

Partnering with the Global Research Community

How to Get Published in a Research Journal: A Publisher's Guide to Writing Manuscripts

Henri van Dorssen, Executive Publisher Elsevier Ltd, Oxford, UK 18-20, June 2014, South Korea



South Korea - articles and citations Publishing Citable VS. Non Citable Documents







http://www.scimagojr.com/index.php

.







What does a Publisher actually do?

The Publisher's Role









Why Publish with Elsevier?

Scientific Publishing Industry









ELSEVIER PUBLISHES 15 OUT OF THE TOP 20 CHEMICAL ENGINEERING JOURNALS*

RANK	TITLE 2012 IMPACT	FACTOR
1	PROGRESS IN ENERGY AND COMBUSTION SCIENCE	15.089
2	ENERGY & ENVIRONMENTAL SCIENCE	11.653
3	ANNUAL REVIEW OF CHEMICAL AND BIOMOLECULAR ENGINEERING	7.512
4	APPLIED CATALYSIS B-ENVIRONMENTAL	5.825
5	JOURNAL OF CATALYSIS	5.787
6	APPLIED ENERGY	4.781
7	JOURNAL OF MEMBRANE SCIENCE	4.093
8	COMBUSTION AND FLAME	3.599
9	DYES AND PIGMENTS	3.532
10	CHEMICAL ENGINEERING JOURNAL	3.473
11	FUEL	3.357
12	SEPARATION AND PURIFICATION REVIEWS	3.154
13	DESALINATION	3.041
14	CATALYSIS TODAY	2.980
15	SEPARATION AND PURIFICATION TECHNOLOGY	2.894
16	ENERGY & FUELS	2.853
17	FUEL PROCESSING TECHNOLOGY	2.816
18	AEROSOL SCIENCE AND TECHNOLOGY	2.780
19	JOURNAL OF SUPERCRITICAL FLUIDS	2.732
20	JOURNAL OF AEROSOL SCIENCE	2.686

* Ranking within ISI category: Engineering, Chemical Elsevier titles shown in white







Publishers guide to writing a manuscript





What steps do I need to take before I write my paper?









An international editor said:

"The following problems appear much too frequently"

- Submission of papers which are clearly out of scope
- Failure to format the paper according to the Guide for Authors
- Inappropriate (or no) suggested reviewers
- Inadequate response to reviewers
- Inadequate standard of English
- Resubmission of rejected manuscripts without revision





0

Original Research Articles

Letters or short communications

Decide the most appropriate type of manuscript



Original Research Articles



- Standard for disseminating completed research findings
- Typically 8-10 pages, 5 figures, 25 references
- Draft and submit the paper to appropriate journal
- Good way to build a scientific research career

Sample Original Research Article Titles

"Hydrodynamic study of a liquid/solid fluidized bed under transverse electromagnetic field"

"Soluble nanoparticles as removable pore templates for the preparation of polymer ultrafiltration membranes"

"Kinetics of pressure oxidative leaching of molybdenite concentrate by nitric acid"

Short Communications



- Quick and early communications of significant, original advances
- Much shorter than full articles.

Sample Short Communications Titles

A proposed rapid screening technique for new reverse osmosis membranes. Desalination, 285, p. 399-400 (2012)

Dispersion of particulate clusters via the rapid vaporization of interstitial liquid. Powder Technology, 215-216, p. 223-226 (2012)

Review papers



- Critical synthesis of a specific research topic
- Typically 10+ pages, 5+ figures, 80 references
- Typically solicited by journal editors
- Good way to consolidate a scientific research career

Sample Review Paper Titles

"Cross-flow microfiltration applied to oenology: A review"

"Boron removal from saline water: a comprehensive review"

"Review on solvent extraction of cadmium from various solutions"

Journal Selection



It is not (only) the Impact Factor, it is (mainly) the right audience!

- Consult the Journal homepage to learn:
- Aims and scope
- Accepted types of articles
- Readership
- Current hot topics
 - go through the abstracts of recent publications

TIP: Articles in your references will likely lead you to the right journal.

