Zida Li, Ph.D.

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Education

University of Michigan, Ann Arbor — Ann Arbor, MI
Ph.D., Mechanical Engineering — Aug. 2013 – Apr. 2018
Dissertation: *Micro-Engineered Devices for Point-of-Care Blood Clot Retraction Testing*
Advisor: Prof. Jianping Fu

University of Science and Technology of China — Hefei, Anhui, China
B.Eng., Mechanical Engineering — Aug. 2008 – June 2012
Advisor: Prof. Liqun He

Tsinghua University — Beijing, China
Exchange Program – C9 University League — Sept. 2010 – Feb. 2011

Positions and Employment

Shenzhen University — Shenzhen, China
Assistant Professor, Biomedical Engineering — June 2018 – present

University of Michigan, Ann Arbor — Ann Arbor, MI
Graduate Student Research Assistant, Mechanical Engineering — Sept. 2013 – Apr. 2018
Graduate Student Teaching Assistant, Mechanical Engineering — Sept. 2014 – Apr. 2018

University of Hong Kong — Hong Kong
Research Assistant, Mechanical Engineering — Aug. 2012 – June 2013
Advisor: Prof. Anderson Ho Cheung Shum

Peer Reviews

- Scientific Reports ▪ IEEE Transactions in Nanotechnology ▪ Applied Sciences ▪ Micromachines
- Engineering ▪ Design of Medical Devices Conference 2018 ▪ Biomicrofluidics

Awards

- Baxter Young Investigator Award First-Tier, Baxter Healthcare Inc. (2016)
- Provincial Honored Graduate, Department of Education, Anhui Province, China (2012)
- National Scholarship, Ministry of Education, China (2011)

Research Grants

- Startup Grant for Oversea Talents, Department of Human Resource and Social Security, Shenzhen (2020-2022)
- Mianshang Grant, Science and Technology Agency, Guangdong (2019-2021)

- Medical Research Grant, Committee of Hygiene and Health, Guangdong (2019-2021)
- Faculty Startup Grant, Shenzhen University, Shenzhen (2019-2022)

Journal Publications

[#]co-first authors; *co-corresponding authors.

[1] Linzhe Chen, Guoliang Zhang, Longqi Liu*, and **Zida Li*** (2020). Emerging biosensing technologies for improved diagnostics of COVID-19 and future pandemics. *Talanta*, in press.

[2] Lanzhu Huang[#], Xinyu Liu[#], Yuanbin Ou, Haofan Huang, Xia Zhang, Yize Wang, Yong Liang, Xiaxia Yu, Weidong Zheng, Huisheng Zhang, and **Zida Li*** (2020). Micro-engineered flexural post rings for effective blood sample fencing and high throughput measurement of clot retraction force. *ACS Sensors*, in press. DOI: 10.1021/acssensors.0c01596

[3] Zhourui Xu, **Zida Li**, Yihang Jiang, Gaixia Xu, Mingwei Zhu, Wing-Cheung Law, Ken-Tye Yong, Yanshuai Wang, Chengbin Yang, Biqin Dong, and Feng Xing* (2020). Recent advances in solar-driven evaporation system. *Journal of Materials Chemistry A*, in press. DOI: 10.1039/D0TA08869B

[4] Xue Chen, Nicolo Simone Villa, Yanfeng Zhuang, Linzhe Chen, Tianfu Wang, **Zida Li***, and Tiantian Kong* (2019). Stretchable supercapacitors as emergent energy storage units for health monitoring bioelectronics. *Advanced Energy Materials*, 10(4), 1902769, 2020.

[5] Feng Lin, Xufeng Xue, Yue Shao, Yi Zheng, **Zida Li**, Chunyang Xiong*, and Jianping Fu* (2019). Emergent Primitive Streak Cell Patterning in Micropatterned Human Embryonic Stem Cell Colony. *Biomaterials*, Under Review.

[6] Yi Zheng, Xufeng Xue, Yue Shao, Sicong Wang, Sajedeh Nasr Esfahani, **Zida Li**, Jonathon M. Muncie, Johnathon N. Lakins, Valerie M. Weaver, Deborah L. Gumucio, and Jianping Fu (2019). Controlled modeling of human epiblast and amnion development using stem cells. *Nature*, 573(7774), 421-425

[7] Yuanyuan Zheng[#], Xufeng Xue[#], Agnes M. Resto Irizarry, **Zida Li**, Yue Shao, Yi Zheng, Gang Zhao*, and Jianping Fu* (2019). A patterned model for neural tube development studies by human embryonic stem cells in a biomimetic niche. *Science Advances*, 5(12), eaax5993, 2019.

[8] Sajedeh Nasr Esfahani, Yue Shao, Agnes M Resto Irizarry, **Zida Li**, Xufeng Xue, Deborah L Gumucio, and Jianping Fu (2019). Microengineered human amniotic ectoderm tissue array for high-content developmental phenotyping. *Biomaterials*, 216, 119244.

[9] Luoquan Li#, Ping Wu#, Zhaofeng Luo, Lei Wang, Weiping Ding, Tao Wu, Jinyu Chen, Jinlong He, Ying Chen, Guibo Li, **Zida Li***, and Liqun He* (2019). Dean flow assisted single cell and bead encapsulation for high performance single cell expression profiling. *ACS Sensors*, 4(5), 1299-1305.

[10] **Zida Li***, Luoquan Li, Meixiang Liao, Liqun He, and Ping Wu* (2019). Multiple splitting of droplets using multi-furcating microfluidic channels. *Biomicrofluidics*, 13(2), 024112.

