Featuring a compilation of career articles that will put you on a path to success

Special Supplement
Letter from the Editor

Every time I stroll through poster sessions at ACS meetings, I’m amazed by the undeniable passion and energy students bring to presenting their research and successes through their ACS student chapters. I’ll never forget one student you’d least expect to be at a chemistry conference, because she didn’t grow up loving science. I asked her what drove her to study chemistry, and she told me it all happened in a psychology course. The class was studying synapses, and the text mentioned how signals occur through chemical mechanisms. But it didn’t explain how. She was intrigued, and like any scientist at heart, she had to get her brain around how it was possible. So she signed up for a chemistry course and, lo and behold, she fell in love with chemistry.

When I met her in 2016, she was highly active as president of her ACS student chapter. She had led many volunteer activities, was excelling in her courses, was planning for graduate school, and she was full of hope for a successful career in chemistry. I wish I knew where her passion ultimately led her, but I have no doubt that because of her volunteer experiences in her ACS student chapter and her deep motivation to learn she is well on her way to a successful career.

That’s what this special supplement is all about—exposing how what you do today will prepare you for the next chapter in your life. The story on volunteering uncovers the many ways you can showcase professional skills on a résumé that you develop from doing community work. A special profile of cosmetic chemist Dr. Amber Evans’s journey from pharmaceutical science to cosmetic chemistry is a prime example of how staying true to what you are passionate about will point you in the right direction toward a fulfilling career. And there is loads of practical advice for marketing yourself on your résumé, networking online, and dressing professionally.

I hope the experiences you read about and the career tips you learn will contribute to the foundation you’re already creating in college for a fruitful science career.

Natasha Bruce
inChemistry Editor-in-chief
Career Profile

Dr. Amber Evans

Working at the intersection of chemistry and personal care.

Volunteering = Résumé Gold

Make your résumé shine with volunteer experience.

Industrial Résumé Mistakes to Avoid

New job, tight budget? No problem.

Learn how to dress professionally without breaking the bank.
Refresh your résumé. Your résumé is your single most important professional document. It is your marketing tool, where you present yourself to potential employers in the best possible light. In many cases, it is the first impression an employer has of you. You’ve probably been using the same résumé for a long time, updating it in bits and pieces as your situation changes. Now is the time to take a fresh, critical look at the overall picture.

» Verify that everything is up-to-date and current. Are all of your most relevant skills included?

» Look at the overall impression your résumé gives. At this stage, you should remove some of your extracurricular activities from high school, especially ones that are not relevant to your career.

» Make sure your strongest selling points are up front and quantify accomplishments where possible. You may need to reorganize the sections, update the headers, and rewrite points about your experience to reflect your recent accomplishments. For example, instead of “Experience with HPLC,” it is better to explain your accomplishment with a more comprehensive statement, such as “Analyzed 25 samples per week using HPLC, including performing routine maintenance and upgrades to equipment.”

» Create the best possible basic résumé, then customize it for each position. Your résumé will be one page, or two at most, so make every line count.

Author
Lisa M. Balbes has been a freelance technical writer and editor at Balbes Consultants LLC for more than 20 years. She is the author of Nontraditional Careers for Chemists: New Formulas in Chemistry.
Create a LinkedIn profile.

Your professional profile on LinkedIn is the first place most industrial employers go to look for candidates. If you don’t have an account yet, sign up. Be sure to:

» Copy and paste content from your now-awesome résumé into the appropriate sections of your LinkedIn profile.

» Include a photo—a nice headshot with a plain background (no selfies).

» Include all the professional skills (and keywords) that are relevant to the type of job you are searching for, and make sure they are consistent with what’s on your résumé. Don’t advertise only your analytical chemistry skills on LinkedIn, and then send a résumé selling your organic chemistry knowledge. Employers like a coherent story.

» Use your LinkedIn profile to go beyond what’s on your résumé. By joining groups and participating in discussions, and including links to your own blog and publications, you can expand the reach of your profile.

Take one bite at a time. The only way to eat an elephant is one bite at a time. Make it a priority to spend one hour every day working on your job search. Go someplace where your friends can’t find you, turn your phone off, and make real progress on your search. You don’t have to do everything today, but you have to do some work to accomplish your goal.

Perfect your intro speech.

When you are interviewing for a position, it is imperative to be prepared. Practice—out loud—your two- or three-sentence response to the questions, “Who are you?” and “What kind of a job are you looking for?”

Describe not only what you are doing now but where you want to go. For example, “My name is Alex James, and I am about to graduate from Big State University with a B.S. in chemistry. I especially enjoyed my undergraduate research project conducting HPLC analysis of over 50 steroid analogs, and I’m currently seeking an industrial position that will let me expand my skills in this area.”

