



*Tips on Résumé  
Preparation*

# Tips on Résumé Preparation



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*The American Chemical Society Department of Career Services (DCS) offers career assistance and information on employment issues to chemistry professionals. This booklet was written for the chemist at any career stage and is based on a review of various résumé sources and interviews with recruiters. It was revised and updated by Edward Kostiner, an ACS Career Consultant. Frank Walworth, Manager of the DCS Office of Professional Services, reviewed the manuscript for completeness and accuracy. Previous editions of the booklet (published 1994 and 1996) were written by DCS staff members. The Department is grateful to the current and former writers and reviewers for their time and effort to develop this guide.*

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September 1998*

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# PREFACE

This guide was written to help you make the best first impression possible on a potential employer. It is based on a review of various sources on résumé writing and interviews with industrial recruiters, who offer their best advice on how to craft attention-getting résumés.

Creating the perfect résumé is part science, part art—and a lot of hard work. You must be willing to spend considerable time reflecting on your past accomplishments, formulating career goals for your future, and then composing and editing the document. Because this important tool is used to get you an interview with a potential employer, it should be clear, accurate, and concise. Your résumé outlines your career objective, education, major skills and accomplishments, work experience, and research. Hopefully, it will convince a potential employer that you are an outstanding candidate who will make positive contributions to the company. A résumé is usually used to apply for industrial and corporate positions. A curriculum vitae is required for academic situations, and the OF-612 (SF-171) form (or a federal government résumé) is required when seeking government employment. How to handle these “special formats” is discussed in Part 3.

As you read this guide, keep in mind that if you talk to 10 different people, you will get 10 different versions of what to put on your résumé. Formats vary, as do personalities. Your primary goal is to communicate enough information about yourself to prompt a potential employer to invite you for an interview.

After you have created your résumé, written your curriculum vitae, or filled out your OF-612, take advantage of the many professional and employment services offered by the American Chemical Society for its members. See Appendix II for details.



# The Power of a Résumé

ONE

Your résumé is your primary marketing tool. Neither an autobiography nor a curriculum vitae, it states your professional objective and presents your relevant skills and credentials. The format of your résumé must follow some general guidelines.

Job-search books and other guidelines for writing résumés usually describe two formats: chronological and functional (or skills-based) résumés. On a chronological résumé—the traditional personal data format—your work history is presented in strict chronological order. Many job seekers prefer to use a skills-based résumé, however, because the format allows them to emphasize their accomplishments and skills (i.e., it shows what they are able to do). Such a format immediately focuses the employer's attention on the candidate's capabilities.

In reviewing résumés for experienced and entry-level chemical scientists, we at the American Chemical Society's Department of Career Services have found that the most effective résumé may be a combination of the chronological and skills-based formats. With this in mind, we present the basic components of all résumés, discuss how you can construct the best résumé possible, and present some excellent examples. Knowing how to avoid common stumbling blocks will put you on the right track.

## *Overall Considerations*

Because a résumé is a personal introduction to a potential employer, it should convey a lasting, positive first impression. Before you sit down to draft your résumé, ask yourself three questions:

- Where am I sending it?
- Who will receive it?
- How will it be read, reviewed, and distributed?

Remember that the function of your résumé is not to get you a job. It's to get you an interview.

A well-written résumé is clear, logically organized, and attractive. It should be both professional looking and easy to read; important facts describing your accomplishments should be easy to locate. It should be brief—two pages maximum—but comprehensive enough to convey your important skills and significant accomplishments. Such measurable facts will appeal to a potential employer. (Note: Résumés submitted for government jobs tend to run longer than average résumés, because the federal government requires quite a bit more information about the candidate. Curricula vitae also are long, because greater detail and publication lists are included.)



Your résumé may be considered poorly written if it is illogically organized, messy, difficult to read, or runs much too long or too short. A résumé that contains irrelevant, illegible, incorrect, or insufficient information is difficult to evaluate.

Make your past job descriptions concise, and most important, make sure that all the information is accurate. The crucial criterion is that this document must sell your capabilities clearly and honestly. Always resist the temptation to exaggerate, overstate, embellish, or brag about your experience or qualifications, because potential employers can verify your history with past employers and references. Even the slightest misrepresentation on your part can cost you an interview—or a job.

## ***General Tips***

A recruiter typically scans a résumé in about 30 seconds on first glance, so the format you choose should make a good impression fast. If you want to ensure that the person who screens résumés takes the time to read yours, take the time to cover the basics.

### **Paper and Printing**

High-quality white paper and laser-quality black printing (not color) make an attractive presentation that will withstand photocopying without rendering the copies (or the original) illegible. Use one simple font of characters that don't run together: On a PC, Helvetica and Times print clearly; on a Macintosh, Helvetica and Times are also good fonts to use. Use boldface, italics, and underlining to highlight important parts of the résumé and catch the recruiter's eye—unless you are submitting your résumé for electronic scanning, in which case you should use minimal formatting (see Part 3).

### **Page Format**

The résumé format (i.e., chronological, functional, or a combination) should reflect your experience. It should be clean, with no stains or handwritten corrections, and have ample "white space." Leave a one-inch margin all around your résumé to create both a visual border and adequate space for notes.

### **Text**

Use clear, concise language. Avoid using the first person ("I," "me," "my") and eliminate any personal statistics while still presenting your qualifications in the most impressive light.

When all your information is in place, carefully proofread your résumé. Spell-check programs do not always catch grammatical and spelling errors; *field* and *filed* are both correctly spelled words, but they have totally different meanings (as do *there*, *they're*, and *their*). Have a friend, colleague, or family member—any honest, unbiased reader whose opinion you value—proofread it, too.

### **Cover Letter**

Your résumé should always be accompanied by a personalized, typed cover letter. Guidelines for writing a cover letter are discussed in Part 5.

# Creating Your Résumé

When you are ready to write your résumé, start by listing and classifying your skills and achievements. Group those items under headings that reflect your technical, organizational, and managerial skills.

## *Identifying Skills and Accomplishments*

This exercise is not something to be done off-the-cuff; it can be quite time consuming. Take several hours to think about what you have done in your personal life, at work, and—if you're a new graduate—at school. Jot down everything that you can think of; remember, even basic skills and modest accomplishments are worthy of note!

When you think you have listed all your skills and accomplishments, think about which of those skills (computer skills, communication skills, leadership skills, technical skills, or the ability to handle special kinds of instruments or equipment, for example) have led to each accomplishment. Assign each accomplishment to one or more skill categories. Use action words to catch the reader's attention, and if possible, quantify the results of your contributions within the context of the problem you solved or the project undertaken. Hiring managers like to see quantifiable results; if you are able to provide numbers, do so. Use incomplete phrases that begin with a verb, for example

### Project Management Skills

- Supervised staff of 10 employees in review, evaluation, and validation of analytical data
- Designed efficient databases for organic and inorganic analytical test results

### Analysis/R&D Skills

- Prepared and analyzed volatile and semivolatile compounds using GC/MS
- Developed an efficient synthesis (85% overall yield) of sucrose derivatives

Modify the list until you feel that it best reflects your experience. When you are finished, you will have a list of your skills, backed up with concrete examples (your accomplishments), to help you compose your résumé, write cover letters, and prepare for interviews.

When you identify your skills and accomplishments, only the results count. It is not enough to say what you did; you have to go one step farther and show the outcome of those actions. Be as specific and quantitative as possible in identifying your accomplishments, because vague statements will not hold up to scrutiny.

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## *Basic Components*

How you put together the various parts of your résumé to effectively market yourself will depend on your situation, that is, whether you are a recent graduate or an experienced chemical scientist. For the most part, however, the basic components remain the same.

### **Heading**

Center your name, home address, and telephone number(s) at the top of the page. It is preferable to give both business and home phone numbers. If possible, list a personal fax number rather than that of your current employer. List your personal e-mail address, if you have one, to demonstrate knowledge of the Internet and offer a rapid method of communication. (Remember that a company e-mail account is not private. It is best not to invite job-search-related e-mail correspondence to your work account.)

