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Bio

BIO

I am a Staff Scientist in the LCLS Chemical Sciences Department at SLAC National Accelerator Laboratory. My research focuses on the excited-state dynamics of small organic molecules, with a particular emphasis on employing novel experimental techniques to probe these processes in real time and space.

Because these dynamics typically occur on attosecond to picosecond timescales, the strongly coupled electronic and nuclear motions drive ultrafast energy redistribution and structural transformations, processes that underpin fundamental phenomena across physics, chemistry, and biology.

Building on my extensive background in ultrafast laser science and time-resolved spectroscopy, my current work involves developing multi-modal experiments that integrate spectroscopy and diffraction. My toolkit includes time-resolved valence and soft X-ray core-ionization spectroscopy, as well as ultrafast electron and hard X-ray diffraction. These studies are conducted primarily at the LCLS X-ray FEL, the MeV-UED facility at SLAC, and our tabletop laser laboratories at the Stanford PULSE Institute.

EDUCATION AND CERTIFICATIONS

- PhD, Stony Brook University , Physical Chemistry (2021)
- B.S., Ocean University of China , Optical Information (2013)

LINKS

- Google Scholar: https://scholar.google.com/citations?hl=en&tzom=420&user=0UAcHswAAAAJ

Publications

PUBLICATIONS

- **Ultrafast Events in Electrocyclic Ring-Opening Reactions.** *Annual review of physical chemistry*
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- **Imaging Valence Electron Rearrangement in a Chemical Reaction Using Hard X-Ray Scattering.** *Physical review letters*
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- **Imaging Valence Electron Rearrangement in a Chemical Reaction Using Hard X-Ray Scattering** *PHYSICAL REVIEW LETTERS*
  Gabalski, I., Green, A., Lenzen, P., Allum, F., Bain, M., Bhattacharyya, S., Britton, M. A., Champenois, E. G., Cheng, X., Cryan, J. P., Driver, T., Forbes, R., Garratt, et al
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- **Imaging the photochemistry of cyclobutanone using ultrafast electron diffraction: Experimental results.** *The Journal of chemical physics*
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