

Part of **SPRINGER NATURE**

Illustration inspired by the work of Dorothy Hodgkin

Scientific writing and publishing

Dr Stefanie Reichert
Associate Editor, *Nature Physics*

04.12.2019 at CERN, Switzerland

natureresearch

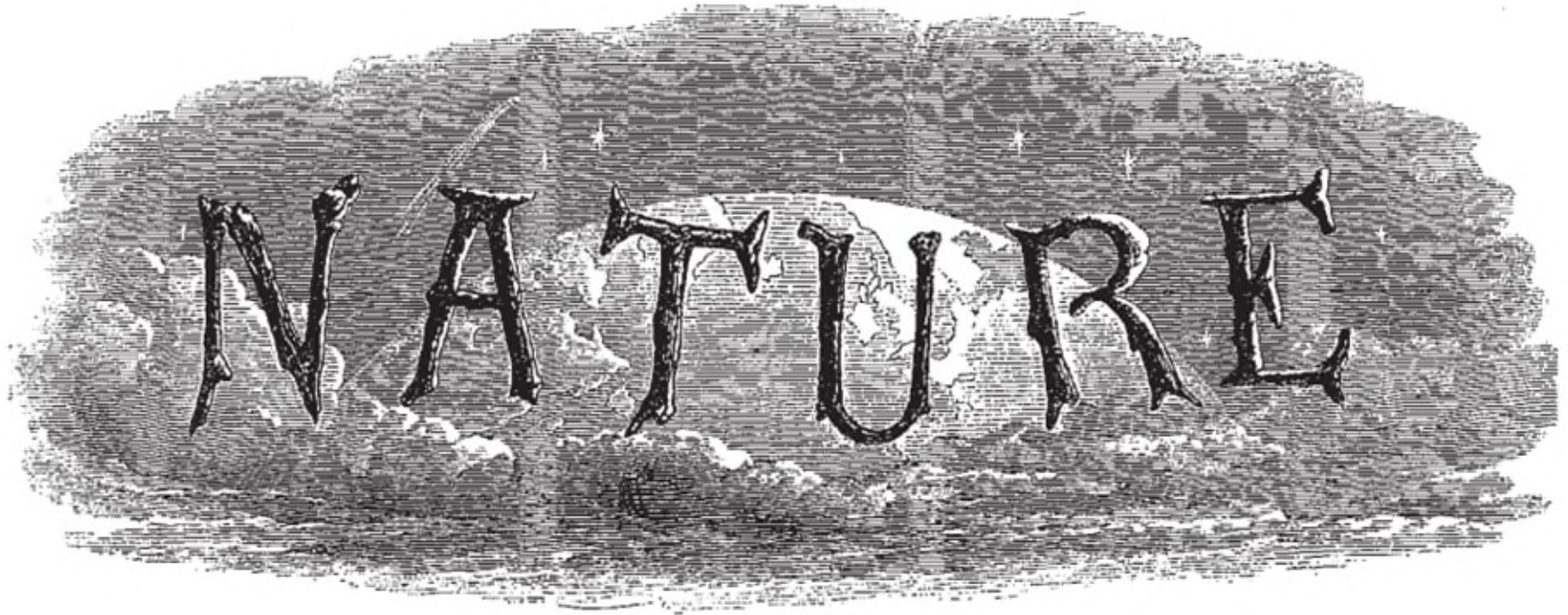
From academia to publishing



- **undergrad at Humboldt University, Berlin specializing on particle physics**
- **PhD at the University of Manchester working on charm physics at the LHCb experiment with a long-term stay at CERN**
- **postdoctoral work at the Technical University of Dortmund focusing on searches for rare decays at LHCb, teaching and supervision**
- **then joined Nature Physics**



