

Optimization of results

In our lab, we work with laser pulses of femtosecond duration: 10-15 seconds long. Unlike normal laser light, femtosecond pulses cover a range of wavelengths (colors). We can shape a pulse by choosing when different wavelengths arrive – like choosing when the notes arrive in a song. In my research, I look for ways to intelligently choose laser pulse shapes that optimize some outcome, where this outcome can be anything from selectively breaking or exciting a molecule to producing fluorescence in tumor cells.

-Janelle Shane