If you give people enough information so they know what you’re looking for, you can turn your entire network into job search agents.
Organize your contacts list.

Start a database, spreadsheet, text document, Google Doc, or whatever format works for you to track all your networking contacts and job leads. Meticulously record:

» Names of people you contact
» Dates the contacts were made
» Conversation topics
» Information gleaned from the conversation
» New job leads
» Anything you might have promised to them, and the due date

Once you have recorded this information, use the document to follow up with all available leads. This can be especially helpful when your contact Victoria suggests you call her contact James. If you documented the conversation, you can contact Victoria afterward and let her know how the conversation went and how much you appreciate the lead.

Create another document to track jobs you have applied for or might want to apply for. Again, keep track of how you heard about the position, who you know at that company, when you applied, which version of your résumé you sent them, and so on. When you meet someone new, you can quickly recall if you have applied to their company and the position you are seeking.

Expand your contacts list.

Possible sources of new contacts could include:

» Current and former employers, teachers, co-workers
» Current and former classmates
» Speakers who presented on campus and audience members at their presentations
» Fellow volunteers at science outreach activities
» Friends from social clubs and other campus activities
» Scientific recruiters

Think back through your professional history and identify people with whom you’ve lost touch. Use LinkedIn and other tools to reconnect to rebuild those relationships. Ideally, you will have an in-person conversation, and even a short phone call is better than an e-mail exchange, but whatever they have time for is better than nothing. You can ask for ideas for possible career paths, information about organizations, and especially for introductions to other people.

Recruiters and staffing agencies can be a good way for new graduates to get a first position because they use their professional network on your behalf; however, their primary focus is to fill the position, not to find you a job.

Update your references.

Keep a references list of the names and contact information for three people who know you well and will speak well of you to potential employers. Make sure to touch base with them regularly. Updating your references on your job search progress is a perfect way to work on making progress so you will have something to tell them.

“Thanks for the update on your job search!”
Be where the chemists are.

Put yourself anywhere that your fellow professional chemists will be. Seminars, student chapter meetings, ACS national and regional meetings, ACS local section meetings... even science nights at local pubs, science museums, and science cafés can be great places to meet fellow scientists and learn about the job market.

If you are going to volunteer, why not do it strategically? Find the student chapter or local section near you (webapps.acs.org/lslookup) and ask to help with any of their activities, such as science fairs, tutoring, or outreach events. Volunteering with your fellow professionals showcases your passion for science and your work ethic. (Read “How Volunteering Helps You Build Your Résumé” on inchemistry.acs.org).

In summary, don’t panic just because you don’t have a position lined up. There are many things you can do to make yourself more visible and attractive to employers. The key is to start now, make a plan, and continue working every day.

Research job listing sites. Using “chem” or “scient” will find many openings, often for jobs you’ve never heard of. Ignore the job titles and focus on the descriptions. Learn what skills employers are looking for and identify keywords to use in your résumé and in future searches. Sites to start searching include C&EN Jobs, Indeed, LinkUp, and LinkedIn.

Browse company websites. Study the websites of companies in your local area that hire chemists. Read press releases about new areas of expansion and marketing literature about new products, and sign up for alerts about new information. Will they need people to support their new efforts? Do they sponsor lectures or outreach events where you might meet some of their employees?

You can also inquire about career fairs, where employers come on campus to interview students. The fair may be school-wide or focus on a specific department. If there are none at your school, check nearby schools and ask if you can attend their career fair.

Learn a new skill. It is never too late to learn something new. Look at the skills required for the jobs you’re interested in, determine what you’re missing, and figure out how to get it. Suppose your dream job requires experience collaborating on dynamic teams. You could create a team of students to help each other study for final exams. Assign topics to individual members, arrange meeting times and locations, and find problem sets or sample tests for everyone to work on together. Not only will you be helping yourself, you will be able to add “Organized study team of 10 students” to your résumé!
Meet Dr. Amber O. Evans

*Development Scientist, BASF Corporation*

» B.S. Chemistry, North Carolina Agricultural & Technical State University

» Ph.D., Pharmaceutical Sciences—Cosmetic Science emphasis, University of Cincinnati

Amber Evans received her Ph.D. in pharmaceutical sciences, with an emphasis on cosmetic science, in 2011. After graduating and taking a brief break from science, she applied to a generic postdoctoral position at BASF and waited for a response. When that seemed to fail, she took a more assertive approach. “I reached out to a BASF employee and industry expert to express my interest in career opportunities in personal care R&D at BASF via e-mail, and we remained in occasional contact over the following months,” she says. “He contacted me when a position opened and invited me to interview.”

