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Publications

PUBLICATIONS

- **Solution phase high repetition rate laser pump x-ray probe picosecond hard x-ray spectroscopy at the Stanford Synchrotron Radiation Lightsource** *STRUCTURAL DYNAMICS-US*
  Reinhard, M., Skoien, D., Spies, J. A., Garcia-Esparza, A. T., Matson, B. D., Corbett, J., Tian, K., Safranek, J., Granados, E., Strader, M., Gaffney, K. J., Alonso-Mori, R., Kroll, et al
  2023; 10 (5): 054304

- **Ferricyanide photo-aquation pathway revealed by combined femtosecond Kβ main line and valence-to-core x-ray emission spectroscopy.** *Nature communications*
  Reinhard, M., Gallo, A., Guo, M., Garcia-Esparza, A. T., Biasin, E., Qureshi, M., Britz, A., Ledbetter, K., Kunnus, K., Weninger, C., van Driel, T., Robinson, J., Glownia, et al
  2023; 14 (1): 2443

- **Femtosecond X-ray Spectroscopy Directly Quantifies Transient Excited-State Mixed Valency.** *The journal of physical chemistry letters*
  Liekhus-Schmaltz, C., Fox, Z. W., Andersen, A., Kjaer, K. S., Alonso-Mori, R., Biasin, E., Carlstad, J., Chollet, M., Gaynor, J. D., Glownia, J. M., Hong, K., Kroll, T., Lee, et al
  1800: 378-386

- **Operando Elucidation on the Working State of Immobilized Fluorinated Iron Porphyrin for Selective Aqueous Electroreduction of CO2 to CO** *ACS CATALYSIS*
  Lu, X., Ahsaine, H., Dereli, B., Garcia-Esparza, A. T., Reinhard, M., Shinagawa, T., Li, D., Adil, K., Tchalala, M., Kroll, T., Eddaoudi, M., Sokaras, D., Cavallo, et al
  2021; 11 (11): 6499-6509

- **Author Correction: Direct observation of coherent femtosecond solvent reorganization coupled to intramolecular electron transfer.** *Nature chemistry*
  Biasin, E., Fox, Z. W., Andersen, A., Ledbetter, K., Kjar, K. S., Alonso-Mori, R., Carlstad, J. M., Chollet, M., Gaynor, J. D., Glownia, J. M., Hong, K., Kroll, T., Lee, et al
  2021

- **Direct observation of coherent femtosecond solvent reorganization coupled to intramolecular electron transfer.** *Nature chemistry*
  Biasin, E., Fox, Z. W., Andersen, A., Ledbetter, K., Kjar, K. S., Alonso-Mori, R., Carlstad, J. M., Chollet, M., Gaynor, J. D., Glownia, J. M., Hong, K., Kroll, T., Lee, et al
  2021

- **Short-lived metal-centered excited state initiates iron-methionine photodissociation in ferrous cytochrome c.** *Nature communications*
  Reinhard, M. E., Mara, M. W., Kroll, T., Lim, H., Hadt, R. G., Alonso-Mori, R., Chollet, M., Glownia, J. M., Nelson, S., Sokaras, D., Kunnus, K., Driel, T. B., Hartsock, et al
  2021; 12 (1): 1086

- **Chemical control of competing electron transfer pathways in iron tetracyano-polypyridyl photosensitizers** *CHEMICAL SCIENCE*
  Kunnus, K., Li, L., Titus, C., Lee, S., Reinhard, M. E., Koroidov, S., Kjaer, K. S., Hong, K., Ledbetter, K., Doriese, W. B., O'Neil, G. C., Swetz, D. S., Ullom, et al
  2020; 11 (17): 4360–73

- **Chemical control of competing electron transfer pathways in iron tetracyano-polypyridyl photosensitizers.** *Chemical science*
  Kunnus, K., Li, L., Titus, C. J., Lee, S. J., Reinhard, M. E., Koroidov, S., Kjær, K. S., Hong, K., Ledbetter, K., Doriese, W. B., O'Neil, G. C., Swetz, D. S., Ullom, et al

2020; 11 (17): 4360-4373

- **Vibrational wavepacket dynamics in Fe carbene photosensitizer determined with femtosecond X-ray emission and scattering.** *Nature communications*

  Kunnus, K., Vacher, M., Harlang, T. C., Kjar, K. S., Haldrup, K., Biasin, E., van Driel, T. B., Papai, M., Chabera, P., Liu, Y., Tatsuno, H., Timm, C., Kallman, et al

  2020; 11 (1): 634

- **Excited state charge distribution and bond expansion of ferrous complexes observed with femtosecond valence-to-core x-ray emission spectroscopy** *Journal of Chemical Physics*

  Ledbetter, K., Reinhard, M. E., Kunnus, K., Gallo, A., Britz, A., Biasin, E., Glownia, J. M., Nelson, S., Van Driel, T. B., Weninger, C., Zederkof, D. B., Haldrup, K., Cordones, et al

