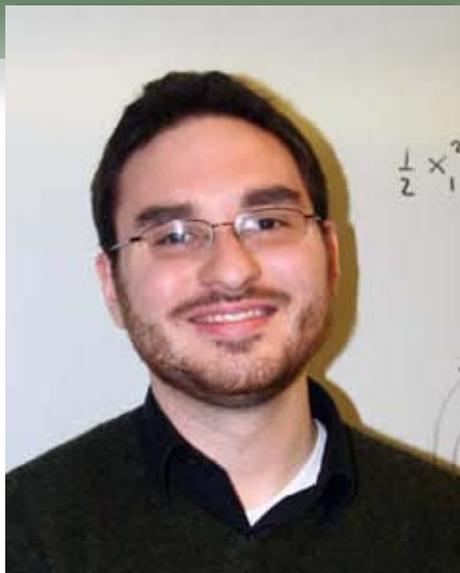


Andrew Fidler



Graduate Institution: University of Chicago

Location: Chicago, IL

Graduate Discipline: Physical Chemistry

Hometown: Rochester, Michigan

Research Interests:

The most abundant source of free energy on Earth is sunlight, which daily provides thousands of terawatts of power. Through photosynthesis, nature has found an efficient manner of converting solar radiation into utile chemical sources of energy that provide the primary source of chemical energy for life. The first process in photosynthesis is the absorption of a photon by a peripheral antenna complex and subsequently funneling this energy to the reaction center. This process is mediated by weak couplings between the many chromophores present in the antenna complexes. My research studies this initial process and aims to determine spectroscopic signatures of these weak couplings present in our experiments. To spectroscopically resolve these features we measure multidimensional correlation diagrams of the different states present in the system. Signal resulting from coupled chromophores is resolved in a distinct location on these multidimensional maps, allowing for coupling information along with energy transfer pathways to be dissected from our measurements. I am interested in what principles guide energy transfer events in complex multichromophoric systems, as well as what role coherent effects may play in these processes. To answer these types of questions I will be designing new spectroscopies capable of resolving features hidden under broad absorbance bands.

About me:

I will be starting my third year of graduate studies at the University of Chicago this fall in the department of Chemistry. Currently I am planning on continuing my studies with a postdoctoral position elsewhere with the aim to receive a tenure-track faculty position. My undergraduate studies were done at Albion College, where I majored in Chemistry and Physics with a minor in Applied Mathematics. I am a member of Phi Beta Kappa, Sigma Xi, and the American Chemical Society. In my free time I enjoy exploring the local Chicago area and spending time with my wife and two cats.



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