Evans now works for BASF Corporation in Tarrytown, NY, developing technologies for personal care market segments, such as hair and oral care. This includes ingredient technologies that can deliver performance effects or functionality in products, and methodologies for evaluating product performance; in other words, she influences the consumer experience with personal care and beauty products. As a mentor, active member of the Society of Cosmetic Chemists (SCC), peer reviewer for the Journal of Cosmetic Science, and member of the Advisory Board for the University of Cincinnati Cosmetic Science Program, Dr. Evans is dedicated to influencing the progression of the cosmetic and personal care field both inside and outside of the lab.
What do you like most about this job?

As a scientist in the cosmetic and personal care industry, having the power to apply science to making consumers look and feel good is exciting. I can link my academic background and personal interest in cosmetics and personal care. For example, I am currently leading the development of a biosurfactant technology; it could potentially offer a natural, multifunctional solution for hair, skin, and oral care products. This project is exciting because it is the result of proactive technology scouting across the company and in line with market and customer demand. Aligning consumer need, science and business impact is an interesting, challenging and rewarding experience.

Did you know what you wanted to do when you were in college? How did you decide that cosmetic science was the career you wanted to pursue?

While a career in a STEM field was my goal, narrowing down the specific area within chemistry that would be suitable for a career was not as straightforward. My career interests changed each time I took a different chemistry class in college. They ranged from utilizing analytical chemistry in forensics to leveraging organic and medicinal chemistry to synthesizing drugs to “something” within green chemistry.

I decided on cosmetic science because it is an exciting field that combines multiple aspects of chemistry, promotes positive self-image and care, and is a relatable science with great impact and reach. I also considered the emotional impact of my future. While careers in forensics and medicinal chemistry could certainly be impactful, I realized that spending nearly the rest of my life exposed to topics like crime and sickness might not be a good fit for me. I was fascinated with hair and hair and skin products when I was younger but was unaware that it could be a career until late college. When I discovered I could build a career using science to improve things people use every day, I began planning how to prepare for and attain this.

What is the most interesting or most memorable project you’ve worked on?

My dissertation. As a graduate student in the cosmetic science program at University of Cincinnati, the country’s first advanced degree program with a cosmetic science focus and the only Ph.D. program, I had the pleasure of working on a project with direct relevance to my planned career path. It was challenging, but I learned a lot and loved every bit of it!

The project focused on identifying the factors that influence the uptake of water hardness ions (calcium and magnesium) by human hair, measuring the impact of that uptake on hair properties, and evaluating technologies related to controlling this interaction. The work was a comprehensive study that included research, physical and chemical analyses of hair, and experience with consumers and market insight. This could lead to the development of products that help consumers better care for their hair. I completed the project in an industrial setting, so I was also exposed to the business

“Sometimes we can be barriers to our own success. There have been times where potential opportunities would not have been available to me had I not the courage and self-confidence to ‘JUST GO FOR IT.’”
of cosmetics and personal care and inspired by professional scientists.

**How do you balance your career and personal life?**

Maintaining a good work-life balance is very important to me. I set rules for myself, such as don’t send e-mails outside of standard office hours, an effort that respects my own work-life balance as well as that of my colleagues.

I try to manage my time in a way that allows for work to be completed on site. Of course, there are deviations from this occasionally, but it is within reason. I also happily use my full allotment of vacation days (mostly for travel), because personal growth is just as important as professional growth, and being overworked can be counterproductive and unhealthy.

While my job at BASF is not demanding in a way that impacts my personal life, I am voluntarily active in the cosmetic and personal care industry and occasionally in mentoring younger scientists. I mainly do this during my personal time, and while it can get a little hectic depending on the commitment, deadline, etc., these efforts keep me engaged and motivated, and I am happy to be of service.

**What's the best career advice you’ve received?**

“Just go for it.” It sounds simple, but this phrase of reassurance is powerful. Sometimes we can be barriers to our own success by allowing self-doubt and assumptions to manifest. There have been times where potential opportunities would not have been available to me had I not the courage and self-confidence to “just go for it.” It can be as simple as being transparent about intentions or asking about or pursuing something.

**Do you have any advice for undergraduate students studying chemistry?**

When considering your future career, take time to think of where you want to use your knowledge to impact the world and what it is that you genuinely enjoy. Be proactive! Set goals, identify resources, and execute. Seek opportunities for exposure to your areas of interest to better understand what that career path entails. This can be achieved by interning, shadowing, attending educational events on various topics, and networking with professionals. Most professionals are happy to support you!
Essential Career Resources

ACS Career Navigator
Whether you are just starting your career journey or looking to learn new skills, the ACS Career Navigator has resources to point you in the right direction.

College to Career
A comprehensive online resource featuring in-depth descriptions of over 50 chemistry fields, plus 120+ profiles of chemists working in all job sectors.

Personal career consultants and résumé reviews
ACS Career Consultants are dedicated to helping you achieve your career goals. From résumé preparation to salary negotiations, we are here to help you succeed.

