Stanford



Edward Pimentel

Postdoctoral Scholar, Radiology

Bio

BIO

Edward Pimentel is a postdoctoral scholar in the lab of Prof. Tom Soh. After receiving his BS in Chemistry at BYU and pursuing the total synthesis of a natural product with anticancer activity in the lab of Dr. Merritt Andrus, Edward was the first graduate student in the lab of Dr. Jeffrey Martell, where his PhD work centered on using DNA nanostructures to accelerate catalytic reactions and building an ultrahigh-throughput DNA-encoded reaction screening platform. Now as a postdoctoral scholar, his research focuses on applying functional nucleic acids to solve problems in diagnostic and sensing for human health. In addition to his research, Edward is a passionate mentor and has been involved in mentoring programs at every stage of his career. He is now a coordinator for the SURPAS Someone Like Me Peer Mentoring program.

HONORS AND AWARDS

- CAS Future Leaders Top 100, American Chemical Society (2025)
- NDSEG Alternate Awardee, Department of Defense (2019)
- NSF GRFP Honorable Mention, National Science Foundation (2019)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, American Chemical Society (2021 - present)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, University of Wisconsin Madison (2024)
- PhD, University of Wisconsin-Madison , Organic Chemistry (2024)
- BS, Brigham Young University , Chemistry (2018)

STANFORD ADVISORS

- H. Tom Soh, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- H. Tom Soh, Soh Lab (9/3/2024)

Publications

PUBLICATIONS

- **A Rationally Designed Split Lettuce Aptamer Based on Large-Scale Mutational Analysis** *ACS SENSORS*

Adams, A. M., Pimentel, E. B., Loh, N., Gidi, Y., Hein, L. A., Eisenstein, M., Soh, H.
2026

- **DNA-scaffolded catalysis** *TRENDS IN CHEMISTRY*
  Marte, J. D., Pimentel, E. B., Ogore, A. N., Hartm, E. M., Cox, C. A.
  2025; 7 (12): 900-915

- **Hyper-Expandable Cross-Linked Protein Crystals as Scaffolds for Catalytic Reactions** *ACS APPLIED MATERIALS & INTERFACES*
  Chung, J. S., Hartman, E. M., Mertick-Sykes, E. J., Pimentel, E. B., Martell, J. D.
  2024; 17 (1): 311-321

- **The 235-360 GHz Rotational Spectrum of 1-Oxaspiro[2.5]octa-4,7-dien-6-one—Analysis of the Ground Vibrational State and Its 10 Lowest-Energy Vibrationally Excited States.** *The journal of physical chemistry. A*
  Esselman, B. J., Pimentel, E. B., Styers, W. H., Jean, D. R., Woods, R. C., McMahon, R. J.
  2024; 128 (1): 191-203

- **DNA-Compatible Copper/TEMPO Oxidation for DNA-Encoded Libraries.** *Bioconjugate chemistry*
  Merrifield, J. L., Pimentel, E. B., Peters-Clarke, T. M., Nesbitt, D. J., Coon, J. J., Martell, J. D.
  2023; 34 (8): 1380-1386

- **DNA-Scaffolded Synergistic Catalysis.** *Journal of the American Chemical Society*
  Pimentel, E. B., Peters-Clarke, T. M., Coon, J. J., Martell, J. D.
  2021; 143 (50): 21402-21409