### **Objective**

Many job recruiters will ignore résumés that do not list an objective. The dual purpose of the objective is to give the employer an idea of what kind of employment you are seeking and a sense of your professional direction. Make sure that your objective is realistic and achievable. If possible, describe the organizational level, functional area, industry, and geographic preference (if any) that you are seeking. For an entry-level position, your objective may be somewhat generic.

Based on your objective, an employer is going to decide whether there is an appropriate position for you in the company. Therefore, whenever possible, tailor the objective to fit the position for which you are applying as well as the specific organization. This tactic is especially necessary when you answer job advertisements. Convey a sense of your knowledge and skills and how they can be applied to a given position or in a given industry; draw attention to your strengths and abilities. In your objective, state the position you are looking for as well as what skills and/or training you bring to that position.

Here are some examples of suitable objectives:

**OBJECTIVE:** A research and development position in the pharmaceutical industry that takes advantage of my experience in synthetic organic chemistry.

**OBJECTIVE:** A position in which my analytical skills in wastewater management can be used effectively to improve a company's environmental operations.

**OBJECTIVE:** A senior marketing research and planning position that requires strong analytical, technical, and creative skills.

### **Highlights (Summary)**

Using a bulleted list, highlight two to four of your strongest skills and/or accomplishments that are relevant to the position you are seeking; details for each of these items are presented in other sections of the résumé. The items should be in descending order of importance to the prospective employer.

## Education

Details about your educational background should be presented in reverse chronological order, that is, starting with your most recent courses or degree. For each entry, include school name and location, date of graduation, degree(s) awarded, and major(s). For an advanced degree, include the title of your dissertation and your adviser's name. Bachelor's-degree chemists should include a grade point average (if above 3.0); advanced degree holders should not.

Some career counselors suggest not giving dates of graduation; however, if you are a late-career chemist, we recommend that you give dates; not to do so automatically calls attention to your age.

## Skills and Accomplishments

It is very important that you effectively present your acquired skills and accomplishments relevant to the position for which you are applying. Although some résumé handbooks suggest that this information should be listed under work experience, it may be more effective to group your strengths according to category and present them under a separate heading. This advice should not be construed as a hard and fast rule, however. It may make more sense to include your accomplishments in the section describing your experience (see examples in Appendix III).

You already have grouped your accomplishments into skills categories. Use a bullet format to list accomplishments, remembering to use active descriptions of what you have done. Use this section to demonstrate how you are different from the competition; it must tell the reader how you are equipped to contribute to his or her organization.

### *For New Grads Only*

If you are a recent graduate, you should use the same technique to describe your research and thesis work. Do not copy your thesis abstract, but convey the salient points in short descriptive phrases. Explain why your research is unique, and try to illustrate how you can contribute to the organization. If you are graduating with a bachelor's degree, present an outline of your coursework and laboratory work, including a discussion of any independent study or research. It is to your advantage to highlight any industrial experience (summer internships or co-op programs) in a positive manner.

## Experience

This section details your employment history. Start with your most recent experience, listing job title, employer's name, and dates of employment in reverse chronological order. Because you will have presented your achievements under Skills and Accomplishments, only brief job descriptions are required here, unless you wish to emphasize a particular point.

### *Old Information*

Interviewers have a tendency to play down résumé information that is more than 10 years old. However, do include information that is relevant to the job for which you are applying. If you took any time off from your career, be prepared to explain such

gaps in employment during the interview, if not on your résumé or in your cover letter. You also will need to ensure that your skills (particularly in instrumentation) are not outdated.

### *Short-Term Jobs*

If you have held short-term consulting jobs that are relevant to the position you are seeking (or if you need to fill in gaps in your résumé), include them under Experience. List the companies for which you worked and the total period of time involved. For example,

#### **EXPERIENCE**

*1994–96: Various Short-Term Consulting Jobs*

Kimberly Clark, Procter & Gamble, SmithKline Beecham, Johnson & Johnson

### *Volunteer Work*

Also list volunteer work that exhibits leadership, management skills, or the ability to work on a team—anything related to the job. Such listings are especially good for new graduates, who may have limited experience to offer in the workplace.

### *Military Service*

Military service should be included in brief detail if the experience is relevant to the job for which you are applying or demonstrates leadership experience. If you gained leadership and management experience while in the military, list these points as acquired skills in the appropriate section.

## **Awards**

List all academic and professional awards from national, regional, and local organizations, including membership in honorary societies. Recent graduates should include competitive scholarships and fellowships as well as academic honors such as dean's list and graduation with distinction.

## **Professional Affiliations**

Include job-related membership in national, regional, and local professional organizations as well as any offices held. Avoid listing political or religious activities unless they demonstrate a relevant skill, such as organizational or leadership ability. If you are applying for a job that requires membership, certification, or licensure as a prerequisite, include the necessary information.

## **Publications, Patents, and Presentations**

Use a formal reference style (all authors, full title, and citation), and list entries in reverse chronological order; if you are unsure about the format, consult *The ACS Style Guide*. If you have numerous publications and/or patents, do not include the full list as part of your résumé; rather, refer to the total number of publications—perhaps listing a few particularly important publications or patents—and state that a full list is available as an appendix (or on request).

Oral presentations usually duplicate published material, so only important invited or keynote presentations should be listed on your résumé. However, because presentations also reflect public-speaking skills, recent graduates should consider listing them, if space allows.

Do not list publications, patents, or presentations that are in progress or have not been accepted. Articles in press, however, can be listed.

## References

It is always preferable to list at least three professional references, unless one of them would be your current employer and you don't want him or her to know that you are looking for another job. Most companies expect references from previous employers or, in the case of new graduates, their professors and mentors. If possible, select your references from a mix of business and academic supervisors, instructors, and colleagues.

Contact the people you would like to use as references before you use their names, and ask whether they are willing to speak on your behalf. Keep those individuals informed by providing them with a recent copy of your résumé, because they must be able to speak intelligently about your qualifications for a prospective position. On your résumé, provide name, title, street address, telephone number, and e-mail address (if applicable) for each reference listed.

## Miscellaneous Considerations

### *Personal Information*

You should not include personal information such as height, weight, health, marital status, age, or race on your résumé, nor should you include a picture. Mentioning hobbies can be somewhat risky (unless they are relevant to the job). Do so only if you feel that a particular hobby reflects one of your skills or accomplishments.

### *Citizenship*

Foreign nationals will be asked about visa status during the hiring process. If you are a citizen or a permanent resident, state your status on the résumé. If you have a temporary visa, however, do not include this information. If there are no suitable American candidates for the position, the company may be willing to sponsor a candidate for permanent resident status. If an employer is sufficiently interested in your résumé, he or she eventually will ask about your citizenship status and only then decide on a course of action.

### *Overqualification*

If you feel that you are overqualified for the position, read the job description very carefully. Your objective should fit the level of position for which you are applying. Be careful not to downplay your talents. Write an appropriate cover letter to accompany your résumé in which you mention that you are willing to negotiate salary.

## *Choosing Your Format*

At this point, consider the marketing aspects of a job search. What are you selling? What are the most important parts of your résumé? Remember that there is no single right way to organize your résumé; use the format (or combination of formats) that best suits your experience.

### **Recent Graduates**

If you are a recent graduate, your education is the most important section of your résumé. It should be ordered as follows:

- Heading
- Objective or Highlights (if appropriate)
- Education
- Skills and Accomplishments
- Experience
- Awards
- Professional Affiliations
- Publications, Patents, and Presentations
- References

### **Experienced Candidates**

If you have been out of school for five or more years, your education may no longer be the most significant factor in your history. Your Skills and Accomplishments and Experience sections should be near or at the beginning of your résumé, and the Education section should be placed near the end. Order your résumé as follows:

- Heading
- Highlights
- Skills and Accomplishments
- Experience
- Awards
- Professional Affiliations
- Publications, Patents, and Presentations
- Education
- References

## *Before You Continue*

Ask a friend, colleague, or family member whose opinion you trust to read your résumé and provide feedback. You want to determine whether your résumé gives a clear picture of you and the kind of employment you are seeking. Quiz the reader by asking what parts of the résumé he or she remembers after having reading it. Are these the facts that you want the recruiter to remember about you?