ACS Leadership Institute
Learn essential leadership skills to get the competitive edge in today's global economy.

Get Experience
Free database containing research experiences, internships, co-ops, and other experiential opportunities.

ChemIDP
ACS's Individual Development Plan tool is designed to help graduate students and postdoctoral scholars determine needed skills and develop a plan to achieve desired goals.

ACS Career Pathways Workshops
Career Pathways help chemists navigate and discover the right choice in industry, higher education, government, and entrepreneurship.

inChemistry magazine
The information hub for ACS student members covering a range of topics related to careers in and outside of academia and research, the job market, graduate school, professional skills development, and innovative scientific advances.

Interview Stream
This practice tool helps you learn how to identify your strengths and weaknesses and improve verbal and nonverbal communications in an interview setting before the interview.

For more information, go to www.acs.org/careers
Spring to the Top of the Résumé Stack with Volunteer Activities

by Joseph Martino

Put down that chemistry text for a minute. Sit back. Relax. Daydream a little bit. You do well in your classes and enjoy them. You are captain of the intramural soccer team and president of the chess club. Okay, maybe you don’t want to brag about being president of the chess club. Soccer team. That’s it.

Now picture yourself sitting across the desk from a hiring manager. She has your résumé and is interrogating you about what’s in it. “Let’s see… President of the chess club. What does this have to do with chemistry?”

I detect your mind may have gone blank, or that you might now be out of your daydream and in a cold sweat. No worries. Those of you who will be graduating this spring may be a little freaked out that you won’t have an answer to such an interview question. inChemistry is here to help you prepare for interviews using skills you’ve already gained through volunteering.

Volunteering is actually work

Well, it is! Volunteering is literally a job. You might not be getting paid for it, and you may have a great time doing it, but it is a real job. So, you’re going to treat your volunteer work on your résumé just as if you were describing a real job that actually brings in a paycheck.

Let’s go back to your role as president of the chess club. Sure, this really has nothing to do with chemistry. But let’s say you were responsible for coordinating a traveling tournament schedule, were supervising the activities of a three-member leadership team comprising a publicity manager, a treasurer, and an event coordinator, and were responsible for coaching your teams on the latest and greatest chess moves. All of these experiences demonstrate leadership skills and management skills, which are relevant to any job.

Here’s another example: You’re in charge of putting together the monthly event programming for your ACS student chapter. Five of your fellow chemistry majors help you. You’re responsible for

Volunteer activities are important, and here’s a secret: companies actually care as much about your people skills as your chemistry knowledge, if not more. You can know all of the chemistry in the world, but you won’t get a job if you can’t play nice in the sandbox.

This is where your volunteer activities can work to your advantage. Read on to learn how you can improve your résumé and make a big impact in interviews using skills you’ve already gained through volunteering.
a department budget, and you have successfully applied for an ACS grant. Here, you not only have leadership and management skills to showcase but also relevancy in supporting chemistry at your school.

How to put it on your résumé

Since we're treating volunteering as if it were a job that pays, let's start out with a blank piece of paper. Think about what made you proud in each one of those volunteer experiences. For this example, let’s use chess. You’re going to write down on paper two or three stories of things you did that made you proud. Perhaps you led a successful fundraising event to allow your chess team to travel to different schools. Okay, let’s use this.

In job interviews, you invariably get questions that start with the phrase “Tell me about a time when...”. One way to make an impression on the interviewer is to use this format:

1. **The challenge that you faced**
2. **The action that you took to overcome the challenge**
3. **The result of your action**

The information in your challenge–action–result response will show a hiring manager how you bring value to a position.

Let’s jump-start this process and do it on your résumé. Write that story on a blank piece of paper using the challenge-action-result format and take as much space as you need.

Now here’s the tricky part: try to condense that story to three or four lines.

Once you’ve written a condensed version, you’ll have a bullet point for your résumé that might read:

- **Organized a fundraiser to support travel expenses for a chess club of 10 participants. Fundraiser consisted of three pizza parties where food was donated by the university food services department and the venue was donated by the student center. Raised $2000 for travel to the regional chess tournament.**

Or, the example of arranging programming for the ACS student chapter could read:

- **Arranged a schedule of speakers for the ACS student chapter by contacting local professors and graduate students to speak about their experiences in chemistry, and coordinated with our chemistry department to fund the speakers’ travel. Awarded an ACS Salute to Excellence by the local ACS chapter.**

Each example, in just a few lines, shows a challenge, an action, and a result. The key is the result. Notice there is something tangible and measurable to the result that shows value. Conveying tangible value in your volunteer work on your résumé demonstrates how it is relevant to the job you’re applying for and will go a long way in putting you ahead of the other candidates applying for the same role.

