



Publishing in the Nature Portfolio of Journals

Elena Belsole, PhD

Chief Editor
Communications Physics

27 June 2022
PPPL Science Meeting

Outline

- 1** Introduction to *Communications Physics* and the Nature Portfolio
- 2** Navigating the editorial process
- 3** Writing your paper
- 4** Questions

Take home messages

1. ***Communications Physics*** could be the venue to publish your next paper!
2. **Editors** and **peer review** are there to **improve your paper**.
3. **Authors are** responsible to **maximize impact; strengthen** your work and make sure it reaches the **widest audience** possible

Introducing *Communications* *Physics* and the Nature Portfolio

1.0

Communications Physics

- A **selective open access** journal for all physicists
- Manuscripts make **important and novel advances** to others working in the same area of research
- Part of the **nature portfolio**, publishing option for more **specialized** or **interdisciplinary** topics
- Less stringent criteria for **impact** than the **nature**-branded journals
- **Combined Editorial Model**: academic and professional editors involved in the peer review.

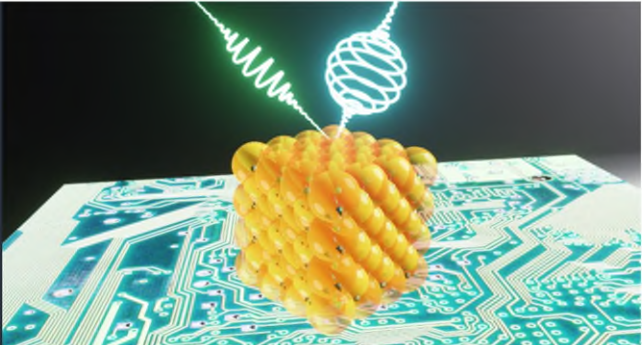
communications physics View all journals Search Login

[Explore content](#) [About the journal](#) [Publish with us](#) [Sign up for alerts](#) [RSS feed](#)

nature > communications physics

Polarisation-dependent single-pulse ultrafast optical switching of an elementary ferromagnet

Hanan Hamamera, Filipe Souza Mendes Guimarães ... Samir Lounis
Article | 11 January 2022



Article | [Open Access](#) | [Published: 01 June 2022](#)

The physics of turbulence localised to the tokamak divertor volume

[Nicholas Walkden](#) , [Fabio Riva](#), [James Harrison](#) , [Fulvio Militello](#), [Thomas Farley](#), [John Omotani](#) & [Bruce Lipschultz](#)

[Communications Physics](#) **5**, Article number: 139 (2022) | [Cite this article](#)

642 Accesses | [Metrics](#)

Abstract

Fusion power plant designs based on magnetic confinement, such as the tokamak design, offer a promising route to sustainable fusion power but require robust exhaust solutions

Article | [Open Access](#) | [Published: 30 June 2021](#)

Atomic-state-dependent screening model for hot and warm dense plasmas

[Fuyang Zhou](#), [Yizhi Qu](#), [Junwen Gao](#), [Yulong Ma](#), [Yong Wu](#) , & [Jianqiao Wang](#)

[Communications Physics](#) **4**, Article number: 148 (2021) | [Cite this article](#)

1320 Accesses | **5** Citations | **1** Altmetric | [Metrics](#)

Abstract

An ion embedded in warm/hot dense plasmas will greatly alter its microscopic structure and dynamics, as well as the macroscopic radiation transport properties of the plasmas, due to complicated many-body interactions with surrounding particles. Accurate theoretically modeling of such kind of quantum many-body interactions is essential but very challenging. In this work, we propose an atomic-state-dependent screening model for treating the plasmas with a wide range of temperatures and densities, in which the contributions of three-body recombination processes are included. We show that the electron distributions around an ion

Article | [Open Access](#) | [Published: 28 April 2022](#)

First-principles theory of the rate of magnetic reconnection in magnetospheric and solar plasmas

[Yi-Hsin Liu](#) , [Paul Cassak](#), [Xiaocan Li](#), [Michael Hesse](#), [Shan-Chang Lin](#) & [Kevin Genestreti](#)

[Communications Physics](#) **5**, Article number: 97 (2022) | [Cite this article](#)

3399 Accesses | **289** Altmetric | [Metrics](#)

Abstract

The rate of magnetic reconnection is of the utmost importance in a variety of processes because it controls, for example, the rate energy is released in solar flares, the speed of the Dungey convection cycle in Earth's magnetosphere, and the energy release rate in harmful geomagnetic substorms. It is known from numerical simulations and satellite observations that the rate is approximately 0.1 in normalized units, but despite years of effort, a full theoretical