Discuss with your reader any parts of the résumé that were unclear, and rewrite them, if necessary. After revision, ask yourself whether your text provides a sense of purpose and an appropriate emphasis on your achievements. Is it an attractive

package that is accurate, clear, and stylistically simple? Does it contain measurable facts that will appeal to an employer and give a sense of the person behind the résumé? Above all, is it credible?





# Special Formats

Certain jobs and new technology sometimes call for a special résumé format. The job advertisement or posting should specify whether a specialized format is suggested (or required).

## *Electronically Scanned Résumés<sup>1</sup>*

New technologies are changing the job application process in many large companies. Scanners, optical character recognition (OCR) software, and retrieval software allow résumés to be electronically scanned, prescreened, and stored for later reading by a recruiting or hiring manager.

The accuracy of the translation of the information in your cover letter and résumé to ASCII text depends on both the scanning ability of the OCR software and the print quality of the résumé you submit. Thus, the characters must be distinct so as not to be garbled in translation (remember: garbage in, garbage out.) Some software programs offer OCR-specific fonts with extra spacing between the characters, but most résumé writers use traditional word processing fonts.

### **Page Layout**

Many problems with scanned résumés can be avoided if you use a standard font such as Times New Roman, Helvetica, or Courier and a font size of 10–14 points. Avoid script, italics, underlining, graphics, and shading. Do not present data in column form; the system prefers a continuous-line layout. A scannable résumé should be laser printed in black ink on one side of a sheet of white 8.5×11-inch paper. Make sure that you send an original or high-quality copy; do not fax your résumé. If possible, send your résumé unfolded in a flat envelope to avoid creasing.

### **Text Content**

OCR software will search for key words of interest to the company and/or the position, so describe your skills in broad terms. For example, if your specialization is “novel applications of asymmetric intramolecular Diels–Alder reactions,” use the terms “synthesis” and “natural products” as well. If you present a condensed list of your skills that excludes relevant key words, you may not be considered for a job.

## *Curriculum Vitae*

The curriculum vitae (CV) is used to apply for academic positions. It is much more detailed than the traditional résumé and, as a result, tends to be much longer (see Appendix III, page 44). Academic recruiters place more emphasis on your list of publications and presentations than do most industrial recruiters.

Perhaps of greatest importance to your application for an academic position is a description of your proposed research. A research proposal should be neither too large nor too small; it should be reasonable in scope and effort. If you are applying

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<sup>1</sup>This section is adapted from Shulman, 1995.

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for a position at an undergraduate institution, for example, your proposal should be designed for work with undergraduates, not graduate students or postdoctoral fellows. You are expected not to sketch out your life's work but to present an adequate outline of the work you propose to undertake in a three- to five-year period. The proposal should not necessarily be the length of a full proposal to the National Institutes of Health or the National Science Foundation; keep your focus on originality, relevance, and fundability.

Your proposal should include requests for necessary start-up funds—including a budget for necessary equipment—so you should be knowledgeable about relevant existing departmental facilities. You should be able to discuss the amount of time needed to complete the work and have a realistic sense of which agencies you would approach for support. Be especially realistic about obtaining industrial support. Junior faculty rarely obtain support from industry.

In addition to funds for capital equipment, typical start-up packages include money for supplies and expendables, student support (usually in the form of guaranteed teaching assistantships), and possibly a summer salary. There normally is some constraint on the amount of money available, but your request should be realistic. Make sure that you will have the financial means to initiate (and continue) your program.

## **OF-612**

The OF-612 form is usually required when you apply for a federal government job. Although you may apply for many federal jobs using a modified résumé, it may be more effective to use the approved form, because the government requires very specific information. New applicants for federal employment also must complete Optional Form 306 (Declaration for Federal Employment).

### **Completing Your Application**

Application procedures vary from agency to agency, so follow the instructions in the job announcement carefully. First, write your name and social security number on each page of the form. Then, you will need to provide the following information either on the form or on a modified résumé:

- Job Title in the Vacancy Announcement
- Government Grade (of the job you are applying for)
- Announcement Number
- Full Name (last, first, middle)
- Mailing Address
- Phone Numbers (day and evening)
- Country of Citizenship
- Social Security Number (your application cannot be processed without it)
- Work Experience (paid and unpaid experience related to the job)
- Education

## *Work Experience*

In the Work Experience section, you must provide several details for each position:

- Job Title
- Employer's Name and Address
- Supervisor's Name and Phone Number
- Description of Duties and Accomplishments
- Time Employed (month/year to month/year)
- Salary (dollar amount/ time period)
- Hours Worked (per week)

Repeat the work history format for each relevant job in reverse chronological order starting with your current or most recent position.

If you were employed previously by the federal government, you may be eligible for special consideration. Be sure to list that job in your work history, along with your series and grade.

## *Education*

State the highest degree that you have received. Then, in reverse chronological order until you reach high school, list the following:

- School Name
- City, State, ZIP Code
- Semester or Quarter Credits Earned (if applicable)
- Major
- Degree
- Year Received
- Additional Qualifications

Recent Job-Related Training Courses

Foreign Language Proficiency

Computer and Equipment Skills

Licenses

Memberships

Honors

Leadership Activities

Public Speaking Experience

Publications

- Veteran's Preference (U.S. veterans can gain hiring preference; attach DD-14 or SF-15 form)

## **Using a Modified Résumé**

If you choose to submit a modified résumé, write in your name, address, and telephone numbers on the OF-612 form and attach your résumé, modified as explained above.

## **Submitting Your Application**

Make sure that you have provided all of the required information on your application or modified résumé. If you fail to address any points mentioned in the job vacancy announcement, you may not be considered for the position. Sign the form; your signature is required to vouch that all the information on the form is true. Submit a completed Optional Form 306, if necessary.

File your application by the deadline on the job announcement. Send it via first-class mail (certified and registered mail can take up to 30 days to deliver) to the agency that announced the vacancy. Your application will be reviewed by either a panel or a staffing specialist, who should inform you whether you made the list of best-qualified candidates.

## **For More Information**

Obtain government job information by calling the U.S. Office of Personnel Management (912-757-3100) or via the Internet (Telnet: [fjob.mail.opm.gov](mailto:fjob.mail.opm.gov)).

Request the OF-612 form by contacting the U.S. Office of Personnel Management, or download it from the Web (one site is <http://www.fedworld.gov/jobs/index.html>).

# The Cover Letter

# FOUR

A résumé should never be sent without a cover letter. The letter presents your résumé to the reader, must be personalized to suit the organization, and should expand on points that you may have covered briefly in your résumé. It should be concise, to the point, and less than one page long—because the average time spent reading each letter is 8 seconds.

A good cover letter should include the following:

- **Reason.** Explain why you are writing to the organization. Whenever possible, the letter should be addressed to a specific person, using his or her full name and title. Spell the person's name correctly.
- **Relevant data.** If you are responding to an advertisement, include the date of the ad, the publication in which it appeared, and the position for which you are applying. Analyze your skills, acquired both on the job and in volunteer work, and make every effort to match your skills with the stated qualifications.
- **Contact name.** If you are sending your résumé at the suggestion of a mutual acquaintance, mention that person's name.
- **Questions.** If you are sending an unsolicited résumé, make every effort to explore the goals of the organization, its regular and continuing job needs, and the climate of the organization to demonstrate how your accomplishments match its goals and objectives.
- **Interview request.** In closing, express a desire to arrange an interview and state that you will telephone to set up an appointment. Then, follow through.

Two example cover letters are given on pages 46 and 47 in Appendix IV. Note that the second sample, even though it seems personalized, is really a form letter. By changing the salutation and the name of the company in the body of the letter, it can be sent to any organization.