Let’s get back to that daydream:

“President of the chess club? What does this have to do with chemistry?”

The hiring manager is looking at your résumé. She sees that you have chemistry coursework, research experience at your university, and a summer internship at a local pharmaceutical company. You share how you have reached out to prominent professors and promising grad students to speak at your monthly ACS student chapter meeting, you have persuaded your chemistry department to fund your speakers’ travel, and your chess team is going to the national tournament because you have raised money through your leadership in organizing fun pizza parties.

You go on to tell her how these endeavors have helped your time management skills and, along with what you learned in chemistry class, you have become adept at solving problems independently and creatively. “And did I mention how I coached my intramural soccer team to an in-house university championship?”

The hiring manager looks at you. “Wow. When can you start?”

May your career daydreams come true.
The Chemical Industry Landscape

Industry employs approximately 75% of all chemists and chemical technicians. If you’re considering a job in industry, use this landscape to get a feel for where you might find your niche.

Research & development
Creates, analyzes, and develops new products and processes

Product development
Refines products and processes for affordable mass production

Manufacturing & supply chain
Acquires raw materials and converts them into products

Quality control & regulation
Ensures products and processes are up to business standards; ensures compliance with government regulations

Sales & marketing
Sells products/processes, interacts with customers, identifies new markets

Support
All other functions that support a business, such as human resources, accounting, patents and licensing, chemical information, public relations, and technical support

Considering a career in industry? We’ll help you get started:

acs.org/industry

The U.S. chemical industry

- comprised of 10,000 companies
- produces 70,000 products
- nets $800 billion per year
- employs 811,000 workers
- affects 2.7 million workers in allied fields

Top 10 Employers

1. Testing laboratories and engineering services (17.5%)
2. Research and development services (17.2%)
3. Pharmaceutical manufacturing (17.0%)
4. Basic chemical manufacturing (7.5%)
5. Waste management/remediation services (5.5%)
6. Paint, coating, and adhesive manufacturing (3.6%)
7. Wholesale trade (3.6%)
8. Resin, synthetic rubber, artificial synthetic fibers, and filaments manufacturing (3.4%)
9. Management of companies/enterprises (3.3%)
10. Soap, cleaning compound, and toilet preparation manufacturing (3.0%)

*Data collected in 2018

Networking is not about finding that one perfect contact who is going to land you a dream job. It’s about getting to know people who share your interests and are open to exchanging advice and insights at any career stage. Therefore, even if you’re not currently searching for a job, the time to network is now.

“I consider networking to be building relationships with people,” says Jana Markley, senior scientist at the pharmaceuticals company AbbVie. “If you think of networking as simply reaching out to another person—maybe with a similar story but just at a different point in their journey, it becomes less intimidating.”

Networking is critical for helping you understand what sorts of positions are available and which would be the best fit for you, says Samina Azad, an ACS career consultant and the R&D manager at the Illinois-based company PLZ Aeroscience, where she specializes in consumer packaged goods (CPG) research and development. When you have questions such as, “what is it like to work in academia versus industry or government?” says Azad, “the best way to find out is by talking to people.”

The people that you meet now might vouch for you when your résumé is on the table or give you a heads-up about a new opening before it’s posted. They could also help you understand what is expected of you in a new position, which could ease new job jitters.

Make the most of a virtual meeting

Reaching out to new people, especially those senior to you, can feel intimidating whether in a conference space or cyberspace. When you attend conferences in person, you might rely on a mentor to introduce you to potential employers. You might even happen to find yourself in line for coffee behind your dream graduate advisor and (deep breath!) muster up the courage to ask a question about her recent paper.

Networking can feel unnerving, especially for introverts, says Alayna Johnson, who graduated from the University of Illinois in spring 2020 with a B.S. in chemistry. In person conferences forced Johnson to move out of her comfort zone and talk to new people. “If someone is at your poster, you have to talk,” she says. After the ACS Spring 2020 National Meeting was canceled, she still shared her poster online via ACS’s SciMeetings platform. But she didn’t feel the same push to network.

Whether online or in person, making connections at conferences will require a little extra work. Conferences open doors to linking up with potential employers through career fairs. Azad suggests that students review the list of career fair employers and begin reaching out before the conference to ask what it’s like to work at that organization.

In addition, if you learn something fascinating at a technical meeting, you can use that intriguing talk or...
Students can contact a presenter through e-mail or LinkedIn with a comment or question, says James Murray, a professor of chemistry at Immaculata University in Pennsylvania and ACS career consultant. “Maybe it will turn into a phone call or a Zoom meeting to start getting that connection tighter,” he says. “You can see what it is that both sides can bring to a particular issue, whether mentoring, or solving a scientific problem, or looking for jobs or internships.”

