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WRITE IT, SPEAK IT

Effective Communications, the Path to Publication and How to Talk about Your Research

OVERVIEW

After attending “Write It, Speak It: Effective Communications,” attendees should better understand their personal communication styles as well as be equipped with strategies to become stronger verbal and non-verbal communicators.

KEY POINTS

Know Your Communication Style

- Determine if you are open or guarded, direct or indirect. To be successful, you need to first understand how you communicate.
- Know your audience and be able to communicate both technically and non-technically.

Types of Communication

- **Technical** — research article, poster, presentation, thesis, job interview
- **Non-technical** — news article, elevator pitch, infographic, press release, social media

Scientific Writing

- Understand what the reader needs and make your words accessible and accurate.
- Use your voice and have a clear take-away message.
- Focus on the big picture, give background information, and describe remaining challenges.
- Edit, edit, edit!

Tips for Being a Good Presenter

- Know your audience (experts, non-scientists, journalists or kids).
- Use clear, precise, jargon-free language.
- Use graphics only if they enhance the presentation.
- Focus on only three take-away messages.
- Adapt your message to meet the audience’s needs.
- Remember that body language and vocal tone count for more than 90% of your message, so relax, focus on intentional and meaningful gestures, make eye contact, and dress for success.
- Practice, practice, practice!

Be Ready with a Short Summary

- Create a 1-2 minute pitch about your research, career goals, and interests.
- Make your message personal and engaging. Be memorable.
- End on a future note (i.e. “Eventually I would like to...”).

Additional Resources

ACS Reactions :::: Chemical & Engineering News — learn to write like an expert! :::: C&EN Speaking of Chemistry
To access these resources and more, visit acsoncampus.acs.org/resources



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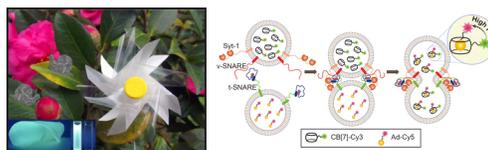
10 TIPS FOR PREPARING YOUR MANUSCRIPT

OVERVIEW

After attending “10 Tips for Preparing Your Manuscript,” attendees should be armed with strategies for preparing a well-organized, carefully crafted manuscript. This includes making compelling graphical elements, selecting a strong title, and writing an impactful cover letter.

KEY POINTS

- 1 Create a useful outline** — Organize data and ask questions like, “What do the results mean?”
- 2 Choose the journal with care** — Consider scope and target audience
- 3 Read and follow the author guidelines** — Understand what is expected of your submission
- 4 Tell a story** — Explain the importance of the research, provide context, analyze the data accurately
- 5 Draw graphics with care** — Graphics should enhance the text, not leave the reader confused
- 6 Attract readers with a strong title** — Create a simple, effective, evocative, and accurate title
- 7 TOC graphics count** — Capture readers’ attention, visually depict the essence of the research
- 8 Revise, edit, and rework** — A good paper goes through many, many drafts
- 9 Prepare the supporting information with care** — Review for missing or incorrect data, be consistent
- 10 Write a strong cover letter** — This is the first item an editor reads so be convincing!



Additional Resources

Publishing your Research 101 :: Mastering the Art of Scientific Publication :: Supporting Information Preparation (an editorial in *Organic Letters*) :: To access these resources and more, visit acsoncampus.acs.org/resources



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WHAT'S NEXT?

Your Guide to Exploring Careers, Expanding Skills and Finding a Job

OVERVIEW

After attending “What’s Next? Your Guide to Exploring Careers, Expanding Skills and Finding a Job,” attendees should have a better idea of their professional objectives and be able to articulate their strengths and value within the context of a job search and networking conversation.

KEY POINTS

Determine Your Professional Objective.

Be specific about your career pathway but remain general about your preferred job type.

Find your “sweet spot” — the intersection among your values, strengths, and the opportunities available in the job market.

Consider your personal values — what you like to do and what rewards you personally, when approaching your job search. Do not think only about what you know and can do. Usually, there are 2-3 personal values that dominate and they can change over time.

Consider your personal strengths when mapping out your career path. Non-technical skills can be as important to success in a job as are technical skills.

Plan your job search. Utilize ACS resources such as C&EN Jobs, the ACS Career Fair, and ACS Personal Career Consultants.

Build your professional network. Start networking to make connections, to signal your availability and interest, and to learn about companies and job positions.

Networking Tips:

- Set the objective to meet at least two new people per event.
- Engage people in conversation about themselves.
- Print and exchange business cards.
- Ask for a follow-up contact.
- Follow-up within one week.

Networking Opportunities:

- ACS National Meetings
- ACS Local Section and Technical Division Meetings
- Events on your campus
- Online

Additional Resources

ACS Career Navigator™ :: ACS College to Career :: ACS Career Pathway Workshops :: ACS Webinars
To access these resources and more, visit acsoncampus.acs.org/resources



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SCIFINDER®

Searching for Science

OVERVIEW

After participating in the SciFinder® session, you'll have a deeper appreciation for the strength of this tool as a comprehensive research solution and its importance in the scientific learning process. Go hands on with SciFinder® to learn how to quickly focus on the most relevant results and develop search strategies to help in your career development.

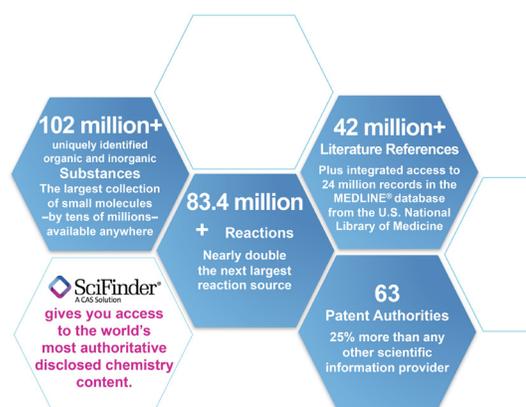
KEY POINTS

SciFinder® content is comprehensive, high quality and up to date, ensuring you don't miss vital information to advance your research.