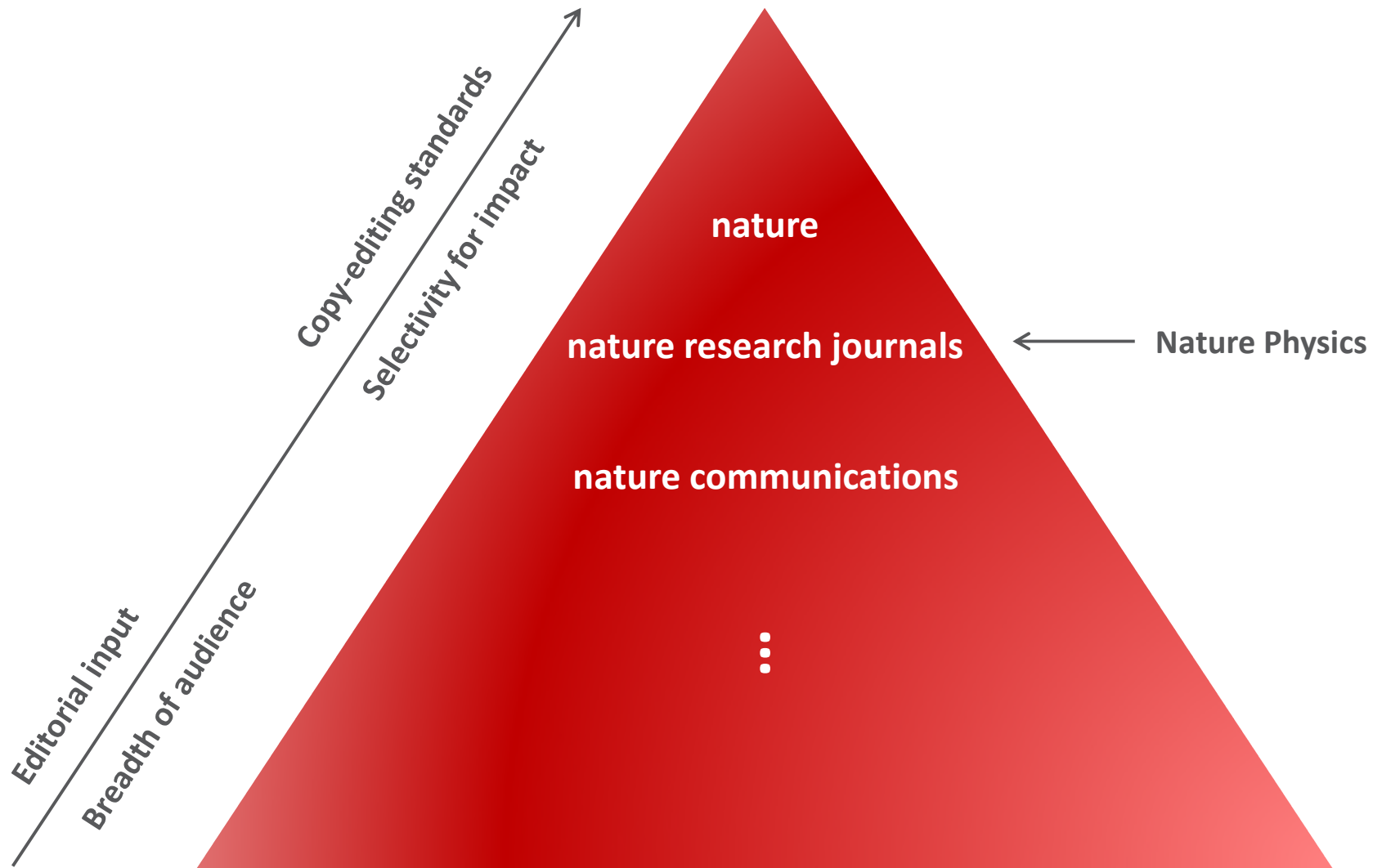
Celebrating 150 years of *nature*



A WEEKLY ILLUSTRATED JOURNAL OF SCIENCE

*“To the solid ground
Of Nature trusts the mind which builds for aye.”—WORDSWORTH*

nature's Universe



Why we have journals

nature's mission in theory:

“... to place before the general public the result of scientific discovery and to help scientists to learn about advances in all branches of natural knowledge”

and in real life:

filtering the breadth of research outputs

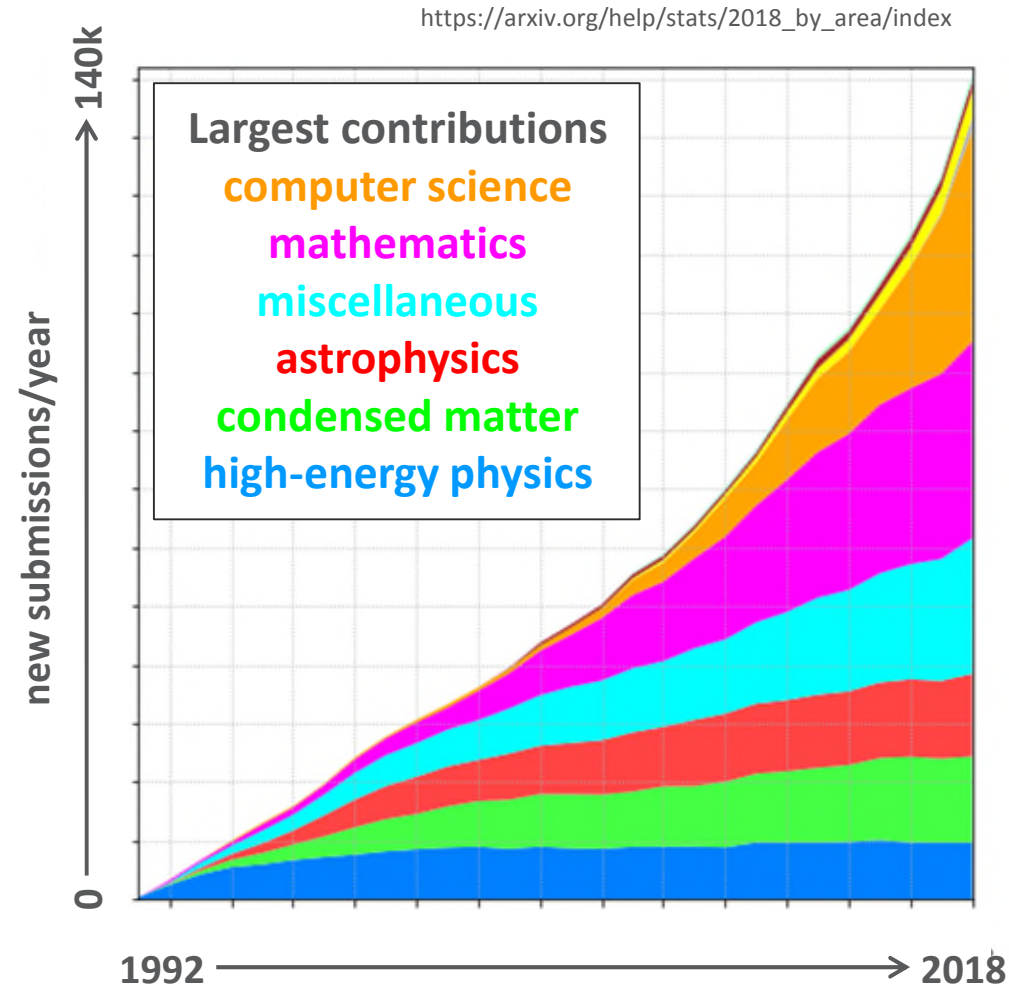
steering peer-review

putting results into context

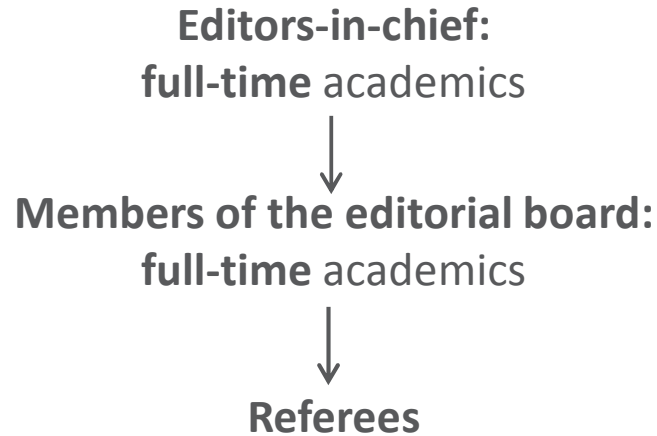
disseminating research for the public

archiving and curating

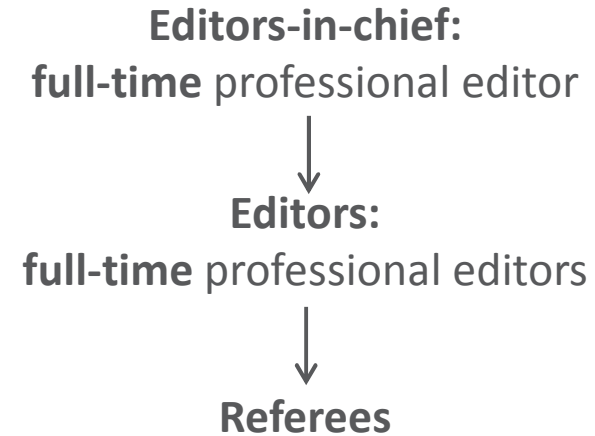
provide a space for scientific discussions