DO NOT gamble by submitting your manuscript to more than one journal at a time.

Consult the Journal Homepage



ELSEVIER	Type here to se	arch on Elsevier.com	Advance	ed search Follow	us: 🗗 🛅 💌	Help & Contact
Journals & books	Online tools	Authors, editors & rev	iewers	About Elsevier	Community	Store
Execute the grade	Education for Chemical Engineers Guide for Authors Official Journal of the European Federation of Chemical Engineering: Submit Your Paper			Share this page:		
	Part D Publication of the Ir Education for Chemi launched in May 200	stitution of Chemical Enginee cal Engineers is IChemE's new 6 at ACHEMA.With a remit to pu	rs online journal, blish education	Track You Order Jou	ur Paper 🔻	KNOW &
Sample Issue	research papers, resource reviews and teaching and learning notes, View Articles ECE View full aims and scope Editor in Chief: D. Shallcross Editor in Chief: D. Shallcross			ADVANCE YOUR PADER'S		
Imprint: ELSEVIER	View full editorial board Publish your article		Journal I	nsights		IMPACT
ISSN: 1749-7728	Options Options	Open Access in Education for Chemical Engineers	Discover this journal's metrics		netrics	
Stay up-to-date	Conferences	New Horizons in Gasification	Impact	0	2,	ARTICLE
Register your interests and receive email alerts tailored to your needs	er your interests seive email ailored to your ere to sign up v us VIEW ALL Highlighted Articles		Authors		Speed	USAGE ALERTS
Click here to sign up				MORE		New service
f⊻₹			Virtual Sp	Editors' Cho	vice	MARK MARK
Subscribe to RSS	(AD)	Articles highlighted in The Chemical Engineer, Nov		A Selection 0 2012-2013	of Articles,	





What steps do I need to take before I write my paper?





How do I properly build my paper?



Why is language important?

Save your editor and reviewers the trouble of guessing what you mean

Complaint from an editor:

"[This] paper fell well below my threshold. I refuse to spend time trying to understand what the author is trying to say. Besides, I really want to send a message that they can't <u>submit garbage</u> to us and expect us to fix it. My rule of thumb is that if there are more than 6 grammatical errors in the abstract, then <u>I don't</u> <u>waste my time</u> carefully reading the rest." Language does make a difference



"It is quite depressive to think that we are spending millions in grants for people to perform experiments, produce new knowledge, hide this knowledge in a often badly written text and then spend some more millions trying to second guess what the authors really did and found."

Amos Bairoch Nature Precedings doi:10.1038/npre.2009.3092.1

Do publishers correct language?



- No. It is the author's responsibility to make sure their paper is in its best possible form when submitted for publication
- Publishers often provide resources for authors.
 - Some publishers may perform technical screening prior to peer review.
 - <u>http://webshop.elsevier.com/languageservices</u>



NEW! Translation services

Lost in English translation? Write in your own language and get expert support. Our scientific professionals translate from eight different languages to English guaranteed within 12 days.





English language editing

Only 5 business days to have your manuscript edited in correct scientific English. Our history of scientific publishing ensures that your English is free of mistakes.

MORE >



Manuscript Language – Overview









Write direct and short sentences



One piece of information per sentence



Avoid multiple statements in one sentence

Tip: Read your manuscript out loud when proofreading. You will pick up on more errors and run-on sentences. 24

Sentence Structure



An example of what NOT to do:

"If it is the case, intravenous administration should result in that emulsion has higher intravenous administration retention concentration, but which is not in accordance with the result, and therefore the more rational interpretation should be that SLN with mean diameter of 46nm is greatly different from emulsion with mean diameter of 65 nm in entering tumor, namely, it is probably difficult for emulsion to enter and exit from tumor blood vessel as freely as SLN, which may be caused by the fact that the tumor blood vessel aperture is smaller."

A possible modification:

"It was expected that the intravenous administration via emulsion would have a higher retention concentration. However, the experimental results suggest otherwise. The SLN entered the tumor blood vessel more easily than the emulsion. This may be due to the smaller aperture of the SLN (46 nm) compared with the aperture of the emulsion (65 nm)."





