Советы авторам научных статей от редактора ведущего химического журнала

Ganna Lyashenko, PhD Senior Associate Editor Webinar, December 18th, 2019







My Route to Chemistry – A European Journal and Beyond







WILEY-VCH

Overview

- 1) Editorial Office
- 2) Scientific Misconduct
- 3) Peer-Review Workflow
 - Initial evaluation
 - Review process
 - Coming to a decision

4) Simplify your Writing for Success

- How to write titles and abstracts
- Tips on simplifying your writing







About Wiley-VCH

Facts and Figures

- Wiley-VCH (Weinheim): part of Wiley since 1996
- (VCH = Verlag Chemie)
- 500 employees from 24 nations
- > 30 chemistry journals
- in-house editorial offices

















What Do We Do?

Organizers

- Correspondence
- Administration
- System maintenance

Scientific Editors

- Monitoring of the latest scientific developments
- Manuscript acquisition (incl. peer-review preselection)
- Manuscript handling
- Copy-editing; proofs and revision
- News, portals, social media

Content Managers

- Typesetter management
- Online publication
- Print publication









Meet Our Team









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Why Publish?



Fame Recognition by your peers



Fortune Promotions, grant applications, research funding



Responsibility To society, taxpayer-funded research, contribution to progress



Quality control Through peer review









Ethical Guidelines for Publication in Journals and Reviews

http://www.euchems.eu



European Chemical Society











Author's Responsibility

- Scientific honesty
- Not to engage in redundant publication
- To avoid undue fragmentation of their work into multiple manuscripts











Author's Responsibility

• Correct use of the "authorship"



- The award of authorship should **balance intellectual contributions** [...] against the collection of data and other routine work
- If there is no task that can reasonably be attributed to a particular individual, then that individual should not be credited with authorship







Ethical Guidelines for Publication in Journals and Reviews

- Adding one name (co–first author) on a paper: 90,000 ¥
- Adding two names (co-first author and co-corresponding author): 160,000 ¥

Science Investigation: M. Hvistendahl, *Science* 2013, *342*, 1035-1039









Editors Have the Following Responsibilities

- Ensure that manuscripts are handled in a fair, timely and confidential manner
- Avoid contacting referees that the author asked not to be consulted
- Avoid using unpublished work for personal gain









Duplicate Submission

Duplicate Publication

Plagiarism

Self-Plagiarism

Inadequate citing

Fraud



- Taking material from another's work and submitting it as one's own
- The appropriation of another person's ideas, processes, results, or words without giving appropriate credit







How Can Plagiarism be Detected?

"Whether you're a publisher, goveri non-profit or legal firm, if you have ensuring content originality, iThent for you."

Chris Cross, General Manager, iThenticate







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Silicon (Si) has a great potential as a photoelectrode because it is an earth-abundant element with several desirable properties, including a narrow energy band gap of ~1.2 eV, high carrier mobility, stability over a wide pH range, non-toxicity, and commercial availability.^[11] Si is a key material in the solid-state photovoltaic industry, whilst modified Si has been used increasingly in solid/liquid photoelectrochemistry. For example, the surface of a p-Si trassdoped heavily with the or (n⁺ error for equivable to consider on the solid state photoelectrochemistry. For example, the surface of the n-Si photoandes as a protective layer in PEC water oxidation.^[14] Although planar p-Si is promising.^[15] charge carrier recombination can occur due to the low diffusion length of the minority carriers in the same absorber thickness.^[16] However, a wire-array geometry possesses long optical paths for efficient photon absorption and increased collection efficiency for the minority carrier. A comparison of planar p-Si and p-Si wire arrays indicated that the latter exhibits a significantly lower reflectance^[17] and 0.1–0.3 V higher anodic onset potentials in PEC water splitting processes.^[13,18]