A tale of two publishing approaches



Springer journals such as
European Journal of Physics: Techniques
& Instrumentation



Nature journals such as **Nature Physics**

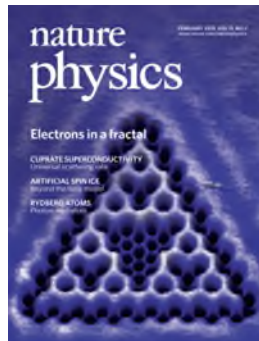
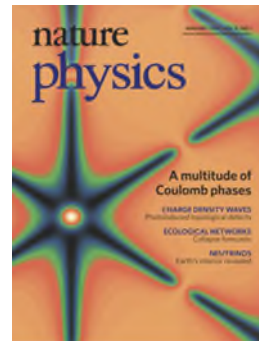
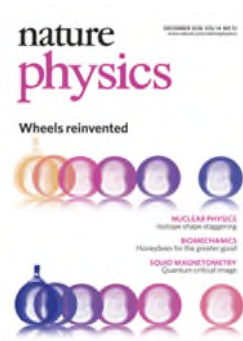
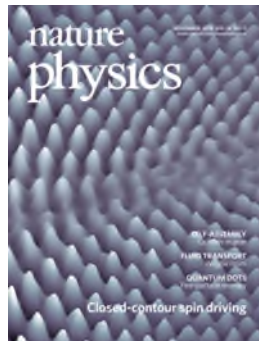
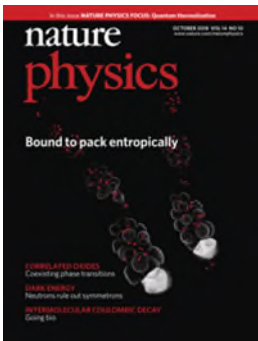
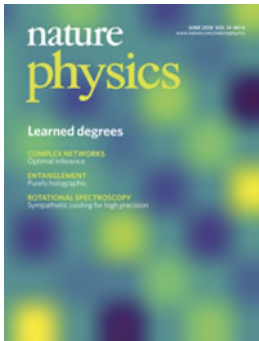
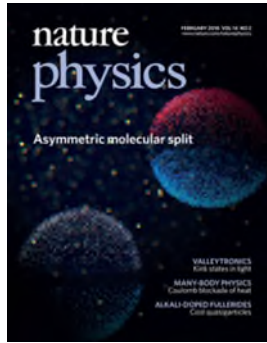
nature and nature research journals ...