Present tense: for known facts & hypotheses

Past tense:

for experiments conducted & results













Finally, you should use English throughout the manuscript, including figures.







What steps do I need to take before I write my paper?



B How do I properly build my paper?



Thought Questions

What are some characteristics of the best manuscript writing you have seen?

What is it that distinguishes a very good manuscript from a bad one?





- Has a <u>clear</u>, <u>useful</u>, and <u>exciting</u> message
- Presented and constructed in a logical manner
- Reviewers and editors can easily grasp the significance



Read the 'Guide for Authors'



- You can find the Guide for Authors on the journal homepage on Elsevier.com
- Stick to the Guide for Authors in your manuscript, even in the first draft (text layout, nomenclature, figures & tables, references, etc.). In the end it will save you time!



Introduction

All contributions must conform to the Aims and Scope of the Journal, available on the Journal homepage at

Research Article Structure



- Title
- Abstract
- Keywords

Main text (IMRAD)

- Introduction
- Methods
- Results

and

- Discussion
- Conclusions
- Acknowledgements
- References
- Supplementary Data

informative, attractive, effective

How do you search for a paper?

Make sure each section of the paper fulfills its <u>purpose</u> clearly & concisely

Write in the same order you read:

- Figures and tables
- Methods, Results and Discussion
- Conclusions and Introduction
- Abstract and title





- A good title should contain the *fewest* possible words that *adequately* describe the content of a paper.
- Effective titles
 - Identify the main issue of the paper
 - Begin with the subject of the paper
 - Are accurate, unambiguous, specific, and complete
 - Are as short as possible
- Do not contain rarely-used abbreviations





Original Title	Revised	Remarks
Preliminary observations on the effect of Zn element on anticorrosion of zinc plating layer	Effect of Zn on anticorrosion of zinc plating layer	Long title distracts readers. Remove all <u>redundancies</u> such as "observations on", "the nature of", etc.
Action of antibiotics on bacteria	Inhibition of growth of mycobacterium tuberculosis by streptomycin	Titles should be <u>specific</u> . Think to yourself: "How will I search for this piece of information?" when you design the title.
Fabrication of carbon/CdS coaxial nanofibers displaying optical and electrical properties via electrospinning carbon	Electrospinning of carbon/CdS coaxial nanofibers with optical and electrical properties	"English needs help. The title is nonsense. All materials have properties of all varieties. You could examine my hair for its electrical and optical properties! You MUST be specific. I haven't read the paper but I suspect there is something special about these properties, otherwise why would you be reporting them?" – the Editor-in-chief

Abstract



- ... is freely available in electronic abstracting & indexing services [PubMed, Medline, Embase, SciVerse Scopus,]
 - This is the advertisement of your article.
 - Make it interesting, and easy to be understood without reading the whole article. What has been done? What are the main findings?
 - Follow the Rule of 10:
 - 1-2 sentences: aim
 - 2-3 sentences: materials & methods
 - 2-3 sentences: results
 - 2 sentences: discussion/conclusions

Graphical Abstracts



- May be MANDATORY for your journal (check Guide for Authors)
- Summarize article content in a concise, pictorial form
- Submitted as a separate file in EES
- Image size: 531 x 1328 pixels (h x w) with minimum resolution 300 dpi
- Image should be readable at size of 5 x 13 cm (screen resolution 96 dpi)
- Preferred file types: TIFF, EPS, PDF, MS Office files
- Visit: <u>http://www.elsevier.com/graphicalabstracts</u> for examples
- Visit: <u>http://www.webshop.elsevier.com/illustrationservices</u> for Elsevier's professional illustration services

Illustration Services

Our professional scientific and medical illustrators create high-quality images for your research paper, presentation, or book. >>read more here.



This is what you get:

FREE QUOTE IN 24 HOURS!