With this in mind, this study attempted, for the first time, to fabricate Sn-coupled p-Si nanowire arrays for application to solar CO₂ conversion. Vertically aligned, free-standing p-Si nanowire arrays of varying lengths were grown on p-Si wafers using an electroless chemical etching technique. The wire arrays prepared using this method exhibited a > 0.5 V higher anodic onset potential compared to planar p-Si and an approximately two-fold increase in photocurrent generation and formate production. However, the Faradaic efficiencies for formate formation of the planar and wire electrodes were similar at < 10%, presumably due to the same surface characteristics. In an attempt to catalyze formate production, Sn nanoparticles were strategically photo-electrodeposited onto the p-Si electrodes because of its

★ ChemPubSoc

Europe

Experimental Section

Fabrication of p-type Si nanowire electrodes

An Ag-catalyzed electroless chemical etching method was used to prepare vertically aligned, freestanding silicon nanowire array electrodes. For this, p-type Si (100) wafers (WaferKorea, Inc.; B-doped at 10^{14} – 10^{16} cm⁻³ based on its resistivity of 1–30 Ω-cm according to the producture information access in the nack desoft as 51 waters was conserved water. Duri in the classification etching inocess, the nack desoft as 51 waters was conserved in Teflon tape. The substrates were dipped in a pranha solution (H₂SO₄/H₂O₂ – 3 in volume) for 5 min and then in HF (5%) for 1 min to remove the surface oxides. To deposit the Ag seed layer, the substrates were dipped into an aqueous solution of AgNO₃ (10 mM) and HF (5 M)

for 3 min and rinsed thoroughly with deionized water. Finally, they were immersed into an aqueous solution of H_2O_2 (0.27 M) and HF (5 M) for various times (1–10 h) to grow the wire arrays. The wafers were then soaked in HNO₃ (60 %) to remove the residual Ag from the Si surface, rinsed with deionized water, and dried using a stream of N₂. For the photoelectrochemical tests, the Si wafers were cut into pieces (1.5 cm × 1.0 cm) onto which a silver paste (Cans, Inc.) was painted to have ohmic contact of the back side. After drying at 80 °C, the p-Si wire arrays were masked with Teflon tape and only a certain fraction of the area (0.35 cm²) was exposed to the electrolyte.



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What about these?

Figure captions often overlap with literature: a certain diagram type or data set is often described in the same words (minimalistic)

"Not every overlap is the author's fault or intention – coincidences are possible!"







Experimental section:

Material synthesis74nd characterization:

All the samples were prepared by using a solid state reaction method. For FeS, MnS and Fe_xMn_{1-x}S (x=0.2, 0.5, 0.8), the Fe and/or Mn powder, S powder were carefully ground and tabletted. The 55 he tablets were sealed into vacuum quartz tube and heat-treated to 900°C for 40 h. After cooling dow 39 b room temperature, the obtained samples were ground for electrode preparation. The morphologies of the samples were observed using a scan 32 electron microscope (SEM) (Hitachi S-4800). The structure of the samples were characterized by X'Pert Pro MPD X-ray diffractometer (Philips, Holland) using Cu-Ka radiation (1.5405Å), and the exact lattice parameters were obtained by refining the XRD data using Fullprof.

El2 trochemistry test:

The working electrode was prepared by spreading the slurry of the active materials (70 wt.%), acetylene black (20 wt.%) and sodium alginate binder (10 wt.%) on Cu foil with the distilled water as solvent. The electrode was dried at 100°C in vacuum for 10 h before use. The coin cells were assembled with pure lithium foil as the counter electrode, and a glass fiber as the separator in an argon-filled glove box. The charge/discharge measurements v43 carried out on a Land BT2000 battery test system (Wuhan, China) at a current rate of 0.1C (1C=600 mA g⁻¹) under room temperature. The MnS and Fe_xMn_{1-x}S (x43 2, 0.5, 0.8) electrodes were discharged and charged between the voltage range of 0.1–2.5 V. The voltage range for the FeS electrode was 1.0–2.5 V.

This looks worse, doesn't it?