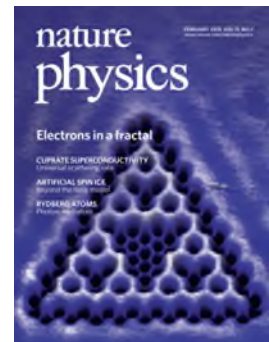
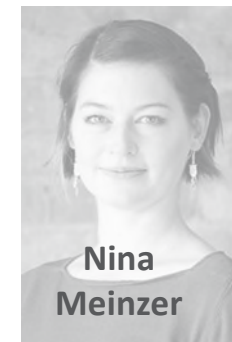
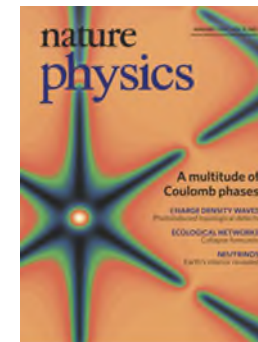
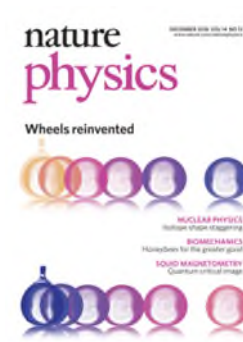
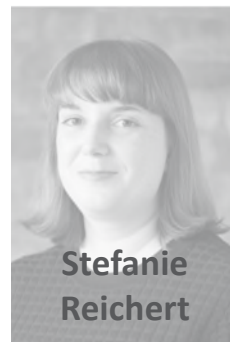
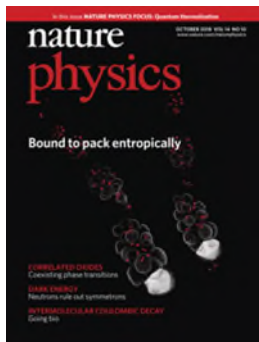
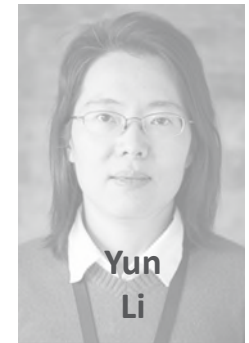
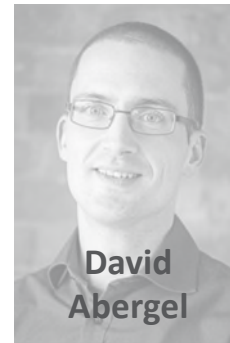
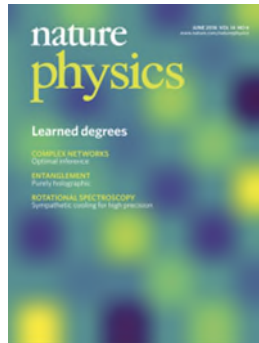
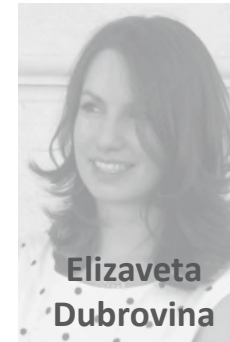
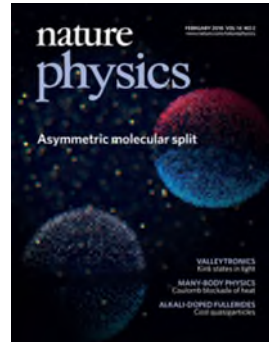
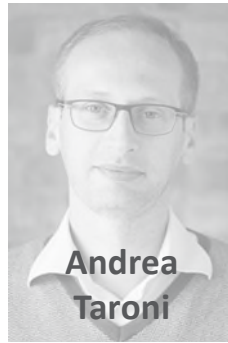
- ... have no editorial board
- ... serve specific communities
- ... are editorially independent of each other
- ... are highly selective with acceptance rates < 10%
- ... each have a team of professional editors (usually 5-7) with academic backgrounds

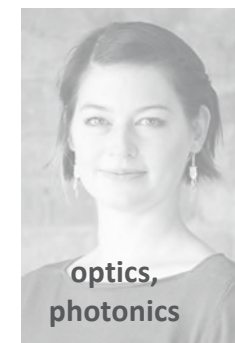
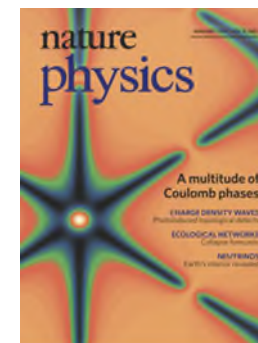
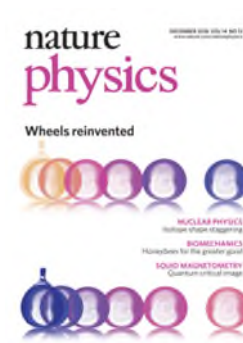
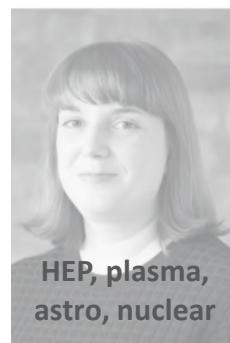
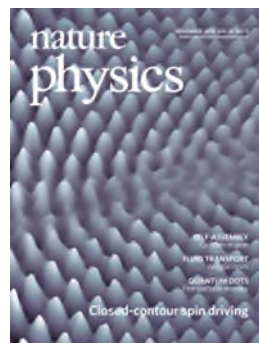
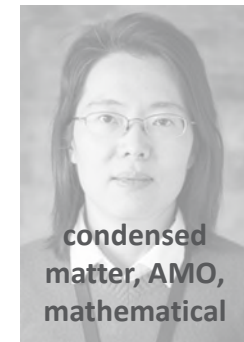
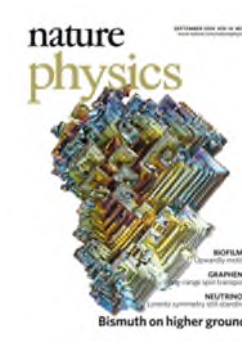
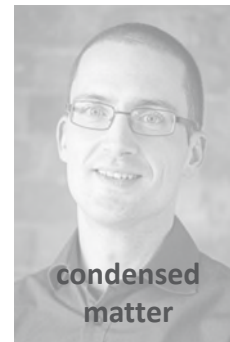
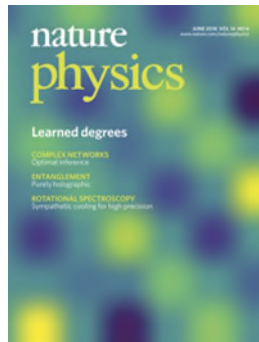
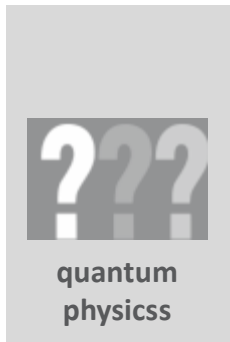
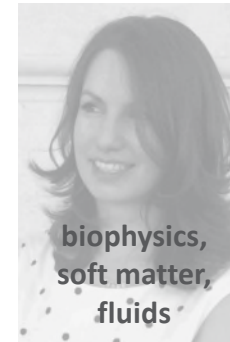
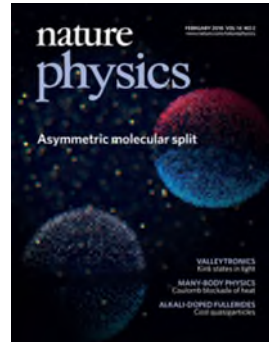


