

A Scientist's Guide to Social Media



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“Can you post that on Twitter?”

“I would if I knew how to ... uh ... tweet? I have no idea how to do that.”

This conversation happened a little over two years ago during the Q&A session at the end of a talk I had given. A colleague was asking me to post a link to a resource I had mentioned in my talk. Yes, that's correct—the second person in the conversation was me.

A few months after that exchange, I did learn how to tweet, but only out of necessity to spread the word about a unique postdoctoral position for which my group was recruiting applicants. My social media experience since then has been filled with adventure (and sometimes misadventure), and it does take up a small portion of my day. However, I cannot imagine not having the knowledge, friendships, and opportunities that have resulted directly from my interactions on Twitter over the past several months. These interactions have introduced me to whole fields of research, fostered new collaborations, and enabled me to join the national and global dialogue around issues in science and academia that directly impact our lives. And, my experience is not unusual—I reached out via Twitter to ask other scientists how they have benefitted from the platform. While their answers are diverse, the common themes emerge of getting to know other scientists, sharing their research and learning about the work of others, having their voice amplified by connecting to journalists and other media outlets, and building a support network to thrive in the midst of the struggles that we all face in academia. And, many people commented that while their first interaction with someone might have been electronic, this often catalyzed an in-person connection at a conference or meeting that would not have happened otherwise. Perhaps most convincingly, my request drew over 400 comments (more than almost anything else I've posted!), so while the reasons why scientists love Twitter are quite varied, the enthusiasm to share those benefits with others runs deep.



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Replying to @jenheemstra

Science Twitter is a huge multidisciplinary, international science meeting that never ends. Cutting edge data get discussed, tips shared, advice & mentoring offered. Thought leaders current & future can meet easily. Everything from science & society to sandwiches are fair game.

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Given all of these benefits, it's hard to make a case for not being on social media, especially since you get to control how much time to put into it. So, whether you're in the same position I was two years ago—thinking, “I know that I should join, but I have no idea how to start”—or if you've been on social media for a while and are seeing the benefits it has to offer, I hope you keep reading! While social media platforms may feel intimidating, confusing, or just not worth your time, my hope is to convince you that you can wade in slowly, learn quickly, and make it worth the effort.

“Too many apps!”

Perhaps the most significant challenge for many of us as we think about engaging on social media is just choosing the right platform (or “app”) or thinking that we have to manage all of them simultaneously. In reality, you can make this as simple or as complex as you want it to be. Below, I outline some of the most popular social media platforms and make a case for why, as scientists and academics, “engaging on social media” usually means joining Twitter.

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- *Facebook*. This may be the site that you are most familiar with. It offers the chance to share thoughts, photos, and videos with your network of friends and family. While there is an option to make all of your posts public, few people do this.
- *Instagram*. When you see someone at a scenic venue posing for photos and trying to get the shot “just right,” chances are they are posting to Instagram. This platform is all about the photos, though it does also allow for sharing of written posts.
- *LinkedIn*. This is intended to be the go-to site for professional connections, and it is great for building and maintaining your network. Like Facebook, you generally only see content from people you have mutually agreed to connect with. LinkedIn is especially important if you are in industry, while academics tend to be less active there.
- *Twitter*. Twitter is all about going fast and having a big reach. Posts are limited to 280 characters, and you can include photos or videos if you choose. While privacy options are similar to other platforms, most people on Twitter choose to have a public account, which means that posts can easily reach new audiences or even go viral. And, as my 11 year old son pointed out to me (while helping me edit this article), people tend to use other social media platforms to highlight only their best or happiest moments, whereas Twitter posts are often more authentic and balanced.

So, why is Twitter arguably the main place for academics, at least right now? Timing and chance probably play a role in this, but from my own experience, it's the reach of Twitter that makes it most useful, and thus most popular. On other social media platforms, we generally only see content from people we follow, and our content is only seen by those who follow us. That's perfect if we want to update our friends and family on important milestones in our lives or share our vacation photos. However, if our goal is to connect with a broader community to expand our knowledge and disseminate our ideas, then we need more exposure. Twitter provides that. On Twitter, you can still follow people and be followed by them, but the “retweet” function acts as a megaphone to broadcast your message to a bigger audience. If someone you follow sees an interesting post and retweets it, you will see it even if you don't follow the person who wrote it. Similarly, if one of your posts is retweeted (or even just “liked”), it will be seen by people who don't (yet) follow you. It's possible for your message to be viewed by orders of magnitude more people than you are officially connected to, and that's powerful. This can be especially important if you

are an “only” in your academic community, as the reach of Twitter can help you find and connect with others who are like you and as a result feel less isolated and alone.



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For academics who don't see facets of themselves reflected by faculties and studentships around them (whether that's gender, ability, skin color, sexuality, background), Twitter has the unique experiences of marginalization covered. It's nice to find community and not feel alone.