## *Targeting the Market*

Do your homework about the company to which you are applying so that you can personalize your letter and résumé as much as possible. Find out the name of the hiring manager or human resource representative, to whom you should address your letter. A name on the envelope and letter increases the probability of your letter and résumé being read. Request this information by calling the company and requesting brochures and annual reports; through your professional network; or by consulting any of the following resources:

- *Thomas' Register of American Manufacturers*
- *Moody's Industrial Manual*
- *Directory of Directories*

- *National Trade and Professional Associations of the United States*
- State Industrial Directories
- Chamber of Commerce Directories
- *Dunn & Bradstreet Directory*
- *Standard & Poor's Register*
- *Directory of American Research and Technology*

For more information about federal employment, including job lists, call the U.S. Office of Personnel Management at 912-757-3000 (TDD 912-744-2299, modem 912-757-3100, Telnet: [fjob.mail.opm.gov](mailto:fjob.mail.opm.gov)).

# Résumé FAQ

## (Frequently Asked Questions)

RESUME

### **Q. Should I include my professional affiliations?**

A. Include them if they are relevant to the job you are applying for or if that position announcement states that membership is a prerequisite.

### **Q. Should I include personal data?**

A. Do not give personal information related to height, weight, health, marital status, age, race, or religion. Do not include a picture. Mentioning your hobbies is somewhat risky—list them only if they are relevant to the job in some way and you truly feel that it will help you get the interview.

### **Q. I've been in the workforce many years and have held many jobs. Must I include all of them?**

A. If any information in the résumé is over 10 years old, mention it very briefly as a part of work experience. Include only information that is related to the job for which you are applying—your descriptions should be brief and relevant.

### **Q. I have had a series of short-term consulting jobs over the last two years. How should I describe them?**

A. Prepare a skills-based résumé. Group all of the short-term jobs together, with the total period of time in which you were employed in this manner, under Experience. For example,

#### **EXPERIENCE**

*1994–96: Various Short-Term Consulting Jobs*

Kimberly Clark, Procter & Gamble, SmithKline Beecham, Johnson & Johnson

### **Q. Should I list volunteer work?**

A. Yes, if the work is related to the job you are applying for. Volunteerism that exhibits leadership, management skills, or the ability to work on a team is especially good for new graduates to list.

### **Q. I am not an American citizen. Should I list my visa status?**

A. Foreign nationals will be asked about visa status during the hiring process. If you are a citizen or permanent resident, state this on your résumé; if you have a temporary visa, do not include this information. If there are no suitable American candidates for a position, the company may be willing to sponsor you as a candidate for permanent visa status. If there is sufficient interest in the content of your résumé, a prospective employer will ask about your visa status eventually and decide on a course of action.



**Q. How do I handle gaps in employment?**

A. You are a prime candidate for using the skills-based résumé. As you can see from *Résumé Examples 4, 5, and 6* (Appendix III, pages 33–37), this kind of résumé concentrates on what you can do rather than where you have worked. Your skills are listed up front, followed by a brief employment history. If you have taken time off from your career, make sure that your skills (particularly in instrumentation) are up to date. Be prepared to explain any gaps in your employment history during your job interview.

**Q. I am over 40 and have considerable experience. I am willing to take a salary cut in a new position, but employers still tell me I'm overqualified. How can I solve this problem?**

A. You need to read the job description very carefully and craft your résumé accordingly—that's it. The skills-based kind of résumé is a useful format for disguising extensive education or experience. Write an objective that fits the level of position for which you are applying. Be careful not to downplay your talents too much. Write an appropriate cover letter to accompany your résumé in which you mention that you are willing to negotiate salary.

**Q. Must I include an objective statement?**

A. Although a career objective at the beginning of your résumé is not required, it is good for catching the reviewer's attention. (It also helps you to focus your thoughts as you compose your résumé.) Write your objective so that it announces what it is you want to do. If possible, use words that correspond to the job announcement or classified ad. Some employers will not look at a résumé that does not have an objective.

# Appendix I: Bibliography

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- Weddle, Peter D. *Electronic Résumés for the New Job Market: Résumés that Work for You 24 Hours a Day*; Impact Publications: Manassas Park, VA, 1995.
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# Appendix II: ACS Career Services

The American Chemical Society (ACS) Department of Career Services exists to enhance the economic and professional status of chemical professionals by providing career assistance; contact with employers; and information about employment data, trends, and issues to aid in their career decision making. Programs and services are offered in six categories: employment services, personalized career assistance, workshops and presentations, workforce analysis, local section career programs, and career-related information (publications and videos).

Career services are available to all ACS members—full members, national affiliates, and student affiliates. For more information, contact

American Chemical Society  
Department of Career Services  
1155 Sixteenth Street, NW  
Washington, DC 20036  
800-227-5558, ext. 6153  
career@acs.org

<http://www.ChemCenter.org/profservices.html>

## *Employment Services*

- National and Regional Employment Clearing Houses (NECH and RECHs)
- ACS Job Bank
- C&EN Situations Wanted Ads
- Professional Data Bank

## *Personalized Career Assistance*

- Career Consultant Program
- Résumé Reviews
- Mock Interview Sessions

## ***Workshops and Presentations***

- Effective Job Searching
- Recruiters Panel
- Employment Outlook

## ***Workforce Analysis***

- Annual Salary Surveys
- *Current Trends in Chemical Technology, Business, and Employment*
- Women Chemists Report

## ***Local Section Career Programs***

- Local Job Fairs, Career Workshops, Job Clubs
- Networking Opportunities
- Access to Local Employers

## ***Career-Related Information***

### **Publications**

- *Professional Employment Guidelines*
- *The Chemist's Code of Conduct*
- *What a Chemist Should Consider before Accepting a Position*
- *Career Transitions for Chemists*
- *Careers for Chemists—A World Outside the Lab*
- *Targeting the Job Market*
- *The Interview Handbook*
- *Tips on Résumé Preparation*
- *Teaching Chemistry to Students with Disabilities*
- *Working Chemists with Disabilities*
- *Coping with Job Loss*
- *Resources for Career Management*
- *Employment Guide for Foreign-Born Chemists in the United States*

### **Videos**

- *Career Transitions: Catalyst for Change*
- *Formula for Success: Turning Job Leads into Gold*
- *Developing the Right Picture: Résumé Preparation*
- *The Essence of a Winning Interview*
- *Your Career in Chemistry: Measuring Your Skills, Weighing Your Options*
- *Careers for Chemists* (prepared especially for students)

# Appendix III: Sample Résumés

This section presents a number of sample résumés, each of which reflects a different individual's background. They are provided to give you an idea what works and what doesn't. Use these samples as templates that you can modify in creating your own résumé, which must represent your particular background.

Understandably, a new graduate with a bachelor's degree does not have the work experience of a chemist who has worked many years in the field. When you realize which category you belong to, you can modify your résumé (and cover letter) to highlight the features that will put you in the best light with a potential employer.

## *Examples 1–3: Bachelor's-Degree Chemists*

Each of these candidates (especially Examples 2 and 3) could have included a Highlights section; however, the decision not to include this section was based on space available and the ability to present the relevant material in a cogent fashion.

In Example 1, the entry-level applicant has two years of experience as a lab assistant. She has many general skills, but none in depth. Because she is looking for a position in environmental chemistry, she places the Education section up front. The References are her two former employers and a professor.

Example 2 is of a new graduate with no real-world experience, but she effectively highlights her varied skills in the Experience section.

The individual in Example 3 is a midcareer chemist who provides varied details about his background in analytical chemistry in the Experience section.

## *Examples 4–6: Experienced Chemists*

All of these candidates have Highlights sections and list Skills and Accomplishments near the beginning.

Example 4 is particularly interesting résumé. The applicant has a very varied background: teaching, supervision, curriculum development, and laboratory experience. She is drawing on all of her skills in looking for a training position in a research laboratory. As a result, her Education section is of very minor importance and thus is placed at the end. (In fact, the whole second half contains only background material and may not even be read by someone initially screening her résumé.)