If you feel nervous about reaching out, remember that “everybody at that meeting had to have the same start as you,” says Murray. “The more you practice the networking and the talking to people, the better you get at it.”

Social media, now more than ever

“Social media provides students with the opportunity to connect with others and learn about career paths,” says Kate Szumanski, director of professional development and internships at Villanova University and instructor of an undergraduate course on social networking for career success. Students can still learn about a field by following on Twitter relevant hashtags and chemists whose work they admire.

Start by following professors and peers in your own department. Pay attention to whose research they retweet and which hashtags keep appearing. If you read an exciting new paper in lab, you could follow the authors on Twitter so you’ll know when they tweet about a new paper or an opening for a new student.

“Most of my social media engagement is following people on Twitter whose labs I could potentially be interested in or whose research helps me figure out what research I could be interested in,” says Javarcia Ivory, who is nearing the completion of a coterminal B.S. degree in biology with a concentration in biochemistry and master’s degree in epidemiology and clinical research at Stanford University.

Szumanski also encourages students to use LinkedIn to find connections. “Craft a message, save that message, and customize it to each individual you intend to send it to,” she says. When sending a prospective contact a message over LinkedIn, or any medium, the key is to set the right tone. “You want to be sincere and genuine so it is clear that you want a few words of advice. You are not expecting anything else of them,” says Azad.

Szumanski suggests that students follow a formula that goes something like this: My name is X. I am a student at Y. I admire your career path and would like to speak with you for 15 minutes to know more about your career journey after college.

If you’ve already met the person, it’s important to remind them of where and when you previously connected, says Azad.

Then comes the hard part: practicing patience. Szumanski has this advice: “Be patient with people. Be empathetic. Do not expect or demand an immediate response.”

When you do get the chance to speak with a new connection, find out what you most want to know about their career path and profession. Some appropriate questions might be: How did you transition from your undergraduate degree to your current position? Can you describe to me what a typical workday is like for you? Do you have any advice on ways that I could prepare myself to be competitive for a position in your field?

Keep the conversation going

Once you make a connection, you will want to maintain that relationship. If you come across an article or webpage on a common area of interest, go ahead and share it. If your contact publishes a paper or wins an award, send your congratulations.

“Just like anything else in life, you have to work at it,” says Murray. He suggests checking in every couple of months or so to ask about a contact’s work and to share your own progress. He has students, for example, who have reached out to people they connected with through meetings months later to ask if they solved particular problems they were working through and share some details of their own work. “You’ve got to carve the time out to follow up with the connections,” says Murray. “Don’t let them wither on the vine.”

Author
Carolyn Beans is a biologist turned science reporter specializing in food, agriculture and health. You can find her on twitter: @carolynmbeans
As an ACS Career Consultant, I see a lot of mistakes on résumés for industry jobs, and some of them are quite common. The industrial culture is very different from the academic world, and it’s easy for students to make missteps when transitioning to the workforce, beginning with the way they craft a résumé. The job résumé is the most important window into a candidate’s professional experience and achievements. Here are the top 10 mistakes that could cost you a really great opportunity.

1. **Having too many pages.** It’s totally normal for undergraduates to have one-page résumés. Depending on your research experience, summer jobs, and internships, you may need two pages. That’s OK, but any more than two pages is overkill. If you need two pages, make sure that your name, phone number, and e-mail address appear on both pages. You never know whether a hiring manager will actually print out your résumé. They receive a lot of applications, and pages could get mixed up in the shuffle.

2. **Relying on spellcheck to catch grammatical and spelling mistakes.** If you depend on your computer’s spellcheck tool to correct grammatical and spelling mistakes, you are in big trouble! Spellcheck doesn’t understand context, homonyms, or acronyms. So, that amide structure you identified using NMR could become an amino structure identified by MNR.

Your résumé is the first demonstration of your ability to communicate well in writing and to pay attention to detail. That’s why it’s important that you carefully comb through each and every word, line, and paragraph, and that you have a fresh pair of eyes (a friend or mentor) do the same. Don’t risk losing out on that dream job because of overlooked typos.