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One important thing to consider as you engage on social media is whether you want to keep your personal and professional lives separate, or whether you are comfortable blending them. This is unique to each person, and your answer may change over time. In a practical sense, you can manage this by either using different social media platforms for different purposes, or by having separate personal and professional accounts on a single platform. I find that I struggle to pay attention to more than one platform, so Twitter is my current go-to. And, as I'll discuss below, I'm comfortable posting both professional and personal content, so this approach works well for me. I do still have Facebook and Instagram on my phone, but they each serve a very specific and limited purpose. Many of my family members are not on Twitter, so I occasionally use Facebook to share photos of my kids. My Instagram is almost exclusively dedicated to photos of rock climbing and other outdoor sports—scrolling through that feed motivates me to get out there and crush it at my recreational activities. But, I rarely open those apps more than once a week.

“What's a hashtag?”

As you read the word “Twitter” above, you may be thinking “I know that's where the academics are, but it's just so confusing!” I feel your pain. I'm still learning, too. Yes, there are hashtags ... and retweets ... and mentions ... and all of that can be kind of confusing at first. The good news is that, as scientists, we're trained to learn new things and deal with complexity. You can do this. The key is to view it as an experiment. As with any new research project you might want to start, you gain a bit of knowledge, make a plan, then dive in. You don't wait until you have all of the answers before running an experiment in the lab. Rather, the purpose of the experiment is to help you gain knowledge and eventually arrive at the answer. Similarly, you don't need to understand much about Twitter in order to join and start

engaging. And, just as you'll have some failed experiments in every research project, you'll probably make some mistakes as you figure out social media. But, you'll keep learning and eventually become an expert.



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Replying to @jenheemstra

Will give you my perspective as a journalist: You can tweet your paper for your peers, and you can *also* tweet it for me--if done right, you're providing context in an accessible way & raising the profile of your research. Have found many sources and fodder for stories here.
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Ready to get started? Download the app on your phone or tablet, or navigate to the Web site, and create an account—you're officially on Twitter! A good first step after doing this is to populate your bio and follow a few people. As you'll notice, on Twitter you have a few main pages: (1) your bio page, which is your space to tell people about yourself and will be populated with the things that you post, (2) your "feed," which is comprised of other people's posts (and will be populated by people you follow once you start following them), (3) your notifications where you'll see if people like, retweet, or comment on your posts, and (4) your direct messages (or "DMs") which functions similar to text messaging and allows you to chat privately with people. The best place to start is your bio page. When you create your account, you'll have chosen a name and a "handle" (this is what follows the "@" symbol). An important thing to know is that you can change these whenever you want. The only limitation is that your handle must be unique, so if you have one that you love and you give it up, you might not get it back. It's up to you whether you want to stick to just using your name (or a variation on it) or whether you want to be more creative. As you can see from my Twitter, I am not among the creative.

Next, you want to create a bio. This is your chance to tell others a little bit about you. This can include information about your research area, where you work, why you're on Twitter, and your hobbies and interests. You can change this as often as you like, so don't worry about getting it perfect. Finally, you get to upload two different photos or images—your "bio photo" that will appear with every post that you write and your "banner photo" that people will see when they navigate to your bio page. There are few rules when it comes to the photos you choose. Bio images range from headshot photos to cartoon avatars to other fun graphics. Similarly, your banner photo can be anything that you think

represents what you care about, or just something you think is fun or pretty. Many scientists use an image from their research or a picture of their university, while others use an image of a favorite quote or a photo of somewhere that is special to them. In general, you want to change your bio photo less frequently, as this is what helps people recognize your posts, but you can change your banner photo as often as you like.

Once your bio is set up, it's time to start following people! You can do this before your bio is complete, but people will be much more likely to follow you back if you have at least a photo and a little bit of information about yourself. There are many ways to figure out who to follow. The approach I suggest is to first search for people you know and follow them. You can then go to their bio page and click on the "X following" text and you'll see a list of who they follow. From that list, a button will be available to follow any of those people you would like to. You can also search for journals or professional societies (including @AmerChemSociety and @ACSCentSci) and repeat this process. As you meet new people at conferences or meetings who are also on Twitter, you can follow them in order to stay in touch and continue to build a relationship. As you follow more people, you'll notice how they have crafted their bio—make note of what you like and don't like. Occasionally revisit your bio and update it based on what you've learned.

Once you follow a few people, your feed will start to populate with posts that they have created, retweeted, or liked. This is how you can find new people who you might want to follow. If you see a post you like from someone you don't know, you can click on their name to visit their bio, view the type of content they typically post, and decide whether you want to follow them. As you navigate Twitter, it's important to remember that you are the one who curates the content that you see in your feed. If you're dissatisfied with the tone or attitudes of what you are reading, then it is probably time to stop following (or at least mute) some people and start following others.

As you become active on Twitter, there will be people you don't know who choose to follow you. It is up to you whether or not you want to follow them back—it's certainly not required or expected. This is also an area where some people get intimidated by Twitter. Most of the people or organizations who follow you will be those that have similar interests, but there are some strange accounts out there. If someone follows you and you are not comfortable with who they are based on their bio, you can choose to block them. However, it is important to know that unlike many other situations where you are judged by the company you

keep, this is only half true on Twitter. People may form opinions about you based on who you follow, but they know that who follows you is largely outside of your control and doesn't reflect upon you or your values.