Looks bad, but it's about standard experimental procedures – very difficult to rephrase, and why would one intentionally describe the same method differently? That could be understood as trying to make it look new.







paper.

1. Introduction

The increasing needs of electrical energy storage have promoted the great success of lithium-ion basis ries (LIBs) in portable electronics, and they are also being developed for application in large-scale applications, su 3 as electric vehicles and grid-scale storage. The transition from portable electronics to vehicles and grid, with ex3 cted lifetime greater than ten years, will require substantial improvements of the LIBs in calendar and cycling life.[1,2] In addition, vehicle applications require at least a two-fold improvement of the energy and power densities. One of the promising classes of electrode materials that could meet these stringent requirements is the conversion reaction based transition metal compounds (including oxides, fluorides, sulphides and nitrides), which provide capacities several times higher than those of existing intercalation compounds, due to the multiple electron transfer per transition metal ion through the conversion reaction.[3-5] Among them, transition metal oxides [6-9] and fluorides [10-15] have been intensively investigated. It was shown that Li insertion into the MO/MF (M=Mn, Fe, Co, Ni and Cu)

3. Questionable...

The red overlap is harmless (hundreds of papers on topic published already)

The purple overlap is highly questionable. This was probably lifted intentionally from the source paper and only minimally modified.

If a manuscript displays a number of such overlaps, coincidence can be ruled out – especially when the number of sources is very limited. **Editors should take action**









CHEMISTRY A European Journal





Case Studies: Can it get worst? Yes...









Duplicate Submission Duplicate Publication Plagiarism Self-Plagiarism Inadequate citing

Fraud



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Some Examples of Scientific Misconduct: Falsification



Falsification is manipulating research materials, equipment, or processes, or changing or omitting data or results such that the research is not accurately represented in the research record









-

PeakTable

PDA Ch1 254nm 4nm

Peak#	Ret. Time	Area	Height	Area %	Height %
1	0.979	15550	415	0.518	0.166
2	6.624	17299	1499	0.576	0.598
3	6.783	19343	1785	0.644	0.712
4	7.073	98814	7864	3.291	3.136
5	7.495	2275244	181444	75.774	72.351
6	8.229	540968	55906	18.016	22.293





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The Blogosphere

ether and the dried completely under high vacuum to give 99mg (93% yield) of product.

Emma, please insert NMR data here! where are they? and for this compound, just make up an elemental analysis...



Pt(II)(($M_{s}S_{s},S_{s}$)-*p*-tolyl-binaso)(acac)(BF₄)₂ (154): A vial was charged with 100 mg (0.126 mmol) 5a and 24 mg (0.126 mmol) AgBF₄. 2 mL CH₂Cl₂ was added, the vial was covered and the reaction was left stirring in the dark for 2 hours. After this time, the reaction was filtered over celite to remove AgCl. Solvent was then removed to leave a







Some Examples of Scientific Misconduct: Sanctions

- an immediate rejection of the paper in question
- severe **warning** to the author
- a ban from submitting manuscripts for a certain period
- In some cases, the article will have to be retracted









Some Examples of Scientific Misconduct: Conclusions

- Scholarly publishing is built on a **foundation of trust**
- Unethical or fraudulent publication practices not only undermine trust in the scientific record, but waste a lot of time and money
- Ethical publication practices maintain the quality and reliability of the scientific literature









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Peer-Review Workflow









Before Submission

Choosing an Article Type and Journal

- Know your target audience
- Look at the literature
- See beyond the impact
- Read the journal requirements









Before Submission

ALWAYS read the journal's guidelines to authors carefully

Make yourself familiar with ethical guidelines for publishing









Manuscript Submission









Manuscript Submission

Editorial Proposal Menu Production Tasks

Handling Editor Main Menu

Quick Searches:

Cover Invites/Suggestion_ab

First Proofs Returned

Legal Statement Pending

Photoredox / Vie

Ready for Copy Editing

Second Proofs Returned

Sent back to author

With Technical Editor

Submissions With: 0 Reviews 1 Review 2 Reviews 3 Reviews 4+ Reviews Complete Complete Complete Complete Complete 20 19 2 0 0