... and many more including reviews journals e.g. nature reviews physics

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Everyday life as an editor

We do not read all day. We also ...

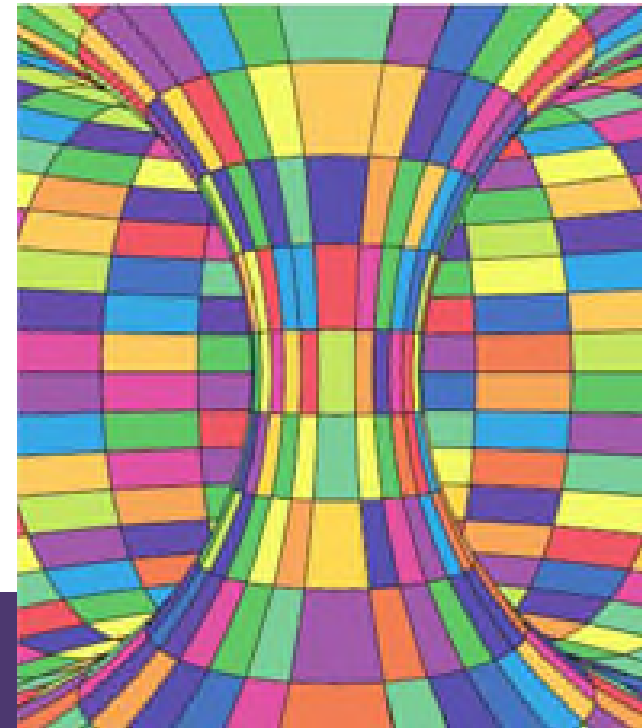
- ... stay in touch with our communities,
- ... attend conferences,
- ... visit labs,
- ... give talks,
- ... organise events and conferences,
- ... commission content,
- ... produce and edit content,
- ... handle manuscripts.

natureconferences

Advances and Applications in Plasma Physics

Peter the Great St. Petersburg Polytechnic University | Ioffe Institute | *Nature Communications* | *Nature Physics* | *Nature Reviews Physics*

