

Stanford



Alex Choi

Postdoctoral Scholar, Bioengineering

Bio

HONORS AND AWARDS

- American Heart Association Postdoctoral Fellowship, American Heart Association (2025)

PROFESSIONAL EDUCATION

- B.S, Georgia Institute of Technology , Chemistry (2019)
- PhD, University of California, Berkeley , Chemistry (2024)

STANFORD ADVISORS

- Stanley Qi, Postdoctoral Faculty Sponsor

LINKS

- LinkedIn: <https://www.linkedin.com/in/alexanderchoi/>
- Google Scholar: <https://scholar.google.com/citations?user=qPVMZtMAAAAJ&hl=en>

Publications

PUBLICATIONS

- **Programmable control of spatial transcriptome in live cells and neurons.** *Nature*
Han, M., Fu, M. L., Zhu, Y., Choi, A. A., Li, E., Bezney, J., Cai, S., Miles, L., Ma, Y., Qi, L. S.
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- **Single-molecule diffusivity quantification in *Xenopus* egg extracts elucidates physicochemical properties of the cytoplasm.** *Proceedings of the National Academy of Sciences of the United States of America*
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2024; 121 (50): e2411402121
- **Hypersensitivity of the vimentin cytoskeleton to net-charge states and Coulomb repulsion.** *bioRxiv : the preprint server for biology*
Unger, B. A., Wu, C. Y., Choi, A. A., He, C., Xu, K.
2024
- **Single-Molecule Diffusivity Quantification Unveils Ubiquitous Net Charge-Driven Protein-Protein Interaction** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
Choi, A. A., Xu, K.
2024; 146 (15): 10973-10978
- **A composite electrodynamic mechanism to reconcile spatiotemporally resolved exciton transport in quantum dot superlattices.** *Science advances*
Yuan, R., Roberts, T. D., Brinn, R. M., Choi, A. A., Park, H. H., Yan, C., Ondry, J. C., Khorasani, S., Masiello, D. J., Xu, K., Alivisatos, A. P., Ginsberg, N. S.

2023; 9 (42): eadh2410

- **Size-Dependent Suppression of Molecular Diffusivity in Expandable Hydrogels: A Single-Molecule Study.** *The journal of physical chemistry. B*
Park, H. H., Choi, A. A., Xu, K.
2023; 127 (14): 3333-3339
- **Single-Molecule Displacement Mapping Indicates Unhindered Intracellular Diffusion of Small (#1 kDa) Solutes.** *Journal of the American Chemical Society*
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- **Fluorogenic Dimers as Bright Switchable Probes for Enhanced Super-Resolution Imaging of Cell Membranes.** *Journal of the American Chemical Society*
Aparin, I. O., Yan, R., Pelletier, R., Choi, A. A., Danylchuk, D. I., Xu, K., Klymchenko, A. S.
2022; 144 (39): 18043-18053
- **Displacement Statistics of Unhindered Single Molecules Show no Enhanced Diffusion in Enzymatic Reactions.** *Journal of the American Chemical Society*
Choi, A. A., Park, H. H., Chen, K., Yan, R., Li, W., Xu, K.
2022; 144 (11): 4839-4844
- **Systematic Analysis of Fatty Acids in Human Cells with a Multiplexed Isobaric Tag (TMT)-Based Method.** *Journal of proteome research*
Sun, F., Choi, A. A., Wu, R.
2018; 17 (4): 1606-1614