Search

Search Submissions | Search People

Editor 'To-Do' List

My Pending Assignments (14) New Submissions (2) Revised Submissions (0) New Submissions Requiring Assignment (0) Revised Submissions Requiring Assignment (0) New Assignments (4) Submissions with Required Reviews Complete (2) Submissions Requiring Additional Reviewers (0) Submissions with One or More Late Reviews (6) Reviews in Progress (35) Reviewers Invited - No Response (13) Submissions Under Review (33)

View All Assigned

View All Assigned Submissions (62) View All Assigned Submissions being Edited (0)





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Evaluation Criteria (1)

- Is the paper suitable for the journal?
- Is it too specialised?
- Is the research significant?
- Is it different to prior work?
- Are the results set in the right context?
- Does the paper adhere to the ethical guidelines?







Evaluation Criteria (2)

When a manuscript lands on my desk, I...

- read the title, authors / affiliations
- read the abstract
- read the cover letter
- read the conclusions
- look over the graphics / tables
- check the references






Writing a Good Cover Letter

Think about who reads it and what they are looking for...

An Editor wants to know...

what the key findings / results are?

why they are significant?

if the work is right for the journal?







Cover Letter

The worst type!









Cover Letter

Not much better...









Cover Letter

Grabbing the editor's attention!



Dear Editor,

Here, we report a series of **potent** anticancer agents with a **novel** pharmacophore that were synthesized via an **efficient** 3-step route... **First report** of a selective agent targeting...

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Yours Sincerely,

A. N. Author





Value of a Good Cover Letter

You can show that your work has:

Four Main Criteria

- Hypothesis
- Innovation
- Evidence
- Clarity

Does my work have...

- a clearly stated purpose?
- significant scientific advances?

Please... don't assume the editor knows what you do[©]

Goal: To increase probability of external review!







Cover Letter: Extras

Also include...

- whether you have any **related manuscripts** recently published on the subject or currently submitted to another journal
- **conflicts of interest** tell the editor if any potential conflict of interest exists with another expert in the field since they will undoubtedly be a potential reviewer
- referee suggestions almost all journals allow (or require) authors to provide reviewer suggestions; these should be experts in the field but should not be collaborators or former/ present colleagues







Cover Letter: Suggesting Reviewers

Good referee suggestions are:

- leaders in your field
- working on related, relevant topics
- located worldwide

My referee suggestions are:

Prof. A, London Univ., expert in Mannich reactions

Prof. B, Tokyo Univ., expert in biology of steroids

Dr. C, ChemCo, Ltd., expert in crystallisation

Prof. D, Dresden Univ. expert in enzyme catalysis







Cover Letter: Suggesting Reviewers

Avoid....

- your previous supervisors, co-workers, or students
- your collaborators
- other members of your institution (we do check!)

Think carefully about suggesting very well-known reviewers!

Give....

• Opposed reviewers







Peer-Review Workflow: Rejection









Initial Decision: Rejection

I typically reject a manuscript when...

- Out of scope/readership
- Only incremental advances are reported
- Strong overlap with previous work
- \rightarrow (Non-committal) transfer offer to a sister journal
- Unethical behavior

- Wrong article type
- Wrong format
- Language
- \rightarrow Rejection with re-invitation





Peer-Review Workflow: Sending out for a Peer Review









Value of Peer Review

"Peer review is the evaluation of work by one or more people of similar competence to the producers of the work (peer)."

Suitability for Publication

- True / credible?
- Reproducible?
- Important / Relevant?
- Communicated effectively?
- Novelty?
- Plagiarism?

