How to get published in *Nature* (and its sister journals)

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Regional Scientific Director, Springer Nature
March 2018
In the beginning...

... there was *Nature*

- Founded in 1869
- The world’s leading, global, scientific journal
- Across the full range of scientific disciplines
- *Nature’s* mission:

To communicate the world’s best and most important science to scientists across the world and to the wider community interested in science.

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Launch Issue 1869

How to get published in *Nature* (and its sister journals) | March 2018
What are we looking for?

That can be expressed in one word

Publishing starts NOT with a desire to be published in *Nature* but with the discovery of something extraordinary that you need to tell the world about!

What are we looking for?

Our goal is that every paper we publish should provoke the response:

"WOW! I didn't expect THAT!"

or

"WOW! That's clever (and useful!)"
A home for all great research

Nature

• Intended for the most significant advances with the widest implications.
• Extremely selective which means relatively few papers and few authors but MANY READERS. So still a subscription journal to spread cost.
• Audience reach extended with SharedIt!
A home for all great research

Nature research journals

• Publish the most significant advances across the discipline each covers.
• Significance apparent to anyone in discipline.
• Very selective so, like *Nature*, published under a reader pays subscription model.

ALL GENETICISTS

How to get published in Nature (and its sister journals) | March 2018
Introducing: *Nature Electronics*

Connecting science, engineering and technology

- *Nature Electronics* publishes both fundamental and applied research across all areas of electronics, from the study of novel phenomena and devices, to the design, construction and wider application of electronic circuits.
- The journal will also cover commercial and industrial aspects of electronics research, to provide a comprehensive picture of the field.
- Our aim is to connect the work of scientists, engineers and industry, and provide analysis of the key issues shaping the field and the key technologies reshaping society.
- To browse or submit, go to [http://www.nature.com/natureelectronics](http://www.nature.com/natureelectronics)
- Follow on Twitter: @NatureElectron
A home for all great research

The world’s premier multidisciplinary open access journal!

- Publishes significant advances that have to potential to influence thinking across an area of research.
- Less stringent emphasis on ‘broad appeal’ means it publishes more than twice the fraction of what is submitted papers as *Nature*.
- Open access significantly boosts readership!
How to get published in Nature (and its sister journals) | March 2018

Announcing…

High impact, open access journals in biology, chemistry and physics!

• Rapid publication of significant advances that have an impact on the thinking of specialists who are working on a particular problem.

• Launched in 2017 to provide a home for all the great research that doesn’t quite make it into Nature Communications.

• Open access significantly boosts readership!
High-impact open access journals, published in partnership with internationally-renowned centres of excellence.

- Each journal seeks to provide a home for great research from relatively smaller communities of researchers, particularly those in (but not limited to) newly emerging fields of research.
- Titles in the series include *npj Computational Materials*, *npj Science of Learning*, *npj Precision Oncology*, *npj Biofilms and Microbiomes*.
- International partners include Shanghai Institute of Ceramics, Chinese Academy of Sciences (SICCAS), Nanjing University, the European Materials Research Society (E-MRS), the Breast Cancer Research Foundation and NASA.
How to get published in Nature (and its sister journals) | March 2018

NPG Asia Materials
The leading APAC-based material science journal celebrating its 10th anniversary!

• Founded in 2018 with Tokyo Institute of Technology, publishing highlights of materials research from APAC. It evolved into full OA journal in 2012.

• Publishing high quality reviews and research covering all aspects of the materials sciences.

• Ranked 17/275 in Multidisciplinary Materials Science according to the 2016 Journal Citation Reports published by Clarivate Analytics.

• High editorial standards | High visibility | Wide dissemination | Research summaries that maximize the reach of your work

• 10th Anniversary Collection: nature.com/collections/am10th

10th ANNIVERSARY
Collection:
nature.com/collections/am10th

Springer Nature
Which **Nature** journal should you choose?

Is the thing you’ve discovered among the two or three most important discoveries in your field anywhere in the world this year?

Then you should consider *Nature*!

Is it going to change the way that cell biologists, physicists, geneticists, chemists, plant biologists, geoscientists, neuroscientists ... see the world?


Is it likely to be important to others working across a broad areas of research?