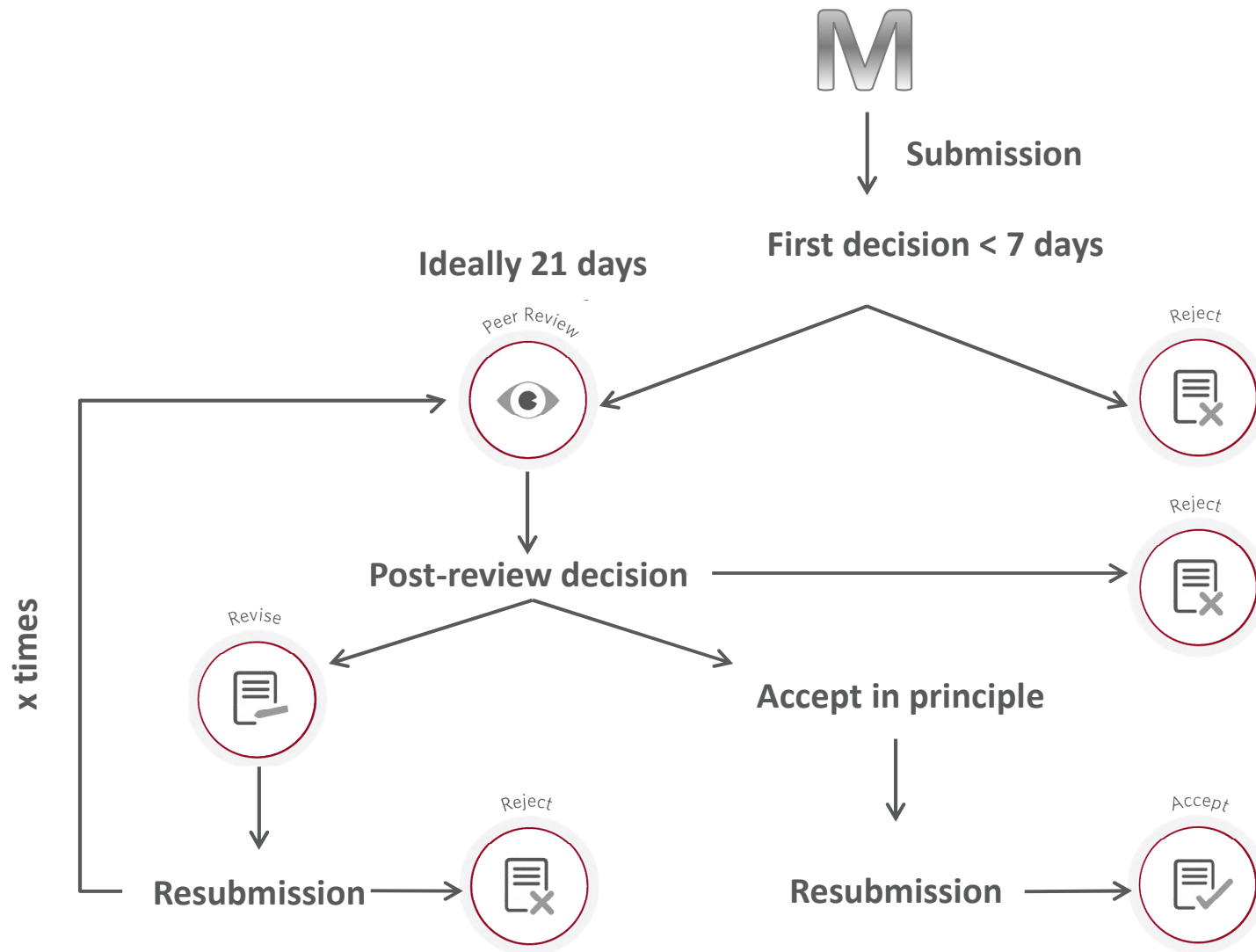
**Advances and Applications in
Plasma Physics**
8-19 September 2019
St Petersburg, Russia



All editors at nature research journals do the same job just with a different focus
– whether it's with us, at nature nanotechnology or at nature chemistry!

natureresearch

A manuscript's journey



Minimizing delays

Delays are unavoidable:

- Reports come in late because referees are busy
- More work required to address referees' comments
- ...

How can you speed the process up?

- By being prepared and responsive.



THE AUTHOR OF THE WINDOWS FILE COPY DIALOG VISITS SOME FRIENDS.

Which journal is the right one?

Navigating between thousands of journals:

- Where do my colleagues publish?
- Which journal is best suited for my work?
- Who is my audience?
- What do I want to communicate?
- What are the journal's criteria, e.g. on peer-reviewed proceedings?
- How long does it take (on average) from submission to acceptance?
- Do I want to publish in a subscription-based, open-access or hybrid journal?
- Does the journal ask for submission fees , colour-printing charges or article-processing costs? Can my institute cover the costs? Are there waivers?
- Is the journal on Beall's list?
- ...

Preparing your submission

Familiarize yourself with the journal and read the guidelines for authors carefully!