Improve Research

- Reasoning
- Presentation
- New / additional ideas







Reviewer Selection

- Expertise and publishing record websites, databases, previous papers
- References
- Editor experience
- Author suggestions
- Relationship or conflict of interest with authors
- Editorial board
- Reviewer suggestions







Reviewer's Responsibilities

- **Hypothesis** What question does this paper answer?
- Innovation What is unique?
- **Evidence** Are the conclusions supported by data?
- **Clarity** Are the results clear and understandable?
- **Context** Are the results set in the context of other known research?
- **Ethics** Does the paper adhere to the guidelines?

Please avoid delays!







Referee Report

How to write a report

- Give constructive criticism
- Identify strengths & weaknesses
- Be specific
- Check references & Supporting
 Information
- Are there any ethical questions?

How to *read* a report

- Treat it as a discussion of your paper
- Don't take it personally
- Be self-critical
- Editors and authors read referee reports differently!



From a **real point-by-point response** to a referee:

"This professor is biased. He criticized other works and only emphasize on his own work. Not a good person.....**He is not good person** in our opinion and very much biased and shall be avoided reviewing our work." – *author*





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Peer-Review Workflow: Decision Based on Report









Editor: Taking Decisions

- Do I have sufficient reports?
- Are the reports consistent?
- Should I contact additional reviewers?
- What is the **quality** of the reports?



Rejection

Revision

• Acceptance







Decision: Rejection

This is an **opportunity to improve your paper** – take it!

Make the changes recommended by the referees because an **unchanged** paper...

- may be sent to the **same referees** by the next journal
- is likely to get the same or similar comments even from different referees







Decision: Transfer Offer to a Sister Journal

• Referee reports can be shared within a publisher :

Contact handling editor at sister journal and ask for transfer option (often without additional refereeing)

Ca. 70% of rejected manuscripts are offered the option to transfer to a sister journal









Decision: Rejection with Transfer Option – Why?



- Helps relieve pressure on peer review process
- Facilitates fast publication of your manuscript



CHEMISTRY A European Journal





Peer-Review Workflow: Decision Revision









Revision

- Comments of the referees should be used to refine your work and improve the manuscript
- If you disagree with the comment, still consider revising the article in someway to clarify your argument
- Take time to respond to all comments, it could save further peer review
- Don't just do the things specifically mentioned
- Remember, reviewers are readers too!







Peer-Review Workflow: Acceptance









Decision: Acceptance!

• Accept with minor revisions (e.g., slight expansion of introduction, adding references, improvement of language or figures)

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• Accept as is

After the manuscript is accepted...

... a whole new chapter in the publishing process begins!





Technical Workflow

- Submission of final electronic files
- Accepted Article workflow
- Scientific editing
- Coding into tagged format (XML)
- Manuscript typesetting
- Galley proofing
- Author corrections
- Files sent to EarlyView
- Issue assembly







Manuscript



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Simple Text



Writing about science is difficult. Writing about science in a **second language** is even more difficult!

Simple is best: "If you can't explain it simply, you don't understand it well enough"*

*Albert Einstein, unverified (at least by me!)

scientific writing ≠ must be complicated complex writing blurs focus!







потный вал вдохновения...



- Пишете? - вяло спросил Ухудшанский.

 Специально для вас, -- ответил великий комбинатор. - Вы, я замечаю, все время терзаетесь муками творчества. Писать, конечно, очень трудно. Я, как старый передовик и ваш собрат по перу, могу это засвидетельствовать. Но я изобрел такую штуку, которая избавляет от необходимости ждать, покуда вас окатит потный вал вдохновения...

И Остап протянул Ухудшанскому лист, на котором было написано:

ТОРЖЕСТВЕННЫЙ КОМПЛЕКТ , НЕЗАМЕНИМОЕ ПОСОБИЕ ДЛЯ СОЧИНЕНИЯ ЮБИЛЕЙНЫХ СТАТЕЙ, ТАБЕЛЬНЫХ ФЕЛЬЕТОНОВ, А ТАКЖЕ ПАРАДНЫХ СТИХОТВОРЕНИЙ, ОД И ТРОПАРЕЙ