Similarly, Example 5, while short, emphasizes specific accomplishments in analysis and development, and management. The applicant's Education section is secondary and thus is placed toward the end.

In Example 6, the individual has a recent M.B.A. in addition to a master's degree in chemistry. All of her relevant accomplishments are listed on the first page. Her Education section comes next, followed by experience and so on. This minor change was made to accentuate her recent M.B.A.

## ***Examples 7–9: Ph.D. Chemists***

In Examples 7 and 8—for a recent graduate and a chemist with postdoctoral experience—education is listed after a Highlights section and immediately followed by accomplishments (included under Experience).

Example 9, which describes a midcareer senior Ph.D. chemist with significant experience, is different in that it is the only résumé in which the Reference section is not given. This individual is currently employed, and it is not unreasonable that he wishes to keep his job-hunting activities quiet. His situation and the need to be discreet should be mentioned in the cover letter, with the availability of references indicated by a phrase such as, "If you consider me to be a viable candidate, I will be happy to provide you with the necessary references."

## EXAMPLE 1: Entry-Level B.S. Chemist

### AMY L. HARRISON

1120 16th Street, #213  
Washington, DC 20036  
Home: 202-555-1212  
Work: 703-555-1212

### OBJECTIVE

An entry-level bench position in environmental chemistry with an organization that allows the opportunity for professional growth and development.

### EDUCATION

B.S., Environmental Chemistry, Ohio State University, Columbus, OH, 1996

### EXPERIENCE

- 1995–Present    Laboratory Assistant, ABC Medilab, Inc., Arlington, VA
- Maintained laboratory equipment
  - Verified inventory of laboratory chemicals
  - Recorded and field-tested fresh water samples
- 1992–94         Assistant Manager, Pizza Hut, Plymouth, NJ
- Trained and managed new employees
  - Handled cash receipts of \$1,000 daily
  - Served an average of 100 customers per 6-hour shift

### SKILLS

- Atomic absorption (flame and graphite furnace)
- Gas chromatography
- High-performance liquid chromatography
- Lotus 1-2-3
- Word Perfect 5.1
- Scheduling
- Management
- Teamwork
- Flexibility
- Problem Solving

### AFFILIATIONS

American Chemical Society  
ACS Student Affiliate Chapter, President  
Iota Sigma Pi  
Phi Lambda Upsilon  
(Honorary Chemistry Societies)

### REFERENCES

Professor Mary Krupke  
Ohio State University  
Chemistry Department  
Columbus, OH 34201  
614-555-1212

Mr. Michael Landry  
ABC Medilab  
P.O. Box 74-Z  
Arlington, VA 22201  
703-555-1212

Ms. Donna Holland  
Pizza Hut #1407  
2901 Lake Forest Dr.  
Plymouth, NJ 19327  
217-555-1212

## EXAMPLE 2: Entry-Level B.S. Chemist

### BARBARA KAYE LEIBOWITZ

2334 S. Austin Rd, Apt. B  
Atlanta, GA 30301  
404-555-1212 (home)  
404-555-1212 (work)

After May 15, 1998:  
1409 Briargrove Circle  
Roswell, GA 30077  
404-555-1212

### OBJECTIVE

A challenging position in an industrial setting performing chemical syntheses and characterizations. The ideal position will offer diverse tasks and the opportunity to work with a team.

### EDUCATION

B.S., Chemistry with Honors; Minor Concentration: Russian  
Emory University, Atlanta, GA (GPA 3.55/4.00), 1998  
Honors thesis "Synthesis of bis-dipyridyl complexes of divalent transition metals"  
Adviser: Professor Nina R. Young

### EXPERIENCE

Research Assistant, Professor Nina R. Young, Emory University, 1994–Present

- Synthesized organic ligands and inorganic compounds, on large and small scales, using anaerobic techniques
- Produced complexes of divalent first-row transition metals and studied their interaction with dioxygen
- Characterized products with  $^1\text{H}$  NMR, UV–vis, and IR spectroscopy as well as X-ray crystallography and magnetic susceptibility

Teaching Assistant, Undergraduate Inorganic Chemistry, Emory University, Fall 1995

- Planned and led help sessions and recitations
- Coordinated laboratory materials, conducted lab sessions, and graded lab reports

Computer Experience

- Navigate Mac OS, DOS, MS Windows, X windows, and UNIX
- Proficient in MathCAD, Excel, MS Word, AmiProd, MS PowerPoint
- Acquainted with Cambridge Structural Database and Inorganic Crystal Structure Database
- Able to learn new software quickly

### COURSEWORK

- In addition to required courses: biochemistry (4 hours), graduate-level biochemistry (4 hours), instrumental analysis (2 hours), bioanalysis lab (2 hours), and computational chemistry lab (2 hours)
- Attended workshop/conference on bioinorganic chemistry

### AWARDS

- Grant recipient from the General Electric Foundation, Summer 1995
- College Honors Program (determined by GPA, research project, and thesis defense)
- Dean's List, June 1992–January 1996

### EXTRACURRICULAR ACTIVITIES

Private music tutor (cello), 1990–Present  
Intern, Atlanta Food Bank, Fall 1993

### REFERENCES

Professor Nina R. Young Department of Chemistry Emory University Atlanta, GA 30322 404-555-1212	Professor Rodney Tree Department of Chemistry Emory University Atlanta, GA 30322 404-555-1212
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## EXAMPLE 3: Mid-Career B.S. Chemist

### Nicholas Smith

770 Broadway, Apt. 15J

Indianapolis, IN 46206

Home: 317-555-1212

Work: 317-555-1212

### OBJECTIVE

A position in which I can effectively use my analytical skills in wastewater management to improve a company's environmental operations.

### EXPERIENCE

- 1986–Present    Assistant Chemist, City of Indianapolis Water Utilities Department, Indianapolis, IN
- Monitored quality of water source, sewage, and drinking water to ensure compliance with state and federal regulations
  - Developed new testing procedures under U.S. Environmental Protection Agency regulations that made the analysis process more time and cost-effective
  - Operated Flame AA for alpha and beta particle activities
- 1983–86:        Chemist II, Mark Laboratories, Connersville, IN
- Analyzed inorganic contaminated hazardous waste materials
  - Coordinated analysis of S.A.I.C. contract programming
  - Created quality-control charts of contamination results
- 1982–83        Laboratory Assistant, Water Management, Inc., Dearborn, MI
- Assisted Senior Scientist with wastewater testing
  - Managed database of lab tests and results
  - Maintained lab and chemical supplies

### SKILLS

- Software Skills: Lotus 1-2-3, WordPerfect 5.1
- Thermospec Instrumentation: IR, AA, GC-FID/ICD, W/VIS, Digital Calorimeter, Auto Analyzer, Oxygen Bomb Calorimeter

### EDUCATION

M.S.E., Engineering Management, University of Michigan, Ann Arbor, MI, 1986

B.S., Chemistry, Indiana University, Bloomington, IN, 1983

### AFFILIATIONS

American Chemical Society, Member

National Society of Professional Engineers, Member

### REFERENCES

Mr. Jack Dryfous  
Laboratory Supervisor  
Water Utilities Department  
Indianapolis, IN 46201  
317-555-1212

Dr. Ralph Kramer  
Chief Chemist  
Mark Laboratories  
Connersville, IN 47331  
765-555-1212

Professor Ann Richards  
Department of Chemistry  
Indiana University  
Bloomington, IN 47490  
812-855-1246  
(arichards@iu.edu)

## EXAMPLE 4: Late-Career B.S. Chemist

### TANYA L. MILLER

461 Starzak Road  
Abington, PA 19001  
215-555-1212 (day); 215-555-1212 (evening)

### OBJECTIVE

A position emphasizing the training of technical assistants in a research or manufacturing organization.