You might be thinking: "Wait ... I've read all of this and you still haven't told me what a hashtag is!" That's because while hashtags were initially a signature part of Twitter, they are not very widely used anymore. That doesn't mean that they are not useful, however. Hashtags allow you to "tag" your post with the topics that it covers so that others can track content around that topic. Examples of this include #RealTimeChem for stories of chemistry in real life and #PhDchat for advice on how to thrive in graduate school. Hashtags can also be useful in the context of conferences and other events. If everyone posting about that conference uses the same hashtag, then you can filter and view all of those Tweets to get a snapshot of what is happening. In addition to learning about the conference, this can be a great way to see who else from Twitter is there so that you can try to connect in person.



Time to engage!

It's perfectly okay to use Twitter solely to view posts and learn from others, but it becomes a much more rewarding experience if you are willing to engage with people. While this may feel intimidating, the good news is that you can start slow and wade in. Below is a list of what I consider to be the five main levels of engagement. If you're unsure of how to use Twitter, you can progress through these in order. Or, if you're feeling adventurous, you can dive right in at level five.

Like

This is the heart button, which you'll be familiar with if you spend time on other social media platforms. Liking a post is a nice way to show that person that you support their message, and if you let Twitter create the order of your feed for you, it will prioritize posts from the accounts that you give likes to most often. So, using the like button can be a great way to curate the type of content that you want to see. One difference between Twitter and other platforms is that

people will be able to see which posts you "like," so people are overall more conservative with doling out this social currency.

Retweet

This is the double arrow button just to the left of the heart. When you retweet something, that exact post will show up on your bio page and go into the feed of everyone who follows you. This is a great way to amplify content that you agree with or think will be of interest to others.

Comment

This is the word cloud button on the far left. Similar to other platforms, you can use this to reply to someone, show your support, or add to the conversation. If you're not sure what to say, it's perfectly okay to reply with only an emoji or gif.

Retweet with comment

This option is found when you hit the retweet button. In this case, you will be creating a new post from your account, but the post you are retweeting will show up as part of that. This option is useful if you want to share a post from someone else but want to add your own thoughts along with it.

Post

You've got something to say and you want to say it! From your feed or bio page, click on the blue circle in the lower right corner to craft a tweet. This will appear on your bio page and in the feed of everyone who follows you.

As I mentioned earlier, posts on Twitter are limited to 280 characters, so it is a great chance to embrace Shakespeare's advice that "brevity is the soul of wit." In fact, many people who commented on the benefits of Twitter mentioned how it has honed their ability to communicate science in a clear and concise way. There are times, however, when you just can't say all you want to in that limited space. In those cases, you have the option to create a "thread." To do this, post a tweet then hit the comment button and add another. Repeat until your message is complete.

When you post, you'll notice that you can add hyperlinks, photos, or gifs along with the text. This can be especially useful if you are posting about research—a good practice is to include the link to the article and use the photo option to



add an image from the paper. But, you'll figure all of that out as you explore and learn!

What's your message?

Many social media guides say that, before starting, you should carefully craft the "message" that you want to convey to the world through your posts. This is one place where I'll disagree. First, it's hard to know what you want to use the platform for until you dive in and start experiencing it. Second, it's easy to change your message over time, as you can always delete posts and people's memory of what you've posted will be relatively short. Third, there are many people I know who very successfully use Twitter and would say that they don't even have a specific message—they just post what interests them in that moment.

As I admitted above, I first became active on Twitter for the sole purpose of advertising a postdoc position. However, as I started to scroll through my feed, I noticed the ongoing dialogue on issues surrounding mentoring, diversity and inclusion, and academic culture. Over time, I recognized that I had something to say on these topics, and I decided to start saying it. I also recognized the importance of faculty being portrayed as real people with real lives and real struggles. So, I started occasionally posting my own personal stories and vacation photos (with the #ProfLife hashtag). Finally, I'm a scientist, so I love to post about research as well! Together, these elements comprise my message, but that changes over time depending on where I'm at and what's on my mind. Perhaps the only rule about crafting your message is be authentic. There is only one you, and the world becomes a better place when you let your real self shine through.



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Replying to @jenheemstra

1. Networking! i've been introduced to some really amazing folks that i probably wouldn't have had the opportunity to meet otherwise

2. SUPPORT 🙌 it means a LOT to me to have the opportunity to hype people up, and in turn, they've helped me in so many ways! (like stats and ICP)

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I never set out with the intention to network or meet new people through Twitter. However, as I started to share my thoughts and engage with other people through their posts, I found myself drawn in and embraced by a community that I hadn't even known existed. Being part of this community

has opened my eyes to new perspectives and advice, and even created some unique and exciting opportunities that I never would have found otherwise. I hope this perspective has convinced you that it's worth giving Twitter a try and provided you with the information you need to get started. There's a whole world of ideas and connections waiting for you!

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Notes

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Biography

Jennifer M. Heemstra is an Associate Professor of Chemistry at Emory University who shares advice on Twitter @jenheemstra. Find all her columns for C&EN and ask her questions at <https://cenm.ag/officehours>.