3. **Writing everything you’ve done in the introductory summary.** If you’re a high-level executive, an executive summary is appropriate and expected. But for an undergraduate who is just finishing a bachelor’s degree, a laser-focused summary or objective is sufficient; some consultants even advise omitting the summary. Your summary should specifically and exclusively hone in on the type of job that you’re seeking. If you are too vague, a company may not readily see you in the job.
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Objective
Seeking a bench medicinal chemistry position synthesizing, purifying, and analyzing organic compounds

Education
B.S. in Chemistry (expected May 2019), Rocks University, Mayfield, Illinois
Thesis: “The Use of Grignard Chemistry in the Formation of Precursor Alcohol”
Advisor: Professor E. X. Pert

Work Experience

Undergraduate Research Assistant
Rocks University (2017–present)
Advisor: Professor E. X. Pert
• Synthesized array of chiral alcohols to use as precursors in carbohydrate syntheses using the Grignard reaction. Devised a microscale method to generate 20 precursors on a 50 mg scale used in a 12-step natural product synthesis.
• Mastered the use of a Schlenk line to transfer water- and air-sensitive Grignard reagents to reaction vessels. Applied skills in collaboration with other researchers, resulting in increased yields in multiple syntheses.
• Independently mastered the use of laboratory HPLC equipment to properly operate the instrument. Accomplished rapid analysis of quenched reaction materials and supplied data to graduate student colleagues to optimize reaction processes for better yield.

Library Assistant
Mendeleev Memorial Library
Rocks University (2017–present)
• Developed a new form for requests for technical journals that increased efficiency of journal searches.
• Created an organization system to file returned technical journals to the library’s reserved journal stack that increased efficiency.

Volunteer Experience

President
American Chemical Society Student Chapter
Rocks University (2017–2018)
• Led 50 undergraduate chemists in coordinating 12 events designed to communicate the value of chemistry to peers, students, and the general public; developed the professional skills of chapter members; and engaged more than 300 members of the general public.
• Coordinated recruiting efforts that led to a 15% increase in membership.
• Collaborated with faculty mentor to organize a seminar series for undergraduates, resulting in the highest attendance for a career talk in 2018.

Honors
ACS Salute to Excellence Award (2018)
Library Assistant of the Year Award (2016)

Languages
Spanish (fluent), French (working knowledge), German (reading knowledge)
including your GPA.

If you are seeking an industrial laboratory job, your scientific experience and accomplishments will speak more for you than your grade point average (GPA) will. If you have a GPA of 3.5 or higher, you should list it. GPAs are one way to distinguish between candidates with similar research experiences and successes. Otherwise, it is safe to omit your GPA. Remember, too, that a hiring manager will ultimately discover your GPA, because companies typically ask for college transcripts to verify your education.

Omitting your senior thesis, research project, or research advisor.

If you worked on a senior thesis or a summer research project, you need to include that information in the education section of your résumé. List your thesis title or project title and the name of your research advisor. Remember that chemistry is a profession driven by academic pedigree. There is a possibility that the hiring manager knows your research advisor. Also, if you do not list your research advisor’s name, most hiring managers will see this as a red flag that you didn’t get along with your advisor—and that means that the hiring manager may not get along with you. So do yourself a favor and list your advisor’s name.

Listing only work duties.

Let’s say that you’re an organic chemist. You carry out synthetic reactions in the laboratory, monitor them by thin-layer chromatography (TLC), perform crystallizations or flash column chromatography to purify them, and characterize the final product by nuclear magnetic resonance (NMR). Do you know how many organic chemists perform these duties? Every single one. There is no way that a standard list of duties will help you stand out from the competition. Instead, spotlight your accomplishments. In a series of short sentences, explain the synthetic challenge you faced (e.g., “needed to synthesize an array of precursors for a Grignard reaction”), the action that you took to overcome that challenge (e.g., “devised a microscale method to generate precursors in inert atmosphere”), and the result.
customize your résumé

Be sure to tailor your résumé—and not just the summary—to the position you are seeking. If you are applying for a position as a synthetic chemist, include your success with manipulating Grignard reagents in a Schlenk line. If you are going for an analytical position, start with the high-performance liquid chromatography (HPLC) and gas chromatography (GC) techniques you mastered independently. This shows how you will excel in the job and bring value to your employer.

(e.g., “generated 20 precursors to support a 12-step natural product synthesis”). The more tangible the result, the better. This will give you a bullet point on your résumé that is measurable and will show the hiring manager the value that you bring to the job.

7 ▶ Including a word bank on your résumé.
Yes, a computer program will scan your résumé before an actual person does, but remember that the computer can pick up words anywhere in your résumé. To a reviewer, a word bank is a meaningless block that takes up valuable real estate. Instead, incorporate key words into your accomplishment-driven bullet points of technical and professional experiences.

HPLC / GC / NMR / TLC / leadership

Languages:
• English

9 ▶ Stating that you speak English.
If you are applying for a job in the United States and your application is in English, it is assumed that you are fluent in English regardless of what your first language is. However, if you are fluent in any non-English language, whether it’s your first language or a language you acquired, be sure to list it.

10 ▶ Including a “References available upon request” statement.
In the past, this was standard operating procedure. Times have changed, and now it’s customary to supply references to the hiring manager when requested to do so. Therefore, there is no need to write this phrase on your résumé.

