

A Conversation with Nathan Allen

Andrea Widener

Industry chemist Nathan Allen spends his spare time creating a place for open, civil debate about science online.

It all started when Nathan Allen was stuck in the lab, babysitting his experiments for hours at a time. The 10- or 15-minute blocks between checking on his reactions weren't long enough to dig into anything substantial. Instead, he recalls, "I posted snarky comments on the internet, which you can do in 5 minutes."

Soon, Allen was answering science questions on the Web site Reddit, where he saw people being led astray by bad science.

Now Allen, 42, is one of the most powerful science communicators in the U.S. as head moderator of Reddit's science community, called the [science subreddit](#). The science subreddit has almost 18 million subscribers and is growing by the equivalent of the *Chicago Tribune's* print circulation—about 500,000—every month.

By day, Allen is a synthetic organic chemist at Millipore-Sigma in Milwaukee, where he lives with his wife and two daughters, two and five years old. Leading the science subreddit is a volunteer position he does on the side.

And Allen keeps doing it because he feels passionately that more scientists—especially chemists—should be making sure science is fairly represented on the Internet and in the larger world.

"If scientists are not representing themselves, nobody will represent us for us", he says. "We need to show people how great the work we're doing in chemistry is. It's not all men in lab coats pouring things from one beaker to another—even though that's absolutely me."

Exposure is especially important in places like Reddit, a self-governed online community where people share and comment on news stories, press releases, and other content. Stories that are a hit on Reddit can be seen by tens of millions of people.

The site is popular with people in the 15- to 30-year-old demographic, which is why it should be important to



Credit: Courtesy of Nathan Allen

scientists, Allen says. "This is one of the places where young people get their view of the world. If there isn't a responsible presentation of it, what happens? Maybe bad things."

While many parts of Reddit have a surly reputation, the science subreddit is a more civil place, and that's by design. When Allen started as head moderator in 2012, the subreddit was a mess. "All of the comments were just jokes and memes and people having flame wars and people pushing their wing-nut agendas", he remembers.

That's when Allen enlisted his fellow moderators to make the conversation more welcoming. "Censorship is not just Big Brother saying you can't say something. Censorship is also the extremes yelling at each other and civil people not wanting to get into the emotional fistfight", Allen says. "We want the 80% in the middle to be able to have a civil conversation about an issue."

The moderators started their crackdown with discussions about climate change. The main rule: You can disagree without being disagreeable.

Published: December 7, 2017

Allen set up a computer program to automatically delete posts with language that the moderators decided is inflammatory or degrading. They also recruited “flaired” users—those whose credentials are verified by the moderators and posted next to their user name—to keep things civil. Of the nearly 6,000 flaired users on the science subreddit, 25% have Ph.D.s and another 20% are graduate students. Just one knowledgeable person can “lift the level of discussion and focus it on the facts and the science”, Allen says.

Those changes have earned Allen some haters, but he’s grown a thicker skin. “It used to be that someone calling me ‘Hitler’ was upsetting. Now it’s just Thursday.”

Given the difficulties, friends wonder what keeps him going. “Why am I doing it? It needs to be done. I’ve always had this streak in me to do the responsible thing.”

Allen got that sense of moral obligation from his father, an Episcopal minister. His father was leading a parish in a small Iowa town when the Mexican immigrant population there ballooned because of jobs at a local meat packing plant. When the town’s Catholic church refused to start a Spanish service, Allen’s father learned Spanish and started one at his church instead.

After that, residents showed their anger with stunts such as doing doughnuts with their cars on the family’s front yard. Allen learned that “just because somebody’s going to try to bully you”, you can’t not do the right thing.

Allen struggled with school as a child, and his parents found out he had dyslexia when he was in elementary school. However, at the time, the 1980s, his parents didn’t believe there was anything they could do to help. “They said, ‘He’s not falling behind. We’ll leave well enough alone.’” Allen didn’t learn about his diagnosis until he had already completed his Ph.D.

Looking back, though, he realizes, “I was working way harder than all the other kids. I just thought I was defective.”

Allen came to love chemistry through an enthusiastic high school teacher. “It just made sense and it explained so much. That’s what I was craving. How do you explain the way the world works?”

Chemistry was also a good fit for his dyslexia because much of the discipline is using basic principles to visualize chemical reactions. In structural chemistry in particular, “we talk with pictures. The only text is the atomic models.”

Helping young people also find a career that is right for them is, in part, why Allen launched the science subreddit’s Ask Me Anything (AMA) series. Scientists who participate in AMAs field questions on everything from their research to their laboratories to their career paths.

The AMAs have been huge successes—the science subreddit hosts over 400 a year. “One person commented that he was more excited about doing an AMA than he was about getting published in *Science*”, Allen says. “That should be eye-opening.”

He understands that scientists are wary of answering questions from the public, but “we need to represent science as it is. Otherwise, the general public thinks that scientists are in one cabal, when that could not be further from the truth.”

“We’re a bickering, angry little family”, he says. Thanksgiving at the scientists’ house would consist of people yelling, “You’re a fool. Let me tell you how smart I am.” On the science subreddit, Allen’s goal is that “people get to see the arguments and debate that scientists actually have on a subject.”

He wants to ensure scientists that, at least on the science subreddit, “you can have a civil conversation. You will not be attacked. You can ask questions.” But if you waffle or try to cover up the truth, “that will go very badly because people will call you out on it.”

Allen has had a hard time getting industrial chemists to participate because of their concerns about revealing company research. “It’s a big part of the chemistry population that has been silenced”, he says.

The public would love to learn more about the chemistry of, say, their dishwasher detergent, but that’s not happening. “There has for 50 years been a gag order on scientists in industry not to talk about their research. Why?”

The result is that chemists and the industry they work for get defined by their critics. In extreme cases, chemists are portrayed as people willing to poison the public for profit. It’s up to chemists to show that’s not the case, Allen says. “We care deeply about the safety and health of our products. We use them. Our families use them. Our children use them.”

Allen knows advocating for industry science might not be popular with everyone. “It is weird that I’m standing up for scientists, which are one of the highest esteemed groups in society, and for the chemical industry, which is powerful in society”, he says.

“They have a lot of money, but in the court of public opinion that doesn’t matter.”

Andrea Widener is a senior editor at [Chemical & Engineering News](#), the weekly newsmagazine of the American Chemical Society. A version of this story appeared in [C&EN](#).