Article | [Open Access](#) | [Published: 17 June 2021](#)

Unveiling the structure and dynamics of peeling mode in quiescent high-confinement tokamak plasmas

[Kensaku Kamiya](#) , [Kimitaka Itoh](#), [Nobuyuki Aiba](#), [Naoyuki Oyama](#), [Mitsuru Honda](#) & [Akihiko Isayama](#)

[Communications Physics](#) **4**, Article number: 141 (2021) | [Cite this article](#)

733 Accesses | **1** Citations | **1** Altmetric | [Metrics](#)

Abstract

Quiescent high confinement mode plasmas with edge harmonic oscillations do not exhibit the explosive instabilities associated with edge-localized modes. Instead, an additional means of enhanced transport is considered to maintain the plasma edge under conditions just below the boundary of the peeling mode instability. Although the potential of the peeling mode has been widely recognized in plasma physics, no direct evidence for this mode has been revealed previously because decisive diagnostics were lacking. Herein, we report evidence of the structure and dynamical steady state of peeling mode in quiescent high-confinement mode.

Communications Physics: Editorial Team



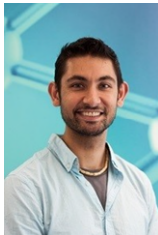
Elena Belsole, PhD
Chief Editor (London)

*Astrophysics, Nuclear and
particle physics, plasma physics,
AMO*



Arianna Bottinelli, PhD
Senior Editor (London)

*Soft and active matter, statistics,
complex systems, biophysics*



Saleem Denholme, PhD
Senior Editor (London)

*Condensed Matter Physics and
Materials Sciences*



Daniel Payne, PhD
Senior Editor (London)

*Optics and Photonics, light-
matter interaction*

Editorial Board

Our Editorial Board Members are active researchers recognized as experts in their field. They handle manuscripts within their areas of expertise, overseeing all aspects of the peer review process from submission to acceptance. Editorial Board Members work closely with our in-house [editors](#) to ensure that all manuscripts are subject to the same editorial standards and journal policies.

<https://www.nature.com/commsphys/editorial-board>

Plasma Physics

- High energy plasma physics
- Plasma Turbulence
- Tokamak (esp. experimental results)
- Magneto hydrodynamic turbulence
- Magnetic reconnection
- High-energy-density laboratory
astrophysics
- Transport in magnetized, collisional
plasmas



Saskia Mordijck – Editorial Board Member

plasma physics, fusion energy, turbulence, chaos, data science

Plasma Physics

- Laser Plasma interaction
- Wakefield acceleration (any PWFA facilities)
- Proton beam driven plasma wakefield acceleration
- Laser plasma accelerator based free electron laser
- Studies on strong field (QED) plasma accelerators (petaWatt lasers facilities)
- High Harmonic generation

Subhendu Kahaly, Extreme Light Infrastructure, Hungary



ultrafast physics, attosecond science, photonics of materials, optical metrology, intense laser matter interaction

Daniele Margarone, Queen's University Belfast (UK) & ELI Czech Republic

laser-plasma interaction, laser-driven acceleration, laser-induced nuclear fusion, novel approaches to hadrontherapy, radiation detectors



Other initiatives

Travel Grants for Early Career Researchers

The 2019 travel grant program is now open for applications to support travel in 2020.



Focus Collections

<https://www.nature.com/commsphys/focus-collections>



Transparent Peer Review

65% of entitled authors agree

The Nature Portfolio



Widest importance and implications.

Significance should be obvious to any scientist working in any field of research.

Most relevant advances in a field.

Significance should be apparent to anyone in that discipline.

Highly significant advances that influence a field.

Broad appeal isn't a prerequisite for publication... but great science is.

Important insights into focused areas of research.

Selective Open access options reporting high-quality findings.

Technically sound science.

Papers are not selected for their significance or impact but must be technically correct, with reproducible results.

