

Jacob Kirsh

Ph.D. Student in Chemistry, admitted Autumn 2017

Publications

PUBLICATIONS

- **Critical Evaluation of Polarizable and Nonpolarizable Force Fields for Proteins Using Experimentally Derived Nitrile Electric Fields.** *Journal of the American Chemical Society*
Kirsh, J. M., Weaver, J. B., Boxer, S. G., Kozuch, J.
2024
- **Structural Characterization of Fluorescent Proteins Using Tunable Femtosecond Stimulated Raman Spectroscopy.** *International journal of molecular sciences*
Chen, C., Henderson, J. N., Ruchkin, D. A., Kirsh, J. M., Baranov, M. S., Bogdanov, A. M., Mills, J. H., Boxer, S. G., Fang, C.
2023; 24 (15)
- **Protein protic and aprotic interactions systematically mapped via IR spectroscopy and polarizable molecular dynamics**
Kirsh, J. M., Kozuch, J., Weaver, J. B., Boxer, S. G.
CELL PRESS.2023: 309A
- **Protein protic and aprotic interactions systematically mapped via IR spectroscopy and polarizable molecular dynamics.** *Biophysical journal*
Kirsh, J. M., Kozuch, J., Weaver, J. B., Boxer, S. G.
2023; 122 (3S1): 309a
- **Carbon-deuterium bonds as reporters of electric fields in solvent and protein environments.** *Biophysical journal*
Fried, S. D., Kirsh, J. M., Zheng, C., Mao, Y., Markland, T. E., Boxer, S. G.
2023; 122 (3S1): 481a
- **Carbon-deuterium bonds as reporters of electric fields in solvent and protein environments**
Fried, S. E., Kirsh, J. M., Zheng, C., Mao, Y., Markland, T. E., Boxer, S. G.
CELL PRESS.2023: 481A
- **Nitrile Infrared Intensities Characterize Electric Fields and Hydrogen Bonding in Protic, Aprotic, and Protein Environments.** *Journal of the American Chemical Society*
Weaver, J. B., Kozuch, J., Kirsh, J. M., Boxer, S. G.
2022
- **Nitrile IR intensities directly measure electric fields in protic and non-protic environments**
Weaver, J. B., Kozuch, J. A., Kirsh, J. M., Boxer, S. G.
CELL PRESS.2022: 414A