[11] Feng Lin, Yue Shao, Xufeng Xue, Yi Zheng, **Zida Li**, Chunyang Xiong, Jianping Fu (2019). Biophysical phenotypes and determinants of anterior vs. posterior primitive streak cells derived from human pluripotent stem cells. *Acta Biomaterialia*, 86, 125-134

[12] **Zida Li**, Yize Wang, Xufeng Xue, Brendan McCracken, Kevin Ward, and Jianping Fu (2018). Carbon nanotube strain sensor based hemoretractometer for blood coagulation testing. *ACS Sensors*, 3(3), 670-676.

[13] **Zida Li**, Xufeng Xue, Feng Lin, Yize Wang, Kevin Ward, and Jianping Fu (2017). Capillary-assisted coating of carbon nanotube thin film as a strain gauge. *Applied Physics Letters*, 111(17), 173105.

[14] Koh Meng Aw Yong, **Zida Li**, Sofia D. Merajver, and Jianping Fu (2017). Analysis of tumor invasion front using long-term fluidic tumoroid culture. *Scientific Reports*, 7(1), 10784.

[15] Xufeng Xue, Xiaowei Hong, **Zida Li**, Cheri X. Deng, and Jianping Fu (2017). Acoustic tweezing cytometry enhances osteogenesis of human mesenchymal stem cells through cytoskeletal contractility and YAP activation. *Biomaterials*, 134, 22-30.

[16] Jianming Sang, Xiang Li, Yue Shao, **Zida Li**, and Jianping Fu (2016) Controlled tubular unit formation from collagen film for modular tissue engineering. *ACS Biomaterials Science & Engineering*, 3(11), 2860-2868.

[17] **Zida Li**, Xiang Li, Brendan McCracken, Yue Shao, Kevin Ward, and Jianping Fu (2016). A miniaturized hemoretractometer for blood clot retraction testing. *Small*, 12(29), 3926-3934.

[18] Ping Wu, Zhaofeng Luo, Zhifeng Liu, **Zida Li**, Chi Chen, Lili Feng, and Liqun He (2015). Drag-induced breakup mechanism for droplet generation in dripping within flow focusing microfluidics. *Chinese Journal of Chemical Engineering*, *23*(1), 7-14.

[19] **Zida Li**, Sze Yi Mak, Alban Sauret, and Ho Cheung Shum (2014). Syringe-pump-induced fluctuation in all-aqueous microfluidic system implications for flow rate accuracy. *Lab on a Chip*, 14(4), 744-749.

[20] Sze Yi Mak, **Zida Li**, Arnaud Frere, Tat Chuen Chan, and Ho Cheung Shum (2014). Musical Interfaces: Visualization and Reconstruction of Music with a Microfluidic Two-Phase Flow. *Scientific Reports*, 4, 6675.

[21] Xiang Li, Weiqiang Chen, **Zida Li**, Ling Li, Hongchen Gu, and Jianping Fu (2014). Emerging microengineered tools for functional analysis and phenotyping of blood cells. *Trends in Biotechnology*, 32(11), 586-594.

Book Chapters

[1] **Zida Li*** and Anderson Ho Cheung Shum* (2019). Nanotechnology and microfluidics for biosensing and biophysical property assessment: implications for next generation in vitro diagnostics. *Nanotechnology and Microfluidics*, 83-107, John Wiley & Sons, 2019.

Patents

[1] Jianping Fu, Kevin Ward, **Zida Li**, and Xiang Li. (2017). A microscale device for blood coagulation assay. *U.S. Patent Application* 62/304,385.

[2] Ho Cheung Shum, Alban Sauret, **Zida Li**, and Yang Song. (2013). System and method for generation of emulsions with low interfacial tension and measuring frequency of vibrations in the system. *U.S. Patent Application* 13/839,072.

Conference Presentations

[1] Micro-engineered devices for point-of-care blood clot retraction testing. **Panel Speech**. *CSMNT 2020*, Shenzhen, China, Dec. 2020.

[2] Dean flow assisted single cell and bead encapsulation for high performance single cell expression profiling. **Panel Speech**. *FLOCA 2019*, Dalian, China, Nov. 2019.

[3] Dean flow assisted single cell and bead encapsulation for high performance single cell expression profiling. **Panel Speech**. *IMCO 2019*, Hong Kong, China, June 2019.

[4] Capillary-facilitated coating of carbon nanotube thin film as a strain gauge for blood retraction testing. **Poster Presentation**. *MicroTAS 2017*, Savannah, GA, USA, Oct. 2017.

[5] Capillary-assisted coating of carbon nanotube thin film for blood retraction testing. **Panel Speech**. *BMES 2017*, Phoenix, AZ, USA, Oct 2017.

[6] A miniaturized hemoretractometer for blood clot retraction testing. **Panel Speech**. *8th International Symposium on Microchemistry and Microsystems*, Hong Kong, May 2016.

Invited Talks

[1] Microfluidics-enabled point-of-care testing and single cell analysis. Department of Biomedical Engineering, Shenzhen University, Shenzhen, China, Dec. 2020.

[2] Droplet microfluidics and single cell analysis. Department of Thermal Science and Energy Engineering, University of Science and Technology of China, Hefei, China, Nov. 2019.

[3] Micro/Nano-engineered tools for mechanobiology. Department of Mechanical and Electrical Engineering, Guilin University of Electronic Technology. Guilin, China, Dec. 2018.

[4] Micro-engineered blood coagulation tests. Department of Thermal Science and Energy Engineering, University of Science and Technology of China, Hefei, China, Mar. 2018.