

Jie Cheng is a student in the Faculty of Science, researching carbonates, environmental geochemistry, and carbon sequestration. Her image *The laboratory synthesized Mg-carbonates from the amorphous phase under high temperature* is featured on the front cover of this issue.

“ I’m in my fourth year of Environmental Earth Science. I was born and raised in Shanghai, China. Never thought of studying abroad when I was little. It did take me a lot of courage. But here I am, an international student at the U of A. When I’m not busy with school and research, I like to stay home, read books, and watch films. But personally, the best thing to do at home is baking!

Other than this field, what is another discipline you see yourself working in?

Maybe chemistry. I always have so much fun studying chemistry.

What was your experience entering research?

I actually got lucky. When I was reviewing for my Mineralogy final, I noticed on the second last slide of the last lecture that the professor was looking for a research assistant for her lab. I was kind of surprised when I first saw that slide, and I wasn’t sure if I was qualified. But when I asked her about it later, she said “yes”. Just for reference, my grade for that class was an A+, and maybe that matters. Honestly, getting into research is not hard in the Department of Earth and Atmospheric Sciences. The undergraduate administrator let us know of research opportunities through emails, and some professors stuck a piece of paper on the door of the lab room to recruit student research assistants. So, my advice for students is: Actively look for the opportunities out there, instead of waiting for someone to hand it to you.

What inspires you in doing your research?

I am inspired because I want to do something environmental-related. I became an environmentalist many years ago after watching a documentary criticizing the pollution problem. I plan to pursue a career in science. I’m not sure about the details yet, but it will definitely be about carbon sequestration or remediation of groundwater contamination.

What do you think about the ‘publish or perish’ attitude in science?

Well, I guess we have to treat this from two perspectives. There’s no doubt that it puts pressure on us students and on almost every single person who wants to do well in research. Publications are the business cards of scientists. So, many of us aim to publish as much as possible. Because of that, some might prefer short-term studies instead of spending years and years focusing on a single research question, and validation tests are sometimes omitted. But another reason is probably because no results and no publications mean no funding. But sometimes, peer pressure and competition become motivation for working harder and being more self-regulating. Publications and impact factor are also a more quantitative way to assess and understand the ability of researchers.

What was your favorite undergraduate lecture?

My favorite lecture from Mineralogy on heterogeneous nucleation. Simply speaking, heterogeneous nucleation is the nucleation that happens on a surface rather than occurring randomly. In that lecture, the professor, my current supervisor, brought a petri dish into the class and asked somebody to scratch the plate—the volunteer made a tic-tac-toe grid. Then, she poured a solution into the plate. We thought the crystals would form the shape of the tic-tac-toe, but it did not! The petri dish is still in my current lab, and every time I wash it, I find it hilarious. Sorry if the story doesn’t sound interesting, I’m bad at storytelling.

What’s one piece of advice that has stuck with you and you would give to other student researchers?

Sort out the data and write your notes right after finishing the experiment. I tend to procrastinate a lot and always leave things to do later. Sometimes, the tasks accumulate and become overwhelming, and I end up having trouble remembering my earlier thoughts.