- Includes coverage of thousands of journals and 63 patent authorities
- Manually curated by hundreds of chemistry experts around the world
- Updated daily and/or weekly with new references, structures and reactions
- Used by all of the top chemistry programs and >90% of the top 500 schools worldwide

SciFinder® is more than a chemistry textbook — it helps you see the big picture.

- Gain insights from current and past research
- Expedite your workflow in the lab with methods and procedures, regulatory information and the ability to directly purchase the chemicals you need



- Bolster your grant writing with all the necessary tools for your preliminary and ongoing research

Enhance your job search by connecting to the research community.

- Find organizations publishing around your research interests
- Connect with peers in your field

Additional Resources

SciFinder® Training Materials: www.cas.org/training/scifinder :: SciFinder® Content: www.cas.org/content

Contact Us: www.cas.org/contact-us :: To access these resources and more, visit acsoncampus.acs.org/resources



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COPYRIGHT, OPEN ACCESS OPTIONS, AND PUBLICATION ETHICS

OVERVIEW

After attending “Copyright, Open Access Options, and Publication Ethics,” attendees should have a basic understanding of copyright, ACS Open Access options, and common ethical violations.

KEY POINTS

Copyright

- An intellectual property law that protects all tangible original works that you create.
- Grants owners exclusive rights to reproduce works, create derivatives, sell or transfer works, or display works publicly.
- When you publish an article in an ACS journal, you transfer the copyright to the Publisher. Each Publisher is different, so make sure you understand what you are transferring.
- The ACS’ Journal Publishing Agreement allows authors to use their articles for a range of scholarly purposes such as republishing a thesis you are required to submit for your degree.

ACS’ Pillars of Open Access

- **ACS AuthorChoice** — options for authors to buy articles into open access, with expanded offerings to meet the needs of funders and institutions
- **ACS Central Science** — ACS’ first fully open access journal publishing the most compelling, important primary reports on research in chemistry and allied fields with no charge to readers or authors
- **ACS Omega** — a fully open access journal publishing across the breadth of chemistry and focusing on technical soundness. Authors or funders pay a charge and articles are open access for all readers
- **ACS Author Rewards** — a rewards stimulus program that distributed \$60,000,000 in open access vouchers to authors publishing in 2014 for use during 2015 – 2017
- **ACS Editors’ Choice** — a program spanning the journals published by ACS. Editors make recommendations of articles with a broad impact and ACS sponsors one article into open access each day of the year

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Ethics and Scholarly Publishing

Most common ethical violations (that you should avoid!)

- **Self-plagiarism** — reusing your own content without proper attribution
- **Prior Publication** – publishing duplicate content in more than one location
- **Concurrent submissions** — submitting the same manuscript to multiple journals at the same time
- **Data Fabrication or Falsification** — deliberately or unintentionally changing data to fit the conclusions
- **Ghost or gift authorship** — adding authors who did not contribute, or leaving off authors who did

Possible Consequences of Ethical Violations

- Rejection of the submitted manuscript or retraction of a published article
- Notification to institutions or agencies that funded the research
- Journal sanctions
- Public notoriety or damage to personal reputation

Additional Resources

[ACS Ethical Guidelines to Publication of Chemical Research](#)

[ACS Open Access Options](#)

[Author & Reviewer Resource Center](#)

To access these resources and more, visit acsoncampus.acs.org/resources



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PEER-REVIEW

Why, How-To, and What Not To Do

OVERVIEW

After attending “Peer-Review: Why, How-To, and What Not To Do,” attendees should be well versed in how the peer-review process is carried out at ACS Publications, what editors look for when reviewing submissions, qualifications needed to become a reviewer, strategies to evaluate a manuscript, and tips for responding to reviewer reports.

KEY POINTS

Definition

Peer-review is the evaluation of a manuscript by people with relevant expertise and is intended to determine a manuscript’s relevance and suitability for publication in a journal.

To warrant peer-review, a manuscript should have:

- Appropriate scope (resonate with the journal’s target audience)
- Technical validity (have well-designed experiments, high level data interpretation)
- High quality writing (be clear, concise, free of grammatical errors)

Reviewers should have:

- Broad knowledge
- Technical expertise
- Ability to provide an unbiased opinion

Handling editors:

- Invite reviewers suggested by the author and chosen from an independent pool to ensure a fair review process
- Carefully review each manuscript before and after external peer-review
- Analyze reviewer comments and make a decision about the manuscript

Upon receiving reviews, authors should:

- Carefully read the decision letter and comments
- Evaluate the relative importance of the comments
- Perform necessary experiments and include the results in the revised text
- Be timely if a revision or resubmission is requested

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Remember to:

- Be professional in responses to the reviewer comments
- Respond to each comment noting if/what changes were made
- If a reviewer misunderstood the content, provide scientific support or rewrite text for clarity

What to do if a manuscript is declined:

- Step back for a few days to regain perspective
- Refocus on the science and examine the editors' and reviewers' comments again
- Use the comments constructively to improve the manuscript
- Submit to a new journal with an appropriate scope that reaches the target audience

To become a peer-reviewer:

- Publish high quality work in reputable journals
- Attend conferences and network to enhance your standing within the scientific community
- Let your interest be known to colleagues and advisors, who might suggest you as a reviewer
- Let your interest be known to the journal office if you hold an independent research position

Additional Resources

Publishing your Research 101, Episode 6: The Review Process
Mastering the Art of Scientific Publication

To access these resources and more, visit acsocampus.acs.org/resources