Then you should consider *Nature Communications*.

Is it going to be considered important by others working to solve a particular problem?

Then you should consider *Communications Physics, Communications Chemistry or Communications Biology*.

Is the thing you’ve discovered likely to be important to a small but active field of researchers in a particular community?

Then you might consider a Nature Partner Journal.
But don’t forget that MOST progress is slow and steady

Don’t underestimate the power of incremental progress

In 1956, IBM introduced the RAMAC 350, the world’s first commercial disk drive.

- It weighed well over 1 tonne.
- It cost the equivalent of US$315,000.
- It had an operating speed of 700 kb/s.
- It consumed 2374 watts of electricity.
- It had a storage capacity of 5 MB.

(Thanks to Bernie Meyerson, Vice President for Innovation at IBM, for pointing me to this story.)
MOST progress is slow and steady

Don’t underestimate the power of incremental progress!

In 2017, the concept is the same but with steady progress, a hard disk is now, 20,000× lighter, 7,875× cheaper, 857,000× faster, 237× more energy efficient, and stores 200,000× more information!
MOST progress is slow and steady

Don’t underestimate the power of incremental progress!

In 2017, the concept for magnetic hard disks is the same but with steady progress, a hard disk is now, $20,000 \times$ lighter, $7,875 \times$ cheaper, $857,000 \times$ faster, $237 \times$ more energy efficient, and stores $200,000 \times$ more information!

Without the incremental progress that has happened since 1956 the hard drive in a typical laptop today would be the size of...

FOUR AIRCRAFT CARRIERS
MOST progress is slow and steady

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In 2017, the concept is the same. But with steady progress, a hard disk is now

- 20,000 × lighter,
- 7,875 × cheaper,
- 857,000 × faster,
- 237 × more energy efficient, and
- Stores 200,000 × more information!

If car technology had followed a similar path, a 1956 Volkswagen Beetle would weigh 400 grams, cost $5, have a top speed of 86 million km/h, and travel 24 thousand km on a single tank of gas!
Good science is more important than being published in *Nature*

Assess science on its **OWN MERITS** and not on **WHERE** it is published

Science should be judged on its **OWN MERITS**, not on **WHERE** it was published. We need to stop using journal impact factors as a proxy for assessing research.

For many years we at *Nature* have been arguing against judging research by the impact factors of the journals in which it is published. Which is why *Nature* Research and *BMC* signed the San Francisco Declaration on Research Assessment ([http://www.ascb.org/dora/](http://www.ascb.org/dora/)).

We have examined researchers’ opinions about metrics over recent months, and what matters to them when choosing where to submit their work. And in the second half of 2016, we carried out a survey of authors.

Some 985 authors from *Nature Research* and more than 2,500 from Springer Nature overall, who had published a research article during 2015–16, gave us their views, with the largest groups of respondents coming from Europe (47%), Asia and the Middle East (19%) and the United States (15%).

The survey showed a demand for publishers to provide more information about their journals: 85% of authors said that information on journal performance is important to them when deciding where to submit their work, but 48% thought that publishers did not provide enough. For junior researchers with less publishing experience, this information is particularly important.

The survey also revealed that authors were deeply interested in the quantitative and qualitative details of a journal’s peer-review process. Journal choice was influenced by these and other experiences, including interactions with journal editors, an understanding of a journal’s readership, and a journal and its publisher. The survey also revealed that knowledge of its limitations, the impact of these factors on their research, and other aspects of the peer-review process that are not widely known, may be as important for journal choice.

Since the survey, we have been hearing about what the different metrics tell us about different aspects of the peer-review process that are not widely known, may be as important for journal choice.

Accordingly, we have improved the *Nature Research* metrics page to provide extra information on median times for all the key stages of the submission-to-publication workflow. We’ve also created a new infographic with short, simple explanations of each of the metrics we now offer, which we’ve released under a CC BY licence so that anyone, anywhere, can use it.

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**ANNOUNCEMENT**

**Nature Research signs DORA**

*Nature Research* will this week formally sign up to the principles outlined in the San Francisco Declaration on Research Assessment, commonly known as DORA. *Nature Research* (the *Nature*-branded journals, *Scientific Reports*, *Scientific Data* and the *Nature Partner Journals*) has long been editorially aligned with the principles described in DORA, particularly the need to move away from the inappropriate use of the journal impact factor. (A collection of relevant editorials is available on our journal-metrics web page.)

