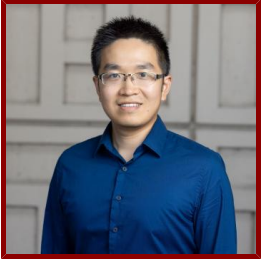


Stanford



Zijian Yang

Postdoctoral Scholar, Radiology

Bio

BIO

I have long term interest in combining advanced science and technology to provide next generation healthcare system.

To reach that goal, I have developed machine learning based diagnosis model on the software end, which is combined with my hardware end work including wearable/flexible electronics and microelectronic/microfluidic platforms.

HONORS AND AWARDS

- Baxter Young Investigator Award, Baxter International (2022.09)
- Sanjiv Sam Gambhir-Phillips Fellowship, Stanford Precision Health and Integrated Diagnostics Center (2022.04)
- Penn Health Tech Pioneer Award seed grant, University of Pennsylvania (2021.09)
- Nemirovsky Engineering and Medicine Opportunity (NEMO) Prize, finalist, University of Pennsylvania (2021.08)
- Penn Bioengineering Graduate Group Research Symposium, second place, University of Pennsylvania, Bioengineering Department (2021.01)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Pennsylvania (2021)
- PhD, University of Pennsylvania , Mechanical Engineering and Applied Mechanics
- MS, University of Illinois at Urbana Champaign , Materials Science and Engineering
- BS, Zhejiang University , Materials Science and Engineering

STANFORD ADVISORS

- H. Tom Soh, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Ultrasensitive Single Extracellular Vesicle Detection Using High Throughput Droplet Digital Enzyme-Linked Immunosorbent Assay.** *Nano letters*
Yang, Z., Atiyas, Y., Shen, H., Siedlik, M. J., Wu, J., Beard, K., Fonar, G., Dolle, J. P., Smith, D. H., Eberwine, J. H., Meaney, D. F., Issadore, D. A. 2022; 22 (11): 4315-4324
- **A Multianalyte Panel Consisting of Extracellular Vesicle miRNAs and mRNAs, cfDNA, and CA19-9 Shows Utility for Diagnosis and Staging of Pancreatic Ductal Adenocarcinoma** *CLINICAL CANCER RESEARCH*
Yang, Z., LaRiviere, M. J., Ko, J., Till, J. E., Christensen, T., Yee, S. S., Black, T. A., Tien, K., Lin, A., Shen, H., Bhagwat, N., Herman, D., Adallah, et al