торжественный комплект

Раздел I. Словарь Существительные

1. Клики

2. Трудящиеся

3. Заря

4. Жизнь

5. Маяк

6. Ошибки

- 7. Стяг (флаг)
- 8. Ваал
- 9. Молох
- 10. Прислужник
- 11. Час
- 12. Враг
- 13. Поступь
- 14. Вал
- 15. Пески
- 16. Скок
- 17. Конь
- 18. Сердце
- 19. Прошлое

Прилагательные 1. Империалистический • 2. Капиталистический • 3. Исторический • 4. Последний 5. Индустриальный • 6. Стальной 7. Железный

Глаголы

1. Пылить

2. Взметать (ся)

З. Выявлять

4. Рдеть

5. Взвивать (ся)

6. Вершить (ся)

7. Петь

8. Клеветать

9. Скрежетать

10. Грозить

Художеств. эпитеты 1. Злобный 2. Зубовный Прочие части речи 1. Девятый 2. Двенадцатый 3. Пусть! 4. Пускай! 5. Вперед









How to Simplify Your Writing

- Exhibits, shows, possesses
- Methodology
- Represents
- Employed
- Spectroscopic analysis, chromatographic purification
- Compound x was found to be a good...
- Was synthesised in good yield (79%)

- Has
- Method
- Is
- Used
- Spectroscopy, chromatography
- Compound x was a good...
- Was synthesised in 79% yield

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Graphics

Journal template

• Attractive and concise

Graphics/tables

- Be consistent
- "Less is more"
- High resolution



E> 10° V m

V~12 V

Ge









Graphics





Less is more!







How to Simplify Your Writing

Effect of Metal Catalyst on the Outcome of Coupling Reactions with Aryl Alcohols



What effect?
Which metal(s)?
What type of coupling reaction(s)?
Which aryl alcohols?

Ruthenium Trichloride Catalyses C-H Alkylation of 2,4-Disubstituted Aryl Alcohols



Specific

Concise

Contains many keywords

Are shorter titles better? "The Advantages of Short Paper Titles" Letchford et al. Royal Soc. Open Sci., DOI: 10.1098/rsos.150266







How to Simplify Your Writing: Abstract (1)

... is the shop window of your paper

... is the key to discoverability

...should have a balance of general and expert information









How to Simplify Your Writing: Abstract (2)



20-second rule:

You have 20 seconds to explain your work to a scientist

who is unfamiliar with it.

You would probably:

- 1) explain the key ideas (keywords) and main findings
- 2) only give the most important data
- 3) tell them the conclusions drawn from your results
- 4) not include things that need context to understand







Think I for Introductions

Inspiring, informative, interesting





Explain:

- 1) the background
- 2) any previous work on the topic
- 3) the research question







References

- Avoid "over-referencing"
- Aim for a good balance between the original, first studies and recent findings
- Do not miss any important related manuscripts
- Recheck references before submission things change!







Putting Your Paper Together

1) Start with the easy stuff: Figures, Tables and Experimental Section

- 2) For each Figure/Table write down what information it gives you
- 3) Put the pieces generated in Steps 1 and 2 into a coherent order
- 4) Trim the text to get rid of repetition and superfluous wording

5) Write the conclusions

- 6) Put everything into context in the introduction:
 - This is the question I am tackling in my manuscript (3rd paragraph)
 - This is what other people have done that is related to my work (2nd paragraph)

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- This is why this is an interesting topic that deserves attention (1st paragraph)
- 7) Take care of the references and acknowledgments
- 8) Abstract
- 9) Keywords
- 10) Title





Getting Help: Resources









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Conclusions

- A little care in preparation can make a huge difference
- Scientists are human genuine mistakes will happen, but laziness and sloppiness can be avoided
- Help the editor, reviewer, and reader understand your work
- Keep it simple and specific









"Life is short, but there is always time for a spell checker" referee comment

(The experimental section talks about '**demonized water**'. Is this deionized water? If it really is demonized water their synthesis and characterization needs to be described!!!" – *referee comment*









Спасибо за Внимание!