As long ago as 2005, *Nature* was expressing concern about the problematic dependence on journal impact factors when individual scientists are assessed by their institutions and funders (see *Nature* 435, 1003–1004; 2005). The skewed distribution of a journal’s citation statistics (by a few very highly cited papers) undermines any fundamental usefulness of the impact factor, and the belief that a researcher’s strengths can be measured by such a statistic is self-evidently absurd. So, too, is the misguided belief that numbers of citations are the only measure of a paper’s scientific value.

Scientists have justifiably complained about the abuse of impact factors for years, and continue to do so (see page 41). That’s not to deny that the factor has some value as an indicator of a journal’s cumulative scientific impact. But so do other measurements, such as the immediacy index, the eigenfactor score and the article-influence score. Indeed, in assembling these and other indicators last year in the new *Nature Research* journal–metrics page, we created the ‘two-year median citation score’ as a less-skewed complement to the impact factor. We also provided definitions of each metric to help the reader to understand what they really mean, and to provide context for how our journals are performing.

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**Scientific Reports** is committed to being the best-in-class for scientific rigor:

- The rigor of *Scientific Reports* is overseen by an editorial board of over 8,000 world-renowned scientists from across the globe.

**Scientific Reports** is the most cited journal in the world:


**Scientific Reports** is among the most regularly covered journals in the world:

- In 2016, almost 11 thousand news stories were written about papers published in *Scientific Reports*.

**Scientific Reports** is one of the most read journals in the world:

- In 2016, *Scientific Reports* was visited over 24 million times and its articles read over 46 million times.
Selective, rigorous, international

- Around 60% of submissions to *Scientific Reports*’ meet our standards for scientific rigor.
- The research we publish comes from all over the world.

Acceptance rate by region

<table>
<thead>
<tr>
<th>Region</th>
<th>Acceptance Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>46%</td>
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<tr>
<td>Eurozone</td>
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<tr>
<td>USA</td>
<td>74%</td>
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<tr>
<td>Japan</td>
<td>68%</td>
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<tr>
<td>UK</td>
<td>74%</td>
</tr>
<tr>
<td>RoW</td>
<td>59%</td>
</tr>
</tbody>
</table>

Contribution to *Scientific Reports* by region

- China: 30%
- Eurozone: 18%
- USA: 14%
- Japan: 7%
- UK: 5%
- RoW: 26%
Improving the impact of your paper

Let’s begin by assuming that you have a significant result that will WOW our readers.

What next?
Rule ONE

Think of the reader!
Rule TWO

Think of the reader!
Think of the reader!
Simplicity improves understanding

子曰：辞达而已矣。

"In language it is simply required that it convey the meaning." – Confucius
CONTEXT

Begin by explaining **WHY** you’re working on what you’re working on?

**DON’T TELL** the reader that the thing you’re working on is important:

“Metal organic perovskites are an important new class of materials that have stimulated profound interest by a large number of researchers.”

**SHOW** the reader **WHY** the thing you’re working on is important:

“The performance of solar cells based on metal-organic perovskites has recently surpassed that of many other types of solar cell. They can be grown on inexpensive substrates using solution-based techniques, which could reduce their cost.”
Here we show...

Then, tell the reader exactly WHAT you’ve discovered.

The sentence that begins “Here we show...” is the most important sentence in the entire paper. Make it count!

Ideally, it should appear no later than about 3 or 4 sentences into the Abstract of the paper. And it should say something like,

“Here we show SOMETHING EXTRAORDINARY.”

where the words ‘something extraordinary’ are replaced by the extraordinary thing that you’ve discovered.
DON’T describe your experiments!

“Here we report novel experiments that are conducted to explore the role of beta-carotene on the ophthalmic health of brown rabbits.”

“Here we report polarization-dependent angle-resolved photo emission spectra of nanocrystalline lanthanum sulphur calcium copper oxide films.”

DON’T try to convince the reader your results are significant.