- Medical and scientific illustrators
- Copyright of illustrations stays yours
- Easy preview mechanism for review
- Prices starting at only \$19





- May be MANDATORY for your journal (check Guide for Authors)
- 3-5 bullet points that convey the core findings of the article
- Submitted as a separate file in EES
- Maximum 85 characters (including spaces) per bullet point
- Visit <u>http://www.elsevier.com/highlights</u> for examples



Examples



Microreaction system for non-phosgene direct isocyanate synthesis was developed.

► Gas–liquid slug flow of the reactant CO gas and nitrobenzene was formed in the microchannel.

► The isocyanate yield of the microflow reaction was three to six times higher than that of the batch reaction.

► Higher isocyanate yield was obtained in a narrow-bore tube (0.5 mm i.d.) than in a wide-bore tube (1.0 mm i.d.).

► The results were interpreted in terms of the length of the liquid slug monitored through transparent PFA tubes.

Takebayashi, et al. *Direct carbonylation of nitrobenzene to phenylisocyanate using gas-liquid slug flow in microchannel. Chem. Eng. J.* 180 (2012) 250-254

Perchlorate can be reduced by titanium ions in solutions with high concentrations of acid.

► The TMH system separates a degradation zone that contains Ti(III) from a contaminated zoned that contains perchlorate.

► The model successfully described adsorption, diffusion and reduction of perchlorate in the system.



S.H. Park, et al. *Perchlorate degradation using a titanium and membrane hybrid (TMH) system: Transport, adsorption, chemical reaction* J. Membr. Sci. 390-391 (2012) 84-92





Introduction is especially important! A high proportion of "lack of novelty" rejections are made after reading abstract, introduction and conclusions.

- You are telling a story. Introduction sets the scenario.
- Do not attempt to summarize the whole field (it is not possible!)
- Quote what is necessary for background and to give credit to previous works. Do not add superfluous references.
 - Editors may choose reviewers from cited work

Introduction (Continued)



- Give a clear motivation for the work. Explain why before explaining how.
- Explain what is **novel** compared to what is already available in the *literature*
- High level description of your approach. Why is it important? Why is it difficult?
- What are the *alternatives*? Why is yours different or better?
- What are the gaps and how are you going to fill them? What is your "silver bullet"?
- At the end of the introduction the reader knows the problem and maybe the solution you propose





Describe how the problem was studied

- Include detailed information. The reader should be able to reproduce the experiment.
- Previously published procedures need not be described in depth:
 - Cite methods and note any changes to the protocol and/or
 - Provide detailed methods in Supplemental Material
- Identify the equipment and materials used
 - Provide source and related product information (company, molec. weight, etc.)
- Write out full chemical/biological compound names (followed by abbr.) then use abbreviations throughout paper
 - Make sure that all symbols are defined.

Results



- You are telling a story. Keep the narrative flowing, concise, well organized.
 - The main findings
 - Analytical description of data from experiments described in the Methods section.
 - Findings/data of secondary importance should be captured in <u>Supplementary Materials</u>
 - Minimal *interpretation* of results and/or *comparison* with literature unless the journal combines the <u>Results and Discussion</u> sections
 - Results of the statistical analysis
 - Figures and tables

Results: figures and tables



- Illustrations are critical because
 - Figures and tables are the most efficient way to present results and
 - Results should be presented in a nonredundant way
- Captions and legends should be self-explanatory; figures should be able to stand alone
 - What is the take home point?
- Maximize space; make sure final versions of figures can be easily read (watch use of legends)
- Use consistent formatting between figures
 - Plots: labels, scale and symbols
 - Micrographs: scale bar, point out key features₄₄



Fig. 1. Optical images of ZnO paper (a) and HAuCl₄-treated ZnO paper (b), SEM image of HAuCl₄-treated ZnO paper (c) and TEM image of ZnO whiskers picked up from HAuCl₄-treated ZnO paper (d). The size of each paper composite was 8 × 10² mm².

Results Do not try to fit everything in!



What ends up in the paper

Your work

Slide contributed by Diego Gutierrez





- Critical interpretation of the results
 - Make the Discussion correspond to the Results
 - Be rigorous. Do not make statements that are not supported by your data.
 - Compare your results to published results
- Significance & Implications
 - How does your data relate to the "big picture" / applications?
 - Can you identify a mechanism or form new hypotheses?

