Stanford

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Ph.D. Student in Chemistry, admitted Autumn 2023

Publications

PUBLICATIONS

- **Synthesizing Boron Nitride Quantum Dots in Microdroplets.** *Nano letters*
  Song, X., Lyu, L., Xu, J., Li, C., Alzamil, A. A., Bikdash, R. S., Younis, M. N., Kamran, M., Basheer, C., Zare, R. N.
  2026
- **Water Droplet Microlightning Enables Catalyst-Free Alkane Dehydrogenation under Ambient Conditions** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*
  He, Y., Xu, J., Lyu, L., Xia, Y., Zare, R. N., Meng, Y.
  2026
- **Biomolecular condensates mediate C-N bond formation** *NATURE CHEMICAL BIOLOGY*
  Song, X., Ma, Y., Chen, M. W., Yu, W., Yan, X., Xu, J., Lyu, L., Hyman, A. A., Dai, Y., Zare, R. N.
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- **Mapping Cell Metabolic States by Image-Enabled Gating Metabolomic Cytometry.** *Analytical chemistry*
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- **Biomolecular Condensates Power Nitrogen Cycling via Concurrent Redox Activities.** *Journal of the American Chemical Society*
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- **Dark Reactions in Microdroplets Explain Widespread Artifacts in Metabolomic Profiling** *ACS MEASUREMENT SCIENCE AU*
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  2026
- **Comment on "An Alternative Explanation for Ions Put Forth as Evidence for Abundant Hydroxyl Radicals Formed Due to the Intrinsic Electric Field at the Surface of Water Droplets".** *Analytical chemistry*
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  Ren, X., Song, X., Lyu, L., Chen, M. W., Zare, R. N., Dai, Y.
  2025; 122 (39): e2508804122
- **Nondestructive Metabolic Monitoring of Living Organisms by Water-Droplet Extraction and Contact-Free Electrospray Ionization Mass Spectrometry.** *Analytical chemistry*
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- **Clarifying the Identity of the m/z 36 Ion in Water Microdroplet Mass Spectra.** *The journal of physical chemistry. A*
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  2025