2013 AAAS Science and Engineering Mass Media Fellow

Jennifer Laaser

Degree: 5th year PhD student, physical chemistry
School: University of Wisconsin-Madison
Sponsor: American Physical Society
Media Site: Milwaukee Journal-Sentinel

Research Focus: Ultrafast spectroscopy of materials and biophysical interfaces

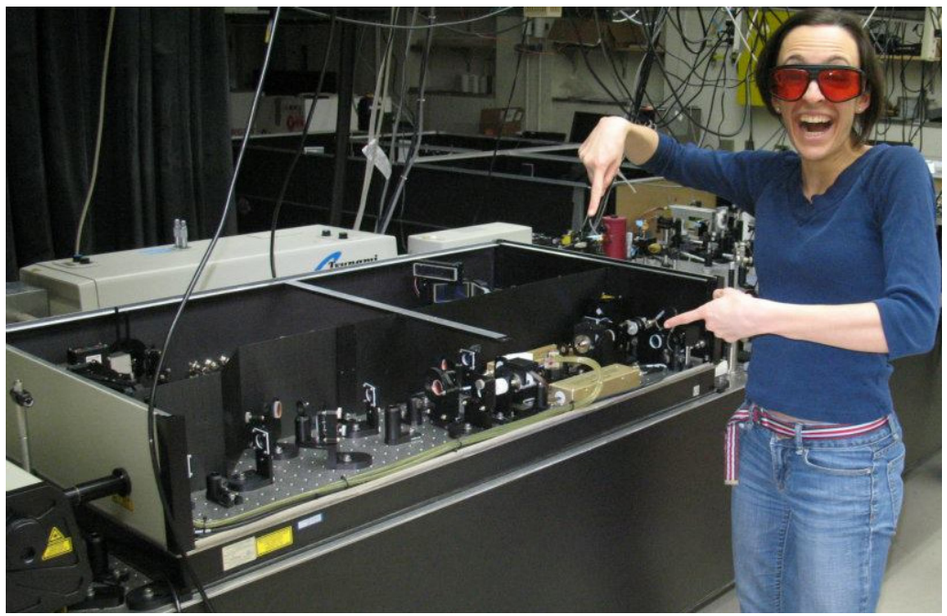
Translation: I use lasers to study how chemical reactions happen at interfaces. Some of the questions we are interested in answering, for example, are: how do electrons move in new materials for solar cells? How do proteins embedded in cell membranes change their shape under different conditions? And how do molecules stick to and interact with surfaces like battery electrodes? Studying chemistry at these types of interfaces is difficult because it happens very, very quickly, so we use pulses of laser light as a sort of incredibly short camera flash or strobe light (less than a trillionth of a second long) to "freeze" molecular motion and watch how these processes happen.

What are your goals for the summer?
My goal for the summer is to get more practice writing about science for non-scientists, to think about how to make science research relevant in a local context, and to gain some insight into how traditional media cycles work.

What are you most excited about?
I'm most excited about the chance to delve into science writing full-time, without having to make it take a back seat to work, grad school, and all the other stuff I "should" be doing!

Why are you passionate about science communication?
Well, the simplest answer is that I'm passionate about science communication because I think science is cool and I want everyone else to think it's cool too. But as a publicly funded scientist, I also feel like I have a duty to tell the public what I'm doing with their money; and I also think that understanding the basic principles of science and scientific thinking are vital skills in modern life (affecting everything from our ability to interpret the statistics in studes on climate change to understanding why our doctors shouldn't prescribe antibiotics to help us fight off a cold), so it's important to me to help people develop this sort of understanding.

Who is your favorite science communicator?
I have too many favorites to list! Maggie Koerth-Baker and Ed Yong come to mind for their explanatory writing; I admire Ed Yong for his accessible explanations of high-profile science papers, while Maggie Koerth-Baker really gets into the science behind the big news stories and public issues of the day. Recently, I've also been a big fan of astronaut Chris Hadfield - I think he's done a fantastic job of teaching science through his videos of how everyday science demos differ in orbit, but I particularly admire him because he conveys such a sense of wonder about his work, and I think that rubs off on his viewers. Hopefully he's inspired some new young scientists among his YouTube & Twitter audiences!



> "...understanding the basic principles of science and scientific thinking are vital skills in modern life..."

Do you have a link to an article you'd like to share?
Sure - here's a research highlight I wrote for UW-Madison's student newspaper last fall: http://host.madison.com/daily-cardinal/science/floppiness-helps-explain-margination-of-blood-cells/article_825e0ece-0784-11e2-956d-0019bb2963f4.html.

Describe your dream job.
Oh, that one's hard. If I could do *anything*, I'd be an astronaut, or a photographer for something like National Geographic. But more realistically, I'd like to work to promote science outreach and science communication by members of the research community. I expect that I'll probably do that "from within", and will pursue a research career with an emphasis on helping other scientists become better, more involved communicators, but who knows. We'll see where I end up!

Tell us about something you do outside of the lab.
I love to cook and bake, am an enthusiastic amateur photographer, and can often be found playing frisbee when the weather is nice. But my favorite things to do is dance. I started taking ballet classes when I was four years old, and I've been dancing & performing ever since.

Anything else you'd like to share?
My favorite colors are purple and teal, while my favorite color of laser light is 800 nm (yes, I have a favorite color of laser light). I'm a big fan of pineapple lifesavers. When I was an undergrad, I accidentally burned a hole in a computer screen with a high-power laser. Ooops?