### HIGHLIGHTS

- More than ten years' diverse teaching experience
- Supervisory and training experience in an R&D analytical laboratory
- Extensive curriculum development experience
- Industrial experience in organic techniques

### RELEVANT SKILLS

#### Teaching

- Trained chemical technicians in production quality control
- Taught general and analytical chemistry at the college level (including laboratory sections)
- Taught physics and advanced chemistry at the high school level
- Instructed adults in remedial reading and mathematics

#### Supervising

- Supervised and evaluated the work of laboratory technicians
- Directed the high school science fair
- Organized science symposia and workshops

#### Curriculum Development

- Developed appropriate supplementary materials, including a laboratory manual for qualitative analysis
- Created review and test material; produced educational multimedia presentations
- Developed and/or modified laboratory exercises to satisfy safety, academic, and economic requirements
- Designed self-paced lessons to ensure student competency

#### Industrial Laboratory Experience

- Performed qualitative and quantitative analyses for product quality assurance
- Tested for air and water pollution

### EMPLOYMENT HISTORY

1992–Present	Chemistry Department, Montgomery County (MD) Community College, Rockville, MD Faculty
1991–92	Anne Arundel County Public Schools, Annapolis, MD Science Teacher, Secondary Level
1989–91	John Thomas High School, Bel Air, MD Science and Mathematics Teacher
1986–89	Physical Sciences Department, Community College of Philadelphia (PA) Adjunct Faculty
1983–86	Williamsburg Public Schools (VA) Science Teacher, Secondary Level
1975–83	Boothby Tobacco Products, Westerville, VA Research Chemist

## **EDUCATION**

Master's of Education in Physical Sciences, Virginia Commonwealth University,  
Richmond, VA, 1984

Bachelor of Science in Chemistry, Temple University, Philadelphia, PA, 1975

## **AFFILIATION**

American Chemical Society

## **REFERENCES**

Dr. John Dossens, Chair  
Chemistry Department  
Montgomery County Community College  
Rockville, MD 20850  
301-555-1212

Ms. Jennifer Aston  
Lead Science Teacher  
Anne Arundel County Public Schools  
Annapolis, MD 21404  
410-555-1212

Professor Thom Jones  
Chemistry Department  
Community College of Philadelphia  
Philadelphia, PA 19130  
215-555-1212

## *EXAMPLE 5: Experienced B.S. Chemist*

### **LOUIS P. SOPHOS**

44 Locust Street  
Syracuse, NY 13201  
315-555-1212

#### **OBJECTIVE**

A senior-level management position in a dynamic analytical chemistry laboratory.

#### **HIGHLIGHTS**

- Ten years' experience in analytical chemistry
- Broad understanding of research and development
- Many accomplishments in laboratory design
- Strong record of effectiveness in management

#### **ACCOMPLISHMENTS**

##### Management

- Directed development and design of laboratory
- Supervised staff of 10 in review, evaluation, and validation of analytical data
- Trained entry-level chemists
- Designed databases for organic and inorganic test results

##### Analysis and Development

- Responsible for extraction and analysis of pesticides and herbicides by GC
- Prepared and analyzed volatile and semivolatile compounds using GC/MS
- Developed methods for specific analytes and established detection limits
- Interpreted results of NMR and wet chemistry analysis

#### **WORK HISTORY**

1989–98      Laboratory Director, Research Foundation at SUNY–Buffalo, Buffalo, N  
1981–89      Research Assistant, Kurtis Analytical Labs, Inc., Rochester, NY  
1978–81      Analytical Chemist, Kurtis Analytical Labs, Inc., Rochester, NY

#### **EDUCATION**

B.S., Analytical Chemistry, SUNY–Buffalo, Buffalo, NY, 1997  
A.A., Chemistry, Buffalo Community College, Buffalo, NY, 1972

#### **AFFILIATIONS**

American Chemical Society  
Phi Lambda Upsilon (Honorary Society)

#### **REFERENCES**

Dr. Amos Lechter Director Research Foundation SUNY–Buffalo Buffalo, NY 14220 716-555-1212	Mr. Jeffrey Kurtis President Kurtis Analytical Labs, Inc. 1122 Maple Avenue Rochester, NY 14604 716-555-1212	Professor A. M. Spector Department of Chemistry SUNY–Buffalo Buffalo, NY 14220 716-555-1212
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## EXAMPLE 6: Mid-Career M.S. Chemist with a Recent M.B.A.

**Natalie K. Hamlin-Piper**  
4508 Oaktree Road  
Banning, CA 92220  
909-555-1212 (h), 909-555-1212 (w)  
E-mail: piper@wavenet.com

### OBJECTIVE

A senior marketing research and planning position requiring strong analytical, technical, and creative skills.

### HIGHLIGHTS

- Master's degree in Business Administration with emphasis on marketing and finance
- Extensive experience in market research including focus group studies, database construction, and statistical analysis
- Excellent oral and written communication skills

### ACCOMPLISHMENTS

#### Market Research

- Researched new product opportunities, including competitive, feasibility, and financial analyses
- Developed marketing strategy, implementation, and evaluation plan for a new product
- Designed and conducted primary research for a new industry product and for a telecommunications/health care service
- Coordinated and carried out focus group studies for new hi-tech services
- Carried out secondary research for market analysis of consumer goods, industry products, and telecommunications/educational services
- Developed protocols for data collection, database construction, and statistical analysis

#### Management

- Designed, developed, and directed research projects
- Coordinated and supervised multidisciplinary project team
- Interfaced with customers, sponsors, contractors, and consultants to guarantee timely delivery of quality services
- Supervised inorganic and organic analytical labs; trained assistants and co-workers in research and quality control/quality assurance methods

#### Communication

- Delivered research results and business strategies in oral presentations
- Composed and edited technical documents for publication
- Wrote and edited contract proposals
- Created visual displays for business and technical presentations
- Designed marketing materials, posters, and brochures for trade shows

#### Computer Skills

- SPSS, Excel, Quattro Pro, Lotus 1-2-3, Word, WordPerfect, AmiPro, PowerPoint, SlideWrite, Netscape, Eudora

### EDUCATION

M.B.A. with emphasis in Marketing and Finance, San Diego State University, San Diego, CA, 1998

M.S., Environmental Science, University of Washington, Seattle, WA, 1985

B.S., Chemistry and Biology, Illinois State University, Normal, IL (GPA: 4.0/4.0), 1983

## EMPLOYMENT HISTORY

- 1995–Present Marketing Consultant, Small Business Institute, Banning, CA
- 1989–Present Senior Chemist and Project Manager, Computer Sciences Corporation (contract with the Navy's Remediation Research Laboratory), San Diego, CA
- 1986–88 Research Scientist, Computer Sciences Corporation (contract with the Navy's Environmental Sciences Laboratory), San Diego, CA

## AWARDS

- Computer Sciences Corporation Award for Technical Excellence (1995)
- Employee of the Year Award, Computer Sciences Corporation's Systems, Services, and Technology Center (1993)
- Pride Employee of the Year Award, Computer Sciences Corporation's Applied Technology Division (1992)

## AFFILIATIONS

Mu Kappa Tau, National Marketing Honor Society  
Female Association of Marketing Executives  
American Chemical Society

## REFERENCES

Professor M. A. Twente  
Marketing and Finance Department  
San Diego State University  
San Diego, CA 92182  
619-555-1212

Ms. Ethel Glyson  
Senior Project Manager  
Computer Sciences Corporation  
San Diego, CA 92101  
619-555-1212

Mr. Donald E. Smyth  
Small Business Institute  
2430 East Main Street  
Banning, CA 92220  
909-555-1212

## EXAMPLE 7: Entry-Level Ph.D. Chemist

### ERNST QUIGLEY

University of Iowa, Dept. of Chemistry  
Iowa City, IA 52240  
319-555-1212

1436 14th Street  
Iowa City, IA 52240  
319-555-1212

equigley@iowa.edu

### OBJECTIVE

A research and development position in an industrial setting that requires my experience in spectroscopic investigations in heterogeneous systems.