Activities:
• Baking pies
• Shopping

8 ▶ Listing irrelevant extracurricular activities.
You absolutely should list extracurricular activities (sports, clubs, volunteer work, mentoring, art, activism, etc.) that contribute to your growth and your potential, but make sure there is an obvious relevance to the position. Including extracurricular activities is an opportunity to showcase professional skills you’ve gained, such as collaboration, independence, teamwork, and communication. It’s also a way to elevate your résumé above those that list only technical skills.

References available upon request

DO YOU HAVE QUESTIONS ABOUT RÉSUMÉS? ACS offers personal career consulting for members. More than 60 volunteer consultants can help you craft your résumé, prepare for an interview, and find the career that’s right for you. Visit acs.org/careers for more information.
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Go to [acs.org/join](http://acs.org/join)
Making Work Clothes Work for You and Your Budget

Dressing professionally seems simple: jacket, shirt, slacks, skirt, dress. Then you try it and suddenly you’re faced with all kinds of quandaries: Are these pants dressy enough? Can I wear my favorite funky earrings? How can I afford a new suit? And what is “business casual” anyway?

Dressing for the workplace or professional events isn’t always easy, and the choices you make have to take into account the image you want to project, the type of work environment you’re in, dress code policies, your personal style, and the business situation at hand.

Choosing the right attire for work can be a hassle, but there are ways to be appropriate and unique without blowing your budget.

**What’s appropriate?**

Most professional situations will call for either “business attire” or “business casual”. In general, formal activities, such as interviews, presentations, or power meetings with people two or three levels above you, call for business attire. That's the full suit, business shirt or blouse, closed-toe dress shoes—the whole nine yards.

For professional activities in which you are just one of the crowd, such as a regular day in the office, a training course, or professional conferences (when you are not presenting), business casual is usually appropriate. Business casual is less formal than business attire. You can remove the tie and replace the jacket with a vest, sweater, or cardigan. But you still need to look put together so that you’re taken seriously as a professional.

**BUSINESS ATTIRE**

- Full suit with jacket
- Necktie or simple jewelry
- Closed-toe shoes

**BUSINESS CASUAL**

- Less formal but still professional
- Sweater in lieu of jacket
- Accessories, if desired
- Long skirt or dark jeans

Bookmark: inchemistry.acs.org/careers/work-clothes-on-budget.html
If you’re not sure about what the expectations are or how traditional the dress code is, ask the human resources department, your boss, or colleagues.

When in doubt, dress up and dress conservatively. It is easier to turn a business outfit into something more casual on the fly (just take off the jacket) than it is to make a casual outfit dressier. Similarly, you can add flair to a navy suit with a fun tie or colorful jewelry, but you can’t tone down prints and patterns as easily.

How on earth can I afford this?

If you’ve been a student your whole life, chances are you’ll have to build a work wardrobe from scratch, without a lot of funding. Here are some tips for getting started without breaking the bank.

With limited funds, the most budget-friendly places to shop for good-quality work clothes are discount department stores like Marshalls, T.J. Maxx, and Nordstrom Rack, or outlet malls. You can also try searching the clearance racks at major department stores or visiting thrift stores and consignment shops.

If you’re not sure about the look or fit you want, you can visit a store that specializes in customer service and tailored business clothing to get ideas for the types of pieces that suit you best. Then go to stores that are more affordable to purchase what you like.

You do want to invest in one or two good-quality business suits and have basic items that can easily pair with other pieces of clothing. A dark suit, a versatile pair of pants, and a plain business shirt or blouse are good foundation pieces that you can rely on for any situation for years to come.

And remember: you do not need to build a whole wardrobe at once. Build slowly as your budget allows, and eventually you’ll have what you need to get from week to week in the office.

These clothes aren’t me!

Unless you’ve been wearing ties, dresses, and suits your entire life, there is a good chance that you will feel stiff and awkward the first time you wear professional clothes. There is a lot you can do to add your own personal style to your work wardrobe without sacrificing professionalism.

Start by making sure the pieces fit properly. Some stores (especially those that specialize in men’s suits) actually sell unfinished clothes and tailor them to fit you. Otherwise, most dry cleaners will do affordable alterations.

It’s OK to add touches of your personality into your wardrobe, but your style should not conflict with the dress code of the office or laboratory. If you like bright, bold colors, wear them with simpler pieces that tip your ensemble closer to the conservative side. If you have brightly colored hair, make sure it is styled neatly so that it is not a distraction. If you have visible piercings, be sure to wear smaller jewelry.

If you’re into fashion trends, stick to one or two trendy but work-appropriate items paired with more conservative basics. This is a less expensive approach that ensures your look does not overshadow the good impression you display in your work. You want people to notice you, not your clothes, hair, or accessories.

Starting with a few pieces and a little creativity, you can make your work wardrobe work for you.
coverage you can count on

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