2020; 26 (13): 3248-3258

- **Biodegradable Monocrystalline Silicon Photovoltaic Microcells as Power Supplies for Transient Biomedical Implants** *ADVANCED ENERGY MATERIALS*
Lu, L., Yang, Z., Meacham, K., Cvetkovic, C., Corbin, E. A., Vazquez-Guardado, A., Xue, M., Yin, L., Boroumand, J., Pakeltis, G., Sang, T., Yu, K., Chanda, et al
2018; 8 (16)
- **Ultrathin, transferred layers of thermally grown silicon dioxide as biofluid barriers for biointegrated flexible electronic systems** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
Fang, H., Zhao, J., Yu, K. J., Song, E., Farimani, A. B., Chiang, C., Jin, X., Xue, Y., Xu, D., Du, W., Seo, K. J., Zhong, Y., Yang, et al
2016; 113 (42): 11682-11687
- **Continuous FACS Sorting of Double Emulsion Picoreactors with a 3D-Printed Vertical Mixer.** *Analytical chemistry*
Yang, Z., Thompson, S., Zhang, Y., Rutten, I., Van Duyse, J., Van Isterdael, G., Nichols, L., Lammertyn, J., Soh, H. T., Fordyce, P.
2025
- **FACS-Sortable Triple Emulsion Picoreactors for Screening Reactions in Biphasic Environments** *ADVANCED MATERIALS INTERFACES*
Thompson, S., Zhang, Y., Yang, Z., Nichols, L., Fordyce, P. M.
2024
- **Ultrasensitive quantification of PD-L1+ extracellular vesicles in melanoma patient plasma using a parallelized high throughput droplet digital assay.** *Lab on a chip*
Shen, H., Atiyas, Y., Yang, Z., Lin, A. A., Yang, J., Liu, D., Park, J., Guo, W., Issadore, D. A.
2024
- **Brain-derived extracellular vesicles as serologic markers of brain injury following cardiac arrest: a pilot feasibility study.** *Resuscitation*
Shen, H., Zaitseva, D., Yang, Z., Forsythe, L., Joergensen, S., Zone, A. I., Shehu, J., Maghraoui, S., Ghorbani, A., Davila, A., Issadore, D., Abella, B. S.
2023: 109937
- **Advancing microfluidic diagnostic chips into clinical use: a review of current challenges and opportunities.** *Lab on a chip*
Iyer, V., Yang, Z., Ko, J., Weissleder, R., Issadore, D.
2022
- **Proteomic Profiling of Extracellular Vesicles Separated from Plasma of Former National Football League Players at Risk for Chronic Traumatic Encephalopathy** *AGING AND DISEASE*
Muraoka, S., DeLeo, A. M., Yang, Z., Tatebe, H., Yukawa-Takamatsu, K., Ikezu, S., Tokuda, T., Issadore, D., Stern, R. A., Ikezu, T.
2021; 12 (6): 1363-1375
- **Extracellular vesicles as distinct biomarker reservoirs for mild traumatic brain injury diagnosis** *BRAIN COMMUNICATIONS*
Beard, K., Yang, Z., Haber, M., Flamholz, M., Diaz-Arrastia, R., Sandsmark, D., Meaney, D. F., Issadore, D.
2021; 3 (3): fcab151
- **Micro- and Nano-Devices for Studying Subcellular Biology** *SMALL*
Siedlik, M. J., Yang, Z., Kadam, P. S., Eberwine, J., Issadore, D.
2021; 17 (3): e2005793
- **Proteomic and biological profiling of extracellular vesicles from Alzheimer's disease human brain tissues** *ALZHEIMERS & DEMENTIA*
Muraoka, S., DeLeo, A. M., Sethi, M. K., Yukawa-Takamatsu, K., Yang, Z., Ko, J., Hogan, J. D., Ruan, Z., You, Y., Wang, Y., Medalla, M., Ikezu, S., Chen, et al
2020; 16 (6): 896-907
- **Multi-Dimensional Mapping of Brain-Derived Extracellular Vesicle MicroRNA Biomarker for Traumatic Brain Injury Diagnostics** *JOURNAL OF NEUROTRAUMA*
Hemphill, M., Ko, J., Yang, Z., Beard, K., Sewell, E., Shallcross, J., Schweizer, M., Sandsmark, D. K., Diaz-Arrastia, R., Kim, J., Meaney, D., Issador, D.
2020; 37 (22): 2424-2434
- **Diagnosis of traumatic brain injury using miRNA signatures in nanomagnetically isolated brain-derived extracellular vesicles** *LAB ON A CHIP*

Ko, J., Hemphill, M., Yang, Z., Sewell, E., Na, Y. J., Sandsmark, D. K., Haber, M., Fisher, S. A., Torre, E. A., Svane, K. C., Omelchenko, A., Firestein, B. L., Diaz-Arrastia, et al
2018; 18 (23): 3617-3630

- **Cytotoxicity and in Vitro Degradation Kinetics of Foundry-Compatible Semiconductor Nanomembranes and Electronic Microcomponents** *ACS NANO*

Chang, J., Emon, M., Li, C., Yang, Q., Chang, H., Yang, Z., Wu, C., Saif, M., Rogers, J. A.
2018; 12 (10): 9721-9732

- **Capacitively coupled arrays of multiplexed flexible silicon transistors for long-term cardiac electrophysiology** *NATURE BIOMEDICAL ENGINEERING*

Fang, H., Yu, K., Gloschat, C., Yang, Z., Song, E., Chiang, C., Zhao, J., Won, S., Xu, S., Trumpis, M., Zhong, Y., Han, S., Xue, et al
2017; 1 (3)

- **Materials and Fractal Designs for 3D Multifunctional Integumentary Membranes with Capabilities in Cardiac Electrotherapy** *ADVANCED MATERIALS*

Xu, L., Gutbrod, S. R., Ma, Y., Petrossians, A., Liu, Y., Webb, R. C., Fan, J. A., Yang, Z., Xu, R., Whalen, J. J., Weiland, J. D., Huang, Y., Efimov, et al
2015; 27 (10): 1731-?