

John Goodfellow

“Johnny”



Graduate Institution: Stanford University

Location: Stanford, CA

Graduate Discipline: Materials Science & Engineering

Hometown: Westwood, MA

Research Interests:

I am interested in the structural and electronic processes that occur in materials on sub-picosecond timescales. These ultrafast processes have been accessible to laser spectroscopy for some time, but are only now becoming accessible to x-ray techniques, largely due to the completion of the LCLS at SLAC National Accelerator Laboratory. I hope to use the combined spatial and temporal resolution of these techniques to study carrier dynamics at the semiconductor-liquid interface in photoelectrochemical cells. In addition to their ability to probe the dynamics of novel systems, I find that synchrotrons and ultrafast lasers are an inexhaustible source of interesting physics. I am excited to learn as much as possible about their operation.

About me:

As an undergraduate I studied materials engineering, both at Brown University and during a year abroad at the University of Cambridge. I was attracted to Stanford for graduate studies, primarily by the opportunity to work at SLAC. I wanted to expand my perspective by working amongst physicists and chemists, and by participating in diverse projects, such as synchrotron beam diagnostics and THz source development, in addition to the materials science that would be my focus.

In the long term, I see myself in academia. In addition to the ability to direct cutting edge research, the prospect of teaching is appealing to me. I tend to evaluate the courses I take as much on the basis of their pedagogy as on their content. My year in Cambridge was particularly useful in exposing me to a completely different academic philosophy which I believe will inform my own teaching if I should find myself in an academic position.

In addition to promoting scientific understanding, I want to share my enthusiasm and views on the discipline. Beyond the utility that it is often associated with, I strongly believe in the ability of science to enrich everyday experience. Outside of science, my true love is music. I enjoy playing guitar and piano, and building my ever expanding CD collection.



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