“Here, for the first time, we report a breakthrough in the treatment of the ophthalmic health of rabbits.”

“Here we shed important light and report a paradigm shift in our understanding of the exotic mechanisms that drive the rich physics that govern the superconducting behaviour of nanocrystalline lanthanum sulphur calcium copper oxide superconductors.”
Here we show...

DOs and DON’Ts

**DO** tell the reader the extraordinary thing you’ve discovered!

✓

“Here we show that beta-carotene can improve the short-distance eyesight of myopic brown rabbits by up to 20%.”

✓

“Here we report results that suggest that the superconducting properties of lanthanum-based cuprates are the result of spin-orbit coupling.”
How does it build on previous knowledge?
Comparisons — DON’T use adjectives; DO use numbers

DON’T use ill-defined adjectives to describe your results:

✗ “We drastically increase the properties of widgets.”
✗ “We profoundly improve the treatment of near-sighted rodents.”

DO provide hard numbers and direct comparisons to what has gone before:

✓ “We increase the yield strength of plastic widgets to 75 MPa — more than twice the value reported previously.”
✓ “We show that beta-carotene increases the eyesight of brown rabbits by up to 20%”
FIGURES

CLARITY is more important than BEAUTY!

A picture tells a thousand words. Make your figures count!

✗ DON’T try to make your figure look pretty!

✗ DON’T try to make your data look cleaner than it looked when you collected it

✓ DO ensure that your figures are clear and to the point!

✓ DO ensure that what the data tells us is obvious from a single glance — without having to read the main text.
What does it all mean?

Conclusions — be SPECIFIC

Could the implications you describe of your results be applied to other results in the field? If so, why should anyone care more about your results?

DON’T conclude with **vague generalizations** that could apply to ANY scientific paper:

“Our results shed light on the operation of widgets.”

DO explain **exactly** what the implications of your work are:

“Our results suggest that lighter dongles increase the efficiency and speed with which widgets operate.”
ORCID (https://orcid.org/)
Making sure you get credit for the papers you publish

• ORCID (which stands for Open Researcher and Contributor IDentification) is an open, non-profit initiative to build a registry of unique identifiers for researchers and other contributors to scholarly works.

• ORCID IDs are particularly important for ensuring that Chinese researchers get credit for the research they do.

• ORCID IDs are now required by many publishers, including AAAS, AGU, eLife, EMBO, Hindawi, IEEE, PLOS and the Royal Society.

• Nature journals are now trialing mandatory ORCID registration for corresponding authors.

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<th>Family name</th>
<th>Given name</th>
<th>Count</th>
</tr>
</thead>
<tbody>
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<td>Wei</td>
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<tr>
<td>Zhang</td>
<td>Wei</td>
<td>506</td>
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<td>Li</td>
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<td>Wang</td>
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<td>Li</td>
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<td>Wang</td>
<td>Lei</td>
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<td>Li</td>
<td>Jun</td>
<td>315</td>
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<tr>
<td>Li</td>
<td>Yang</td>
<td>312</td>
</tr>
<tr>
<td>Zhang</td>
<td>Lei</td>
<td>311</td>
</tr>
</tbody>
</table>
DISTINGUISH YOURSELF IN
THREE EASY STEPS

ORCID provides a persistent digital identifier that distinguishes you from every other researcher and, through integration in key research workflows such as manuscript and grant submission, supports automated linkages between you and your professional activities ensuring that your work is recognized.

1. REGISTER

Get your unique ORCID identifier. Registration takes 30 seconds. Register now at http://orcid.org/

2. ADD YOUR INFO

Enhance your ORCID record with your professional information and link to your other identifiers (such as Scopus or ResearcherID or LinkedIn).

3. USE YOUR ORCID ID

Include your ORCID identifier on your Webpage, when you submit publications, apply for grants, and in any research workflow to ensure you get credit for your work.
A final word... about Open Access
Why do we care about OPEN?
In part, because OPEN is the future!