### HIGHLIGHTS

- Extensive experience in the investigation of photochemical reactions
- Modeling of the kinetics of heterogeneous reactions
- Industrial experience (summer intern program)

### EDUCATION

Ph.D., Physical Chemistry, University of Iowa, Iowa City, IA, 1999

Thesis title: "Photochemical Studies of Heterogeneous Reactions in the Atmosphere"

Adviser: Professor Anton Bruckner

B.S., Chemistry (summa cum laude), Central College, Pella, IA (GPA 3.60/4.00), 1993

Thesis title: "Computer simulation of ozone reactions"

Adviser: Professor J. P. Morgan

### RESEARCH EXPERIENCE

- |              |   |
|--------------|---|
| 1993–Present | Graduate Assistant, University of Iowa<br>Adviser: Professor Anton Bruckner <ul style="list-style-type: none"><li>• Developed a new, highly sensitive technique for the measurement of photochemical reactions on heterogeneous surfaces</li><li>• Modeled the kinetics of heterogeneous photochemical atmospheric reactions</li><li>• Gained experience in all manners of optical investigations of photochemical processes</li><li>• Led Advanced Physical Chemistry and Advanced Kinetics laboratories</li></ul> |
| 1995,1996    | Summer Intern, Exxon Research and Development, Houston TX <ul style="list-style-type: none"><li>• Studied gas-phase reactions on various heterogeneous catalysts of industrial importance using spectroscopy</li></ul>  |
| 1993         | Summer Intern, Iowa State University<br>Assistant in the laboratory of Professor Ivan P. Oakes <ul style="list-style-type: none"><li>• Studied chlorofluorocarbons reacting with water droplets using spectroscopy</li></ul>  |
| 1992–93      | Undergraduate Teaching Assistant, Central College, Pella, IA<br>Adviser: Professor J. P. Morgan <ul style="list-style-type: none"><li>• Studied reactions of ozone both experimentally and theoretically</li><li>• Used computer modeling</li></ul>   |

### AFFILIATIONS

- American Chemical Society
- Optical Society of America

## PUBLICATIONS

1. Bruckner, A.; Kline, B. J.; Quigley, E. The detection of fluorocarbon–water complexes in the atmosphere. *J. Phys. Atmospheric Sci.* 1998, *14*, 428–431.
2. Davis, J.; Quigley, E.; Bruckner, A. A critical review of the kinetics of heterogeneous photochemical atmospheric reactions. *Chem. Rev.* 1997, *45*, 120–145.
3. Quigley, E.; Bruckner, A. A novel optical technique for the measurement of atmospheric chlorofluorocarbons. *J. Instrum. Anal.* 1997, *135*, 1214–1218.
4. Quigley, E.; Morgan, J. P. Computer simulation of ozone reactions. *J. Phys. Chem.* 1994, *88*, 124–126.

## PATENT

1. Peach, J. R.; Petrov, V.; Goldstone, W.; Quigley, E. Catalyst for the cycloamination of butenes. U.S. Patent 4 333 219, March 24, 1997.

## REFERENCES

Professor Anton Bruckner  
Department of Chemistry  
University of Iowa  
Iowa City, IA 52240  
319-555-1212  
(bruckner@iowa.edu)

Professor J. P. Morgan  
Department of Chemistry  
Central College  
Pella, IA 50219  
515-555-1212

Dr. J. R. Peach  
Research Laboratory  
Exxon Corporation  
Houston, TX 77017  
281-555-1212



## EXAMPLE 8: Post-Doctoral Fellow

### RANDOLPH R. REGAN

Sandia National Laboratory, Chemistry Division  
Albuquerque, NM 87185  
505-555-1212

1436 14th Street  
Albuquerque, NM 87101  
505-555-1212

rrregan@sandia.gov

### OBJECTIVE

A research and development position that emphasizes creativity and collaboration in developing new instrumentation for analyzing biologically important materials.

### HIGHLIGHTS

- Improved the analysis of biological materials
- Extensive experience characterizing RNA samples
- Strong background in ultrafast laser spectroscopy
- Investigated interfacial phenomena by using new spectroscopic techniques

### EDUCATION

Ph.D., Chemistry, University of Chicago, Chicago, IL, 1996  
Thesis title: "Studies of Structure and Dynamics of Liquid Supported Monolayers"  
Adviser: Professor Wilson Albright

M.S., Chemistry, University of Chicago, Chicago, IL, 1993

B.S., Chemistry, University of Southern Florida, Tampa, FL, 1991  
Thesis title: "Photochemistry and photophysics of cyclopropylphenols"  
Adviser: Professor Stuart Anthony

### RESEARCH EXPERIENCE

- |              |  |
|--------------|--|
| 1996–Present | Postdoctoral Fellow, Sandia National Laboratory, Albuquerque, NM;<br>Mentor: Dr. Harold Ickes <ul style="list-style-type: none"><li>• Developed novel signal amplification for detecting and sizing single RNA samples</li><li>• Designed and implemented an efficient system for the mass spectrometric separation and identification of individual molecules</li></ul>   |
| 1991–96      | Graduate Assistant, University of Chicago, Chicago, IL; Adviser: Professor Wilson Albright <ul style="list-style-type: none"><li>• Maintained operational responsibility for Professor Albright's laser facility for the measurement of ultrafast kinetics of chemical phenomena in bulk liquid and at air–water interfaces</li><li>• Investigated the molecular properties, orientation, kinetics, and relaxation phenomena at liquid and solid interfaces by nonlinear optical techniques</li><li>• Led Advanced Physical Chemistry and Optical Methods of Analysis laboratories</li></ul> |
| 1989–91      | Undergraduate Research Assistant, University of Southern Florida, Tampa, FL;<br>Adviser: Professor Stuart Anthony <ul style="list-style-type: none"><li>• Studied photochemistry and photophysics of <i>p</i>-cyclopropylphenols both experimentally and theoretically</li></ul>   |
| 1989, 1990   | Summer Research Assistant, Oak Ridge National Laboratory, Oak Ridge, TN;<br>Mentor: Dr. Leopold Wiseman <ul style="list-style-type: none"><li>• Studied chlorofluorocarbons excited by gamma radiation using spectroscopy</li></ul>  |

## AFFILIATIONS

- American Chemical Society
- American Physical Society
- Optical Society of America

## PUBLICATIONS

1. Albright, W.; Regan, R. R. A critical review of the structure and dynamics of liquid supported monolayers. *Chem. Rev.* 1997, *45*, 320–362.
2. Davis, B.; Regan, R. R.; Ickes, H. Method for the preparation of monolayers of denatured RNA. *Biol. Chem.* 1997, *111*, 124–127.
3. Regan, R. R.; Davis, B.; Ickes, H. The detection of monomeric RNA samples. *J. Biol. Chem.* 1997, *104*, 4439–4445.
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## REFERENCES

Dr. Harold Ickes Spectroscopy Laboratory Sandia National Laboratory Albuquerque, NM 87185 505-555-1212	Professor Wilson Albright Department of Chemistry University of Chicago Chicago, IL 60637 312-555-1212	Professor Stuart Anthony Department of Chemistry University of Southern Florida Tampa, FL 33620 813-555-1212 santhony@usf.edu
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## EXAMPLE 9: Mid-Career Ph.D. Chemist

### JAMES WONG LEE

927 River Road  
Stamford, CT 06901  
203-555-1212

#### OBJECTIVE

A management position in new product development in the specialty chemical industry that emphasizes a broad background in synthesis, formulation, process, and product development.