  2020; 152

- **Excited state charge distribution and bond expansion of ferrous complexes observed with femtosecond valence-to-core x-ray emission spectroscopy.** *The Journal of chemical physics*

  Ledbetter, K. n., Reinhard, M. E., Kunnus, K. n., Gallo, A. n., Britz, A. n., Biasin, E. n., Glownia, J. M., Nelson, S. n., Van Driel, T. B., Weninger, C. n., Zederkof, D. B., Haldrup, K. n., Cordones, et al

  2020; 152 (7): 074203

- **Finding intersections between electronic excited state potential energy surfaces with simultaneous ultrafast X-ray scattering and spectroscopy.** *Chemical science*

  Kjar, K. S., Van Driel, T. B., Harlang, T. C., Kunnus, K., Biasin, E., Ledbetter, K., Hartsock, R. W., Reinhard, M. E., Koroidov, S., Li, L., Laursen, M. G., Hansen, F. B., Vester, et al

  2019; 10 (22): 5749–60

- **Solvatochromic and Ligand Effects in Ultrafast Intramolecular Electron Transfer in Fe-based Molecular Photosensitizers**

  Kunnus, K., Li, L., Reinhard, M., Koroidov, S., Kjaer, K. S., Ledbetter, K., Hong, K., Biasin, E., Cordones-Hahn, A., Gaffney, K. J.

  edited by Cerullo, G., Ogilvie, J., Kartner, F., Khalil, M., Li, R.

  E D P SCIENCES.2019

- **Hot Branching Dynamics in a Light-Harvesting Iron Carbene Complex Revealed by Ultrafast X-ray Emission Spectroscopy.** *Angewandte Chemie (International ed. in English)*

  Tatsuno, H. n., Kjaer, K. S., Kunnus, K. n., Harlang, T. C., Timm, C. n., Guo, M. n., Chàbera, P. n., Fredin, L. A., Hartsock, R. W., Reinhard, M. E., Koroidov, S. n., Li, L. n., Cordones, et al

  2019

- **Resolving structures of transition metal complex reaction intermediates with femtosecond EXAFS.** *Physical chemistry chemical physics : PCCP*

  Britz, A. n., Abraham, B. n., Biasin, E. n., van Driel, T. B., Gallo, A. n., Garcia-Esparza, A. T., Glownia, J. n., Loukianov, A. n., Nelson, S. n., Reinhard, M. n., Sokaras, D. n., Alonso-Mori, R. n.

  2019

- **Probing the Electron Accepting Orbitals of Ni-Centered Hydrogen Evolution Catalysts with Noninnocent Ligands by Ni L-Edge and S K-Edge X-ray Absorption.** *Inorganic chemistry*

  Koroidov, S., Hong, K., Kjaer, K. S., Li, L., Kunnus, K., Reinhard, M., Hartsock, R. W., Amit, D., Eisenberg, R., Pemmaraju, C. D., Gaffney, K. J., Cordones, A. A.

  2018

- **Coherent structural dynamics observed with femtosecond Fe K alpha and K beta X-ray emission spectroscopies**

  Kunnus, K., Harlang, T., Kjaer, K., Vacher, M., Vanko, G., Haldrup, K., van Driel, T., Reinhard, M., Hartsock, R., Biasin, E., Nielsen, M., Sundstrom, V., Lundberg, et al

  AMER CHEMICAL SOC.2018

- **Solvent control of charge transfer excited state relaxation pathways in [Fe(2,2 '-bipyridine)(CN)(4)](2-)** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*

  Kjaer, K. S., Kunnus, K., Harlang, T. C. B., Van Driel, T. B., Ledbetter, K., Hartsock, R. W., Reinhard, M. E., Koroidov, S., Li, L., Laursen, M. G., Biasin, E., Hansen, F. B., Vester, et al

  2018; 20 (6): 4238–49

- **Metalloprotein entatic control of ligand-metal bonds quantified by ultrafast x-ray spectroscopy** *SCIENCE*

Mara, M. W., Hadt, R. G., Reinhard, M., Kroll, T., Lim, H., Hartsock, R. W., Alonso-Mori, R., Chollet, M., Glownia, J. M., Nelson, S., Sokaras, D., Kunnus, K., Hodgson, et al

2017; 356 (6344): 1276-+

- **photoaquation Mechanism of Hexacyanoferrate(II) Ions: Ultrafast 2D UV and Transient Visible and IR Spectroscopies** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*

  Reinhard, M., Auboeck, G., Besley, N. A., Clark, I. P., Greetham, G. M., Hanson-Heine, M. W. D., Horvath, R., Murphy, T. S., Penfold, T. J., Towrie, M., George, M. W., Chergui, M.

  2017; 139 (21): 7335–47