2000

2017

BioMed Central
The Open Access Publisher

PLOS

Optics Express

New Journal of Physics
The open access journal at the forefront of physics

nature COMMUNICATIONS

BMC

SCIENTIFIC REPORTS

Springer Open

eLIFE

OXFORD OPEN

Hindawi

PLOS

mBio

ATLANTIS PRESS

Cell Reports

EXCELLENCE IN SCIENCE

PeerJ

Wellcome Trust

ACS AuthorChoice Free Access

Open Access

The open access journal at the forefront of physics
Why should you care being OPEN?

Because it improves the IMPACT of YOUR research

Independent statistical analysis carried out by the Research Information Network of articles published in *Nature Communications* found that

- Open Access articles are **viewed three times more often** than articles that are only available to subscribers.
- Open Access articles are cited somewhat more than subscription articles.

— Research Information Network on the effect of Open Access on citations and downloads of *Nature Communications* articles.

http://www.nature.com/press_releases/ncomms-report.html
Why publish your research open access?
Because it’s better for science, better for the public and better for you

• Scientific knowledge belongs to everyone.
• Science progresses more rapidly when new ideas, new results and new understanding are shared most freely.
• Public understanding of science is improved by public access to primary research.
• Improving others access to your research improves the IMPACT of your research!
But we think ‘open’ should be about more than just papers
Why share data?
Because that’s what science should be about

“Publishing research without data is advertising, not science!”

— Cameron Neylon, Graham Steel, and others.
Open research has more impact!

Papers published with open data are cited more often

Gene expression microarray papers that link to open data receive 9% to 30% more citations than those that don’t.

Astronomy papers that link to open data receive 20% more citations than those that don’t.

Astrophysics papers that link to open data receive 28% to 50% more citations than those that don’t.

Paleoceanography papers that link to open data receive 35% more citations than those that don’t.
— Sears et al (2011) https://figshare.com/articles/Data_Sharing_Effect_on_Article_Citation_Rate_in_Paleoceanography/1222998/1

Open has more impact than closed.
But the biggest hurdle to greater sharing isn’t willing

A survey of 7719 researchers suggests biggest hurdle is lack of understand of **how to share**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organising data in a presentable and useful way</td>
<td>28.24%</td>
</tr>
<tr>
<td>Not knowing which repository to use</td>
<td>20.22%</td>
</tr>
<tr>
<td>Unsure about copyright and licensing</td>
<td>23.03%</td>
</tr>
<tr>
<td>Costs of sharing data</td>
<td>11.52%</td>
</tr>
<tr>
<td>Lack of time to deposit data</td>
<td>16.39%</td>
</tr>
</tbody>
</table>
Research Data Helpdesk
Helping authors comply with open data mandates

Support for authors:
Information on the data policy of their target journal(s)
• Identifying and using data repositories
• Compliance with funders’ and institutions’ data sharing policies
• Data reporting standards

Support for editors:
Information on best practice for implementing a journal’s data policies, including:
• Good practice for data-literature integration
• Advice on handling peer review of sensitive/clinical data
• Help with identifying appropriate data repositories for a journal’s audience

https://www.springernature.com/gp/authors/research-data-policy/helpdesk/
Introducing the Springer Nature Research Data Support

To help Springer Nature authors and journals follow good practice in sharing and archiving of research data, we’re piloting optional data deposition and curation services.

Researchers submit their data files securely

The Research Data team curates the data and metadata

The data are published and linked to the author’s paper
How Research Data Support ensures IMPACT of your data

- Enhance metadata of dataset(s) to improve findability and encourage reuse
- Check for presence of sensitive information and human identifiers
- Apply DOIs to provide unique persistent links to dataset(s) and enable citation of them
- Link data to their associated article(s) and coordinate publication with the article
- Store data in the Springer Nature portal in the figshare repository
Research Data Support

Open data is often little more than a data dump

Without adequate description, structure or metadata, open data is almost impossible to find. And it’s of limited use to anyone, even when it is found!
Research Data Support

After curation, data is not just more DISCOVERABLE, it’s more USEFUL!

Data Support Services help researchers make their open data more valuable, with:

- Links to associated, peer-reviewed publications,
- Consistent titles and author names,
- Clear citation information,
- Files preview-able in browser,
- Metadata for each file in the archive,
- Contextual information,
- Clear license/terms of use,
- Dataset description/abstract,
- Rich usage statistics.
Thank you!

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e.gerstner@nature.com