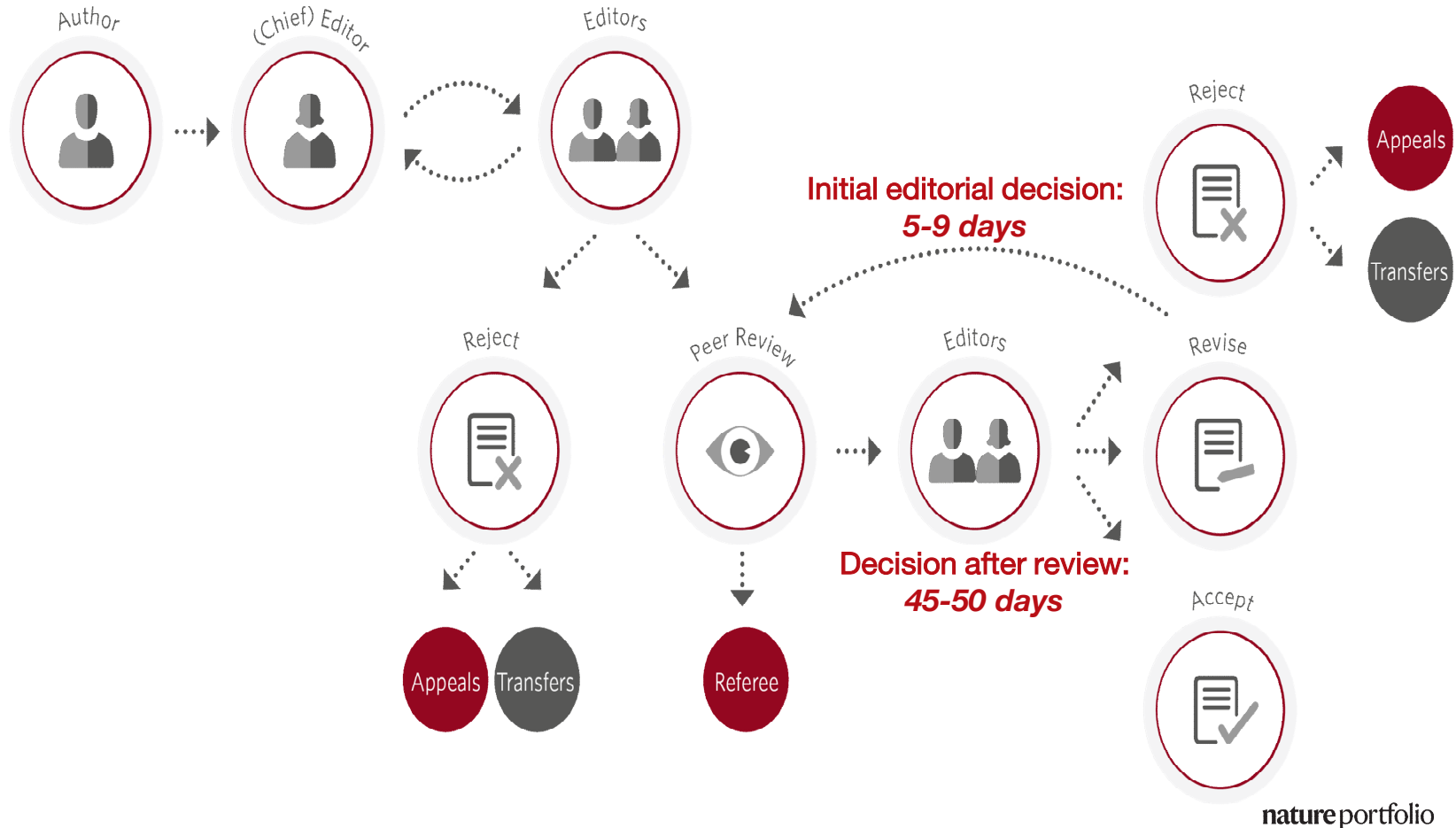
Understanding the editorial process

2.0

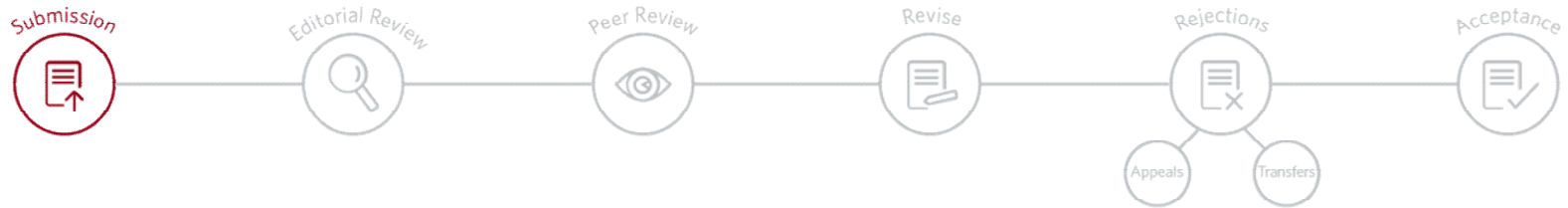


Source: Getty image. Idea: X. Zhang

The Editorial Process



Finding the best fit



How **'big'** is your story?