#### SUMMARY

- Proven track record in organic synthesis, formulation
- Success in process and product development
- Experience in specialty, industrial chemicals, and petroleum industries
- Creative, well-organized, and a strong problem solver

#### MAJOR ACCOMPLISHMENTS

- Launched a novel process for sophorane diisocyanate by using a highly selective catalyst
- Upgraded company's line (melamine and acrylamide) to innovative products for coatings, adhesives, cement additives, paper sizings, rubber adhesion promoters, binders, and flame-retardant materials
- Succeeded in process development and preparation of ultraviolet stabilizers for sunscreen, plastic additive, and intra-ocular lens including developing photochromic polyurethane coatings for polycarbonate CR-391 lenses
- Introduced a new series of potassium silylalkylamides to the pharmaceutical markets resulting in annual sales of \$50,000
- Developed cost-effective synthesis for aromatic isocyanates MDI/PMEPI by nonphosgenation route. Developed a proprietary process for the production of *para*-methylstyrene
- Upgraded C-4 stream to potential premium products in specialty applications (corrosion inhibitors, scale inhibitors, biocides, and rubber chemicals)
- Developed proprietary formulations and flood processes to recover residual oil from high brine reservoirs. Established simple tracer systems to determine flow patterns

#### EMPLOYMENT HISTORY

- |              |  |
|--------------|--|
| 1983–Present | Senior Research Chemist, Chemicals Division, Dow Chemical, Stamford, CT<br>Responsible for R&D of new products and processes to increase the profitability and competitiveness in various business areas   |
| 1982–83      | Research Chemist, Organometallics and Intermediates, Acme Safety and Appliances, Pittsburgh, PA<br>Upgraded alkali metal raw materials to premium products. Synthesized key intermediates and samples of synthetic pyrethroid insecticides for customers   |
| 1980–82      | Research Chemist, Chemicals and Minerals, Lakeland Science and Technology Company, Pittsburg, KS<br>Developed processes for isocyanates, <i>para</i> -methylstyrene, and new product research from C-4 feedstock   |
| 1979–80      | Research Chemist, Alternate Resources and Lubrications, Glade Research and Development, Princeton, NJ<br>Researched and developed processes to enhance oil recovery  |
| 1978–79      | National Institutes of Health Postdoctoral Fellow, Chemistry Department, California Institute of Technology, Pasadena, CA<br>Participated in team to establish mutagenicity–structure relationship and activation mechanism of tryptophan pyrolysates. Designed and synthesized amino acid tryptophan pyrolysate analogues |

1977–78      Project Investigator, Chemotherapy and Pharmacology, National Cancer Institute,  
Bethesda, MD  
Synthesized chemotherapeutic agents coformycin and hycanthone, and radiolabeled compounds.  
Prepared derivatives for metabolites identification in pharmacological study

## **HONOR**

American Men and Women in Science

## **AFFILIATIONS**

American Chemical Society  
Society of Plastics Engineers

## **PATENTS AND PUBLICATIONS**

A complete list of patents and publications is available on request. It includes

- Sixty-eight United States and international patents
- Sixteen publications in referred scientific journals
- Twenty-two publications in trade magazines and journals
- Fourteen oral presentations at national and international conferences

## **EDUCATION**

Ph.D. in Chemistry, Rice University, Houston, TX, 1976  
B.S. in Chemistry, National Taiwan University, 1971

*References available upon request.*

## EXAMPLE: Curriculum Vitae

### RODNEY FARQUART

Assistant Professor  
Department of Chemistry  
University of Southern Wisconsin  
Evansville, WI 53536  
608-555-1212

#### EDUCATION

Ph.D., Materials Chemistry, University of California–Berkeley, Berkeley, CA, 1995  
Adviser: Professor A. M. Stacy

B.S., Chemistry, Amherst College, Amherst, MA, 1990  
Adviser: Professor D. F. Padowitz

#### EXPERIENCE

- 1996–Present    Assistant Professor, University of Southern Wisconsin, Evansville, WI
- 1995–96        Postdoctoral Fellow, Massachusetts Institute of Technology, Cambridge, MA, with Professor M. Wrighton
- 1990–95        National Science Foundation Predoctoral Fellow, University of California–Berkeley

#### RESEARCH INTERESTS

- Materials chemistry, emphasis on growth and characterization of nanostructures; X-ray crystallography; structural chemistry of semiconductor materials; solid-state NMR spectroscopy

#### HONORS

- National Science Foundation Predoctoral Fellow
- DuPont Postdoctoral Fellowship

#### PROFESSIONAL ACTIVITIES

- Member-at-Large, Executive Board, Division of Professional Relations, American Chemical Society, 1997–Present
- Councilor, Southern Wisconsin Section, American Chemical Society, 1997–Present
- Professional and Career Assistance Consultant, American Chemical Society, 1995–Present
- Member, Executive Committee, University of Southern Wisconsin, American Association of University Professors, 1995–Present
- Member, Honors Program Review Committee, University of Southern Wisconsin, 1996

#### PROFESSIONAL SOCIETIES

- American Association for the Advancement of Science
- American Association of University Professors
- American Chemical Society
- American Crystallographic Association
- Materials Research Society
- Phi Lambda Upsilon

## **PUBLICATIONS**

A full list of 24 publications is attached. [Note: Include, if applicable, articles submitted or in press, but not those in preparation.]

## **ORAL PRESENTATIONS**

[Note: Include only important invited or keynote presentations.]

## **REFERENCES**

Professor A. M. Stacy  
Department of Chemistry  
University of California–Berkeley  
Berkeley, CA 94720  
510-555-1212  
(stacy@ucb.edu)

Professor D. F. Padowitz  
Department of Chemistry  
Amherst College  
Amherst, MA 01002  
413-555-1212  
(padowitz@amherst.edu)

Professor Mark Wrighton  
Chancellor  
Washington University  
St. Louis, MO 63130  
314-555-1212  
(wrighton@wu.edu)

# Appendix IV: Sample Cover Letters

## EXAMPLE: Cover Letter, Ph.D. Chemist

2200 South Lawn Street  
Columbus, OH 43085  
614-555-1212

March 23, 1998

Dr. James Swanson  
Personnel Recruitment Manager  
XYZ Laboratories  
1234 Flower Street  
Cincinnati, OH 45201

Dear Dr. Swanson:

I have just received my doctorate degree in analytical chemistry, and am writing to explore the possibility of employment as an analytical chemist at your Cincinnati location.

During my coursework at Ohio State University, I began to consider future employment with XYZ Laboratories. We used many of your instruments in our laboratory research, and I found their design, precision, and reliability impressive. I believe that I am well qualified for a job with your organization and I have the confidence, maturity, and judgment to back up my qualifications.

The enclosed résumé provides additional information about my work experience and educational background. I would appreciate the opportunity to meet with you to discuss how my education and experience would benefit your laboratories. I will contact you by phone within two weeks to discuss the possibility of an interview.

Sincerely,

Amy Amers  
Enclosure

## EXAMPLE: Cover Letter, B.S. Chemist

Thomas E. Lee  
Chemistry Department  
College of William and Mary  
Williamsburg, VA 23185

March 2, 1998

Dr. Al Peyton  
Corporate Recruitment  
Research Laboratories  
Eli Lilly and Company  
Indianapolis, IN 46285

Dear Dr. Peyton:

I am writing in response to the report of Eli Lilly in the *CPC Annual*. In May 1998, I will be graduating from the College of William and Mary with a bachelor's degree in chemistry. I plan to pursue a career as a synthetic research chemist after graduation.

Through participating in undergraduate organometallic synthetic research for the past 18 months, I have developed and improved valuable laboratory skills. The goals of my research project include optimizing reaction conditions and purification methods for each of the four steps in the synthesis of the unreported ligand, 4'-cyanobenzo-18-crown-6, and its rhodium complex. Currently, I am studying binding and extraction constants for the ligand and complex, as well as changes in behavior at the rhodium center, by UV-vis and NMR spectroscopy.

Last January, I presented this work at the Virginia Academy of Sciences in Blacksburg. Next month, I will present current results at the National Conference of Undergraduate Research in Kalamazoo, Michigan. Final results will be summarized in my honors thesis.

I look forward to the opportunity to interview for this position with you in the near future and will call you next week to confirm receipt of my résumé. My telephone number is 757-555-1212. Thank you for your time and consideration.

Sincerely,

Thomas E. Lee  
Enclosure





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