Stanford

Reagan Hooper

Postdoctoral Scholar, Photon Science, SLAC

Bio

PROFESSIONAL EDUCATION

- Ph.D., Yale University , Chemistry (2023)
- B.S., Kennesaw State University , Chemistry (2018)

STANFORD ADVISORS

- Kelly Gaffney, Postdoctoral Faculty Sponsor
- Amy Cordones-Hahn, Postdoctoral Research Mentor

Publications

PUBLICATIONS

- **Interplay between StructuralReorganization and Metal-Ligand Covalencyin the Distinct Excited Statesof [M(diimine)(dithiolate)] Complexes** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Francis, S. A., Lim, H., Poulter, B. I., Hu, W., Hooper, R. X., Ryland, E. S., Nelson, K. J., Raj, S. L., Antolini, C. L., Chatterjee, G., Gee, L. B., van Driel, T. B., Yang, et al
  2026

- **Ultrafast Population and Structural Dynamics of a Ni-Bipyridine Photoredox Catalyst Reveal a Significant Deactivation Pathway.** *The journal of physical chemistry letters*
  Raj, S. L., Curtolo, F., Nelson, K. J., Cagan, D. A., Hooper, R. X., Bím, D., Follmer, A. H., Ribson, R. D., Kazmierczak, N. P., McNicholas, B. J., Powers-Riggs, N., Sachs, M., Biasin, et al
  2026

- **Highly-destabilized ligand field excited states of iron carbene complexes and their relation to charge transfer state lifetimes.** *Chemical science*
  Hooper, R. X., Poulter, B. I., Schwarz, J., Barakat, M., Kunnus, K., Nelson, K. J., Ilic, A., García-Mateos, C., Chowdhury, R., Uhlig, J., Wärnmark, K., Jakubikova, E., Cordones, et al
  2026

- **Photolytic activation of Ni(II)X2L explains how Ni-mediated cross coupling begins.** *Nature communications*
  Kudisch, M., Hooper, R. X., Valloli, L. K., Earley, J. D., Zieleniewska, A., Yu, J., DiLuzio, S., Smaha, R. W., Sayre, H., Zhang, X., Bird, M. J., Cordones, A. A., Rumbles, et al
  2025; 16 (1): 5530

- **Mixed Valence {Ni2+Ni1+} Clusters as Models of Acetyl Coenzyme A Synthase Intermediates.** *Journal of the American Chemical Society*
  Wilson, D. W., Thompson, B. C., Collauto, A., Hooper, R. X., Knapp, C. E., Roessler, M. M., Musgrave, R. A.
  2024

- **Iron(iv) alkyl complexes: electronic structure contributions to Fe-C bond homolysis and migration reactions that form N-C bonds from N2.** *Chemical science*
  Bhutto, S. M., Hooper, R. X., McWilliams, S. F., Mercado, B. Q., Holland, P. L.
  2024; 15 (10): 3485-3494

- **Evaluating Diazene to N2 Interconversion at Iron-Sulfur Complexes.** *Chemistry (Weinheim an der Bergstrasse, Germany)*
  Hooper, R. X., Wertz, A. E., Shafaat, H. S., Holland, P. L.

2024: e202304072

- **Desulfurization and N2 Binding at an Iron Complex Derived from the C-S Activation of Benzothiophene.** *Organometallics*
  Hooper, R. X., Mercado, B. Q., Holland, P. L.
  2023; 42 (15): 2019-2027

- **Engineering Band Gap and Photoconduction in Semiconducting Metal Organic Frameworks: Metal Node Effect** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*
  Nyakuchena, J., Ostresh, S., Neu, J., Streater, D., Cody, C., Hooper, R., Zhang, X., Reinhart, B., Brudvig, G. W., Huang, J.
  2023; 14 (26): 5960-5965

- **Mechanism of Nitrogen-Carbon Bond Formation from Iron(IV) Disilylhydrazido Intermediates during N2 Reduction** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Bhutto, S. M., Hooper, R. X., Mercado, B. Q., Holland, P. L.
  2023: 4626-4637

- **Cobalt-Carbon Bonding in a Salen-Supported Cobalt(IV) Alkyl Complex Postulated in Oxidative MHAT Catalysis** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Wilson, C., Kim, D., Sharma, A., Hooper, R. X., Poli, R., Hoffman, B. M., Holland, P. L.
  2022; 144 (23): 10361-10367

- **Iron Complexes of a Proton-Responsive SCS Pincer Ligand with a Sensitive Electronic Structure** *INORGANIC CHEMISTRY*
  Skubi, K. L., Hooper, R. X., Mercado, B. Q., Bollmeyer, M. M., MacMillan, S. N., Lancaster, K. M., Holland, P. L.
  2022; 61 (3): 1644-1658

- **Assignment of Infrared-Active Combination Bands in the Vibrational Spectra of Protonated Molecular Clusters Using Driven Classical Trajectories: Application to N4H+ and N4D+** *JOURNAL OF PHYSICAL CHEMISTRY A*
  Hooper, R., Boutwell, D., Kaledin, M.
  2019; 123 (26): 5613-5620

- **A stable Cerberus tris(maloNHC) and its coinage metal complexes** *CHEMICAL COMMUNICATIONS*
  Hooper, R., Mason, A., Montgomery, M., Clinebell, B., Gaynor, R., McMillen, C., Tapu, D.
  2019; 55 (42): 5942-5945