What **audience** do you want to reach?

How **fast** do you want to get it out?

Is **open access** important to you?

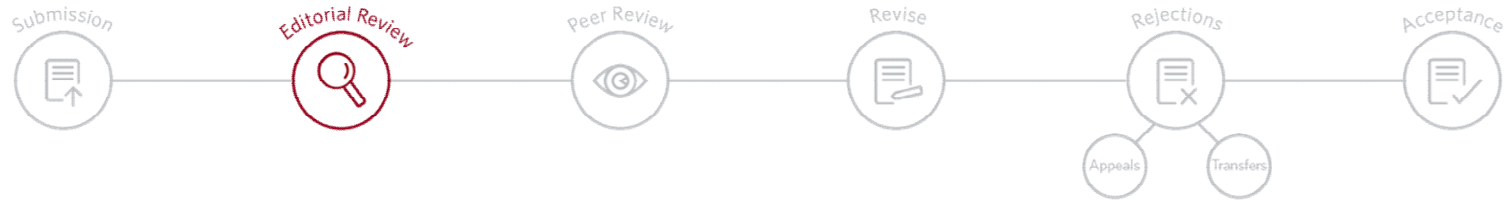
Does your work **build on** recent papers in the journal?



SCIENTIFIC REPORTS

nature portfolio

Initial editorial evaluation at Nature Portfolio journals



Your editor will guide you through the editorial process

Cover letters are important

- Explain **why your research is important**.
- Clearly state **the advance** of your research over previous work. Be specific!
- Be direct and transparent. If a similar paper has been published **tell us what's new**.
- You can suggest reviewers (but please no COIs)

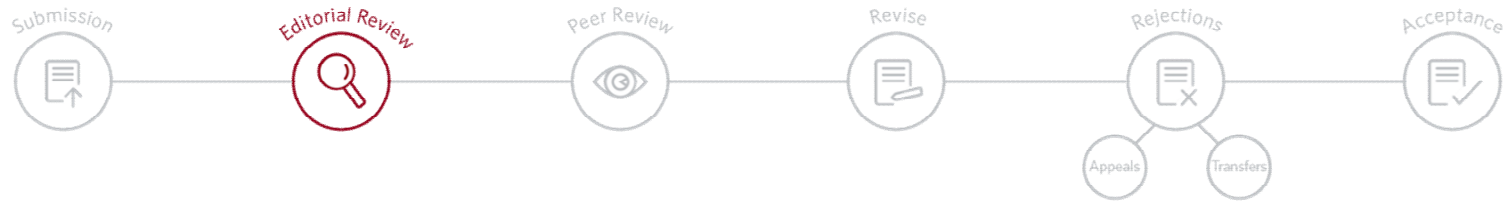
The editor **reads the full manuscript** to determine whether it is potentially suitable for the journal.

The editor decides whether to send the paper to peer review, often in consultation with other editors on the team.

Timeliness is a priority: we aim for initial decisions within a week.



What papers do we send out to peer review?



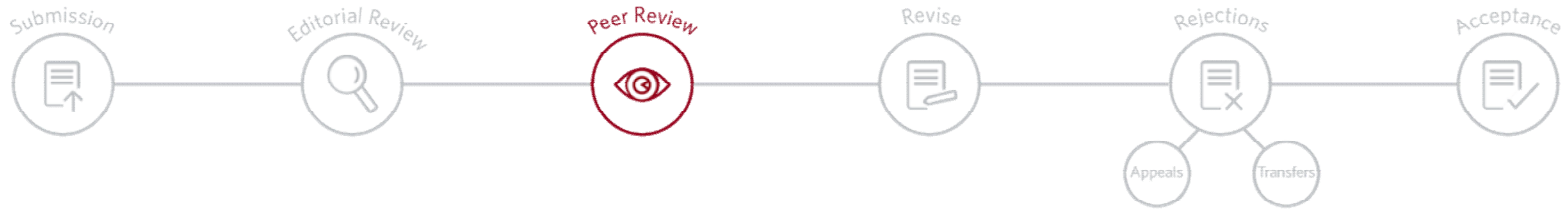
Criteria

- (1) Relevance to the journal's readership
- (2) Significance of the findings
- (3) Strong support for conclusions

A strong contender for review...