- Guidelines might be strict, but there might even be some extent of flexibility.
- Even if you can bend the rules, don't take it too far. If the word limit is 3,000 words, don't submit a 6,000 word paper.

Write the paper - stressing what you've learned over the past days:

- Title and abstract should be accurate, brief, clear, declarative, engaging, focused.
- Guide the reader through your paper step-by-step.
- Explain, don't hype. What are the insights and the work's likely impact?

Ask colleagues from within and from outside your field for feedback on your draft.

Preparing your submission

Cover letter:

- Briefly summarize the state of the field, the work and its advances over previous research.
- Don't hype or oversell your work. Dropping famous names doesn't help either.

Suggested referees:

- Suggest potential referees with the right expertise; you can comment on their areas of research if you like.
- Try to suggest referees who have no conflict of interest with any of the authors.

Excluded referees:

- Limit yourself to a few names, and do not exclude institutes or collaborations.

Response letters

Editors **trust** referees. If they have misunderstood something or are wrong, we want to know!

General rules

- be nice and polite even when you disagree with the reviewers,
- appreciate suggestions,
- don't try to take short-cuts,
- reproduce the reports in full with replies interspersed,
- do not paraphrase or leave out comments,
- answer comments completely, and state what changes you have made and where.

Example:

This paper does XYZ. I have the following questions: A, B, C.



This paper does XYZ. **Reproduce**
I have the following questions:

Question A

Answer to A.

Answer

Question B

Answer to B

Question C

Answer to C

Appeals

If your paper gets rejected, you can appeal the decision:

- **Most likely an appeal will be unsuccessful.**
- **Sometimes editors and/or reviewers make mistakes.**

When preparing an appeal letter:

- **Tell us what we (or the reviewers) have missed or if you disagree with the reviewers.**
- **Argue scientifically and not emotionally. Insults are not taken well.**
- **Don't remind us of your or your co-authors previous accomplishments or status, don't tell us about the media coverage of your work and don't attack us or the reviewers.**

EJP Techniques and Instrumentation

EJP T&I publishes studies devoted to the **design, implementation, and application of new techniques** in all areas of the physical and applied sciences

Scope:

- Laboratory-specific custom instrumentation and diagnostics
- Innovative and clever experimental techniques
- Subtle refinements to established experimental setups
- Novel analytical methods



EJP Techniques and Instrumentation

If you or a co-author is affiliated with CERN, the article-processing charge may be fully sponsored.


Content types:

- Regular articles
- commentary articles
- Reviews of known techniques
- Reviews of open questions in emerging fields

About EJP T&I

- Indexed in Web of Science's Emerging Sources Citation Index
- Allows promotion on SpringerOpen blog and EPJ Portal
- Fast publication schedule whilst maintaining rigorous peer review

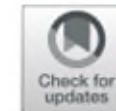
Aaij et al. *EPJ Techniques and Instrumentation* (2019) 6:1
<https://doi.org/10.1140/epjti/s40485-019-0050-z>


 EPJ Techniques and Instrumentation
 a SpringerOpen Journal

RESEARCH ARTICLE

Open Access

Selection and processing of calibration samples to measure the particle identification performance of the LHCb experiment in Run 2



Other potentially suitable outlets

**Applied superconductivity & cryogenics:
Journal of Low Temperature Physics:**

**Publishes low temperature physics and
cryogenics – both experimental and
theoretical works**

www.springer.com/journal/10909



Particle accelerators: EJP+

**Publishes wide range of physics-related
topics, e.g. accelerator physics**

epjplus.epj.org/



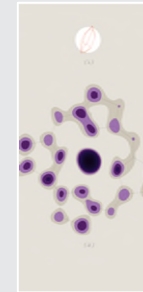
Ask the editor - questions?

Looking forward to hearing from you!

stefanie.reichert@nature.com

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or follow us on twitter @NaturePhysics, facebook
NaturePhysicsJournal or instagram
[nature.physics](https://www.nature.com/nature.physics). Job listings are at
[nature.com/naturecareers](https://www.nature.com/naturecareers).

The story behind the image



Dorothy Hodgkin (1910–1994)

Dorothy Hodgkin pioneered the application of x-ray crystallography techniques to determine the three-dimensional structure of biomolecules, helping to unravel how their atomic arrangements influence how they work in the body. She remains the only British woman scientist to have been awarded the Nobel Prize for Chemistry.