

By Julian G. West

Fortune favors the well read

“You found that in what journal?” My adviser, sitting across the desk from me as we discussed my next research project, raised his eyebrows in surprise. We had recently finished my first project and realized that our methods had some limitations. We needed to redesign our experiments, so I had done a lot of thinking and reading and had collected some preliminary results on new approaches. And based on some surprising sources, I had come up with an unusual proposal for advancing past the obstacles we had encountered.

“Actually, two journals,” I replied somewhat sheepishly, *“Inorganic Chemistry and The Journal of Physical Chemistry.”* We are organic chemists, and although the difference between our field and those represented by these two journals may seem small to a nonchemist, to specialists they are practically different planets. Neither of these journals is usually found near the desk of a card-carrying organic chemist—yet here we were discussing these two papers, the more recent of which was published 2 decades ago.

“I know that this sounds crazy,” I continued, “but look at the reactivity that they saw.” We craned our heads over the printouts. The authors of these papers had given little thought to whether their results had much bearing on our field—they weren’t organic chemists, after all. However, being good scientists, they had made copious observations during their experiments, and sure enough, some had interesting implications for our studies. “I see what you mean,” my adviser said, “but I don’t know how you find these papers.”

The answer is pretty simple: I aggressively curate and monitor the notifications I receive about newly published papers, and I read those that strike my interest, even if they’re not directly related to my research. Then, if I find an interesting string of references in a paper I’m reading, I’ll follow where it leads. That’s how I found my way to those decades-old papers. Chemistry also has a small but vibrant blogging community, and sometimes a thoughtful post highlighting a recent paper will start me on one of my literature dives. If I find that many of these references come from the same source—*Inorganic Chemistry*, for example—I’ll add it to the stable of journals that I follow.

Perhaps the bigger question is why I make the effort. The short answer is that I read widely to prepare myself



“I read widely to prepare myself for whatever might come along in the lab.”

for whatever might come along in the lab. My biggest fear is the one that got away, the important discovery that I missed because I couldn’t see it for what it was. It’s this fear that drives me to cast my intellectual net widely, so that I have the broad foundation I need to see my research from multiple angles. Given the limited number of hours in each day, it can be tempting to read only in my sub-discipline, but I know that doing so would ultimately limit the kinds of connections I can draw. Fortune favors the prepared mind, as Louis Pasteur famously said to explain his scientific success, and I am doing my best to be prepared.

That conversation with my adviser was a few years ago. The intellectual leap inspired by those

old papers enabled me to finish and publish my project, and I am now wrapping up my Ph.D. studies. As I look back on my graduate career, I realize that it’s been replete with these sorts of situations. Time and time again, strange observations in the lab reminded me of a paper I had read in some far-out journal, or a seemingly irrelevant visiting speaker’s talk suddenly led me to understand a result that had been bugging me for weeks. These are my favorite moments in research; the thrill of finally fitting disparate pieces together is tough to beat.

One of the new first-year students in our department recently asked me for advice on making it through graduate studies. I typically find that type of vague question tough to answer succinctly, but this one was easy: Read widely and voraciously. Fortune doesn’t come every day, but when it does, you will be prepared to make the most of it. ■

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Science **355** (6329), 1090. [doi: 10.1126/science.355.6329.1090]

Editor's Summary

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