- (1) Addresses an important question for the field or provides a useful technical advance
- (2) Tells us something **new** and interesting
- (3) Presents strong, well-controlled data
- (4) Rules out alternative explanations to arrive at definitive conclusions
- (5) Includes benchmarking for new methods

Peer review - the cornerstone of all scientific publishing



A good peer reviewer has:

- Technical expertise and knowledge of the field
- A fair and constructive attitude
- No conflicts of interest
- Good attention to detail
- A big picture view
- Familiarity with journal standards

Our editors:

- Seek to increase diversity in the reviewer pool
- Honour author exclusions (within reason)
- Involve as many reviewers as needed (three is standard)
- Are alert to inappropriate reviewer behaviour

Editorial Decisions

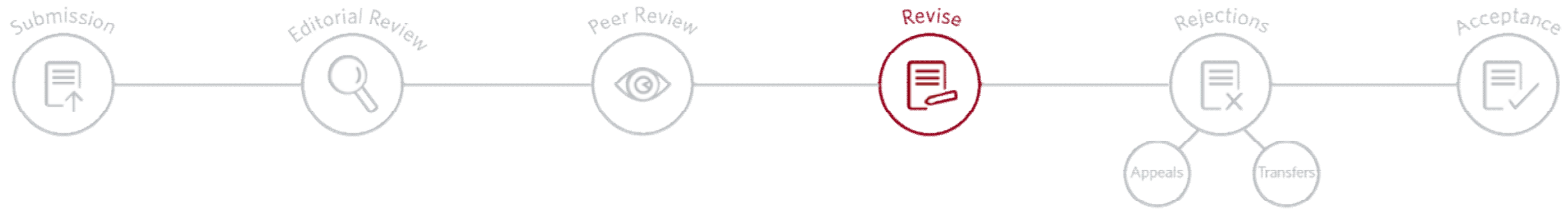


- **The decision is for the editors** — not the referees — to make.
- Editors make decision based on arguments: **we do not count votes** and we do sometimes overrule reviewers, be they positive or negative.
- **The goal of peer review is to improve paper**
- **We can be patient:** If we consider a work to be of interest, we can wait for additional experiments to be completed.

- Criticism is an **opportunity!**
- Engage thoroughly – with new data if requested.
- Make it **easy** – think of the referees.
- When in doubt, [ask the editor.](#)



Addressing the referee reports



Make the most of your opportunity to revise

- **Engage thoroughly** with the reviews
- If revision takes longer than the “deadline”, it is OK! Just **inform the editor**.

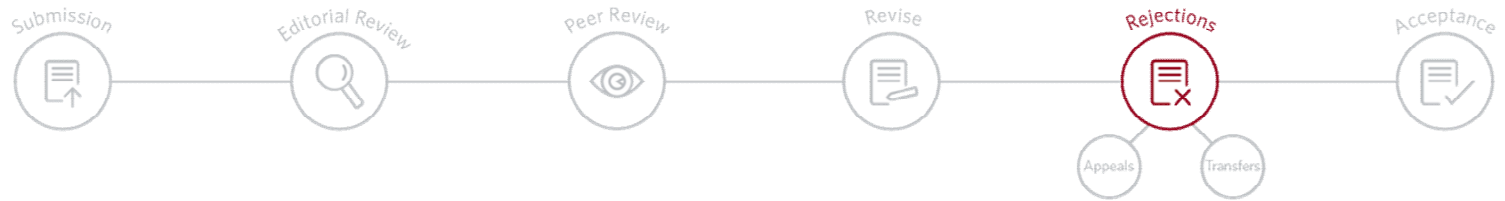
Provide a point-by-point response

- Make your answers distinct from the reviewer comments
 - **Reviewer’s comment**
 - **Author’s response**
- Clearly indicate **where you have made the changes** within the manuscript.

An effective point-by-point response

- Views the critiques as an opportunity for improvements
- Explains why specific points have not been addressed
- Is professional and diplomatic

Why might we reject a paper?



Before Peer Review

- **Topic is out of the journal's scope**
- **Similar findings have been published** or recently accepted
- Key conclusions **lack direct experimental support**
- There are serious **ethical concerns**
- Essential criteria specific for the journal or field are missing

