, 2012
- [3] D. Attinger, J. Xu, R. Vaillant and A. Betz, “*Integrated bubble generation, transport and removal for enhanced liquid cooling in a microchannel heat sink*”, Patent number: WO2011060186, 2011
- [2] D. Attinger and J. Xu, “*Single cell encapsulation in a microfluidic chip*”, Invention disclosure M09-078, by Columbia University, May 2009
- [1] D. Attinger and J. Xu, “*On-demand microfluidic droplet or bubble generation*”, Patent number: WO2008156837, 2008

### **Other Publications**

- [5] Anina N. Rich, André Xuereb, Borys Wróbel, Jeremy Kerr, Megan Dodd, Kristina Tietjen, Binyam S. Mendisu, Vinicius F. Farjalla, Jie Xu, Martin Dominik, Gijs Wuite, Oded Hod, and Julia K. Baum, *Back to basics: Scientists’ perception on the global state of funding for fundamental research*, Global Young Academy Report, in print
- [4] A. Hashmi, Thomas Foster, and J. Xu, *Rapid fabrication of in/outlets for PDMS microfluidic devices*, Lab Chip, Chips & Tips, 14 Feb 2014. [Link](#)
- [3] P. Li, W. Xue, and J. Xu, *The fabrication of PDMS interconnecting interface assisted by tubing fixation*, Lab Chip, Chips & Tips, 10 June 2011. [Link](#)
- [2] J. Xu and D. Attinger. *How to prevent sagging during the bonding or lamination of chips with large aspect ratio chambers*. Lab Chip, Chips & Tips, 24 July 2009. [Link](#)
- [1] J. Xu and D. Attinger. *Profile measurement for microstructures made in hard material*. Lab Chip, Chips & Tips, 22 October 2008. [Link](#)

### **Invited Talks**

- [17] *Towards Fully Integrated Microfluidic Analytical Systems*, Intelligent Automation, Inc., Virtual Seminar, 10/28/2020
- [16] *Towards Fully Integrated Microfluidic Analytical Systems*, College of Medicine Rockford, The University of Illinois, Rockford, IL, 02/19/2020
- [15] *Microfluidic Manipulation using Sound Waves, a Sound Idea?* School of Engineering, The Distinguished Speakers Series, Purdue University Northwest, 09/07/2018
- [14] *On-chip manipulation of worms and fish using acoustofluidics*, 6<sup>th</sup> IBTN (Institute of Biomaterials, Tribocorrosion and Nanomedicine) Research Symposium, UIC College of Dentistry, Chicago, USA, 04/16/2018
- [13] *Microfluidic Manipulation using Sound Waves, a Sound Idea?* School of Mechatronic Engineering, University of Electronic Science and Technology of China, Chengdu, China, 12/17/2015
- [12] *Piezoelectric actuation of multiphase flow for lab-on-a-chip applications*, Department of Chemistry, University of California, Riverside, CA, 04/23/2015
- [11] *Microfluidics Laboratory at WSU Vancouver*, Department of Energy and Resources Engineering, Peking University, Beijing, China, 05/30/2014
- [10] *Microfluidics Laboratory at WSU Vancouver*, Department of Food Safety and Bioengineering, Tianjin University of Science & Technology, Tianjin, China, 05/26/2014
- [9] *Microfluidic Manipulation using Sound Waves, a Sound Idea?* Mechanical Engineering, Iowa State University, Ames, IA, 05/08/2014
- [8] *Microfluidic Manipulation using Sound Waves, a Sound Idea?* Mechanical and Industrial Engineering, University of Illinois Chicago, IL, 05/07/2014
- [7] *Multiphase microfluidics and their applications*, Mechanical Engineering, Santa Clara University, CA,

03/20/2014

- [6] *Acoustic Manipulation of C. elegans in Microfluidic Devices*, Mechanical Engineering, Southeast University, Nanjing, China, 05/27/2012
- [5] *Microfluidic Manipulation of Multiphase Flow and Potential Applications*, Mechanical and Materials Engineering, Portland State University, Portland, OR, 04/20/2012
- [4] *Microfluidic Manipulation of Multiphase Flow and Potential Applications*, The Gene and Linda Voiland School of Chemical Engineering and Bioengineering, Washington State University, Pullman, WA, 04/02/2012
- [3] *Complex Flow in Micro/Nanofluidics and Potential Applications*, Sharp Laboratories of America Technology and Innovation Colloquium, Camas, WA, 01/21/2011
- [2] *Dynamics of Drops and Bubbles in Microgeometries*, School of Engineering and Computer Science, Washington State University, Vancouver, WA, 02/03/2010
- [1] *Dynamics of Drops and Bubbles in Microgeometries*, Mechanical Engineering, Miami University, Oxford, OH, 01/29/2010