Conclusions



How the work advances the field from the present state of knowledge

- Not the same as a summary!
- Give conclusions that are supported by your results
- Try to end in a positive tone
- Do not overreach. Statements such as "this method can potentially be used..." do not belong to the conclusions (and often irritate referees)





Cite the main scientific publications on which your work is based

Do not use too many references

Always ensure you have fully absorbed material you are referencing

Avoid excessive self-citations

Avoid excessive citations of publications from the same region

Conform strictly to the style given in the guide for authors



Acknowledgments



Ensures those who helped in the research are recognised



Authorship



- Policies to address authorship can vary
- The International Committee of Medical Journal Editors (aka Vancouver Group) declared that an author must:
 - substantially contribute to conception and design, or acquisition of data, or analysis and interpretation of data;
 - 2. draft the article or revise it critically for important intellectual content; and
 - 3. give their approval of the final version to be published.
 - 4. <u>ALL 3 conditions</u> must be fulfilled to be an author!
- Any other contributors only need to be acknowledged.

Authorship



General principles for who is listed first

- First Author
 - Generally conducts and/or supervises data generation
 - Sometimes puts paper together and submits to journal
- Corresponding author
 - The first author or a senior author from the institution.
 Considered "mainly responsible" for the contents (but responsibility is shared!). Somebody with a more permanent e-mail address!
 - Sometimes puts paper together and submits to journal





Avoid

- Ghost Authorship
 - leaving out authors who should be included
- •Gift Authorship
 - including authors who did not significantly contribute
- •Spelling names: Be consistent!

Ensure all authors are aware of manuscript and offer opportunity to provide edits.

Now that you *think* you have finished...



- Read the paper again and circulate to all coauthors. Be critical yourself and accept criticism from others.
- Advisors
- Try to be in the position of a reader/reviewer.
 - Forget what you know, read only what is written. Yes, it is difficult. Just keep trying.
- If possible, have someone else you trust to comment on the paper.
 - If you need to explain something verbally, then you probably need to rewrite that part.



Very important: Your chance to speak directly to the editor

- Often overlooked by authors and filled cursorily (a big mistake!).
- You have spent months working in your paper. Do not hurry up now!
- Explain the main findings and motivation
- Highlight the novelty and significance of results
- State final approval of all co-authors
- State prior reviews, revisions, etc.
- Note special requirements
 - Referees: experts, not collaborators
- State any conflicts of interest







What exactly happens after I submit my paper?



Peer-Review



- Minor Revision
 - Good job. Just do what you are told and resubmit quickly.
- Rejection
 - It may be disappointing, but most of the times reviewers are right (and yes, they <u>did</u> understand the paper; and no, they are not biased against you)
 - If you think you have been unfairly treated you may appeal. But this should be exceptional.

Peer-Review



- Major Revision
 - Major is "major." Take it very seriously.
 - Answer all the comments received, one by one, explaining the changes made to the manuscript in response to the remarks (or the reason why a modification is not required).
 - Go straight to the point. Refer to what the comment is about, and not something else.
 - If you feel a remark is not justified or a request is unreasonable, say so, but substantiate your response.
 - If in doubt, the Editor is likely to send it back to the referees.
 - Submit a revised version where the changes have been highlighted.

After acceptance



- Be diligent with any last minute requests (e.g. quality of figures, format adjustments).
- Return the proofs quickly. But make sure you revise them thoroughly (it is your *last chance* to correct any mistakes before your manuscript is published)

What leads to acceptance???

Attention to details

Check and double check your work Consider the reviewers' comments English must be as good as possible **P**resentation is important Take your time with revision Acknowledge those who have helped you New, original and previously unpublished Critically evaluate your own manuscript Ethical rules must be obeyed



Publis

Nigel John Cook Editor-in-Chief, Ore Geology Reviews



Thank you

For further information please visit: <u>www.elsevier.com/authors</u> <u>www.senseaboutscience.org</u> <u>www.biggerbrains.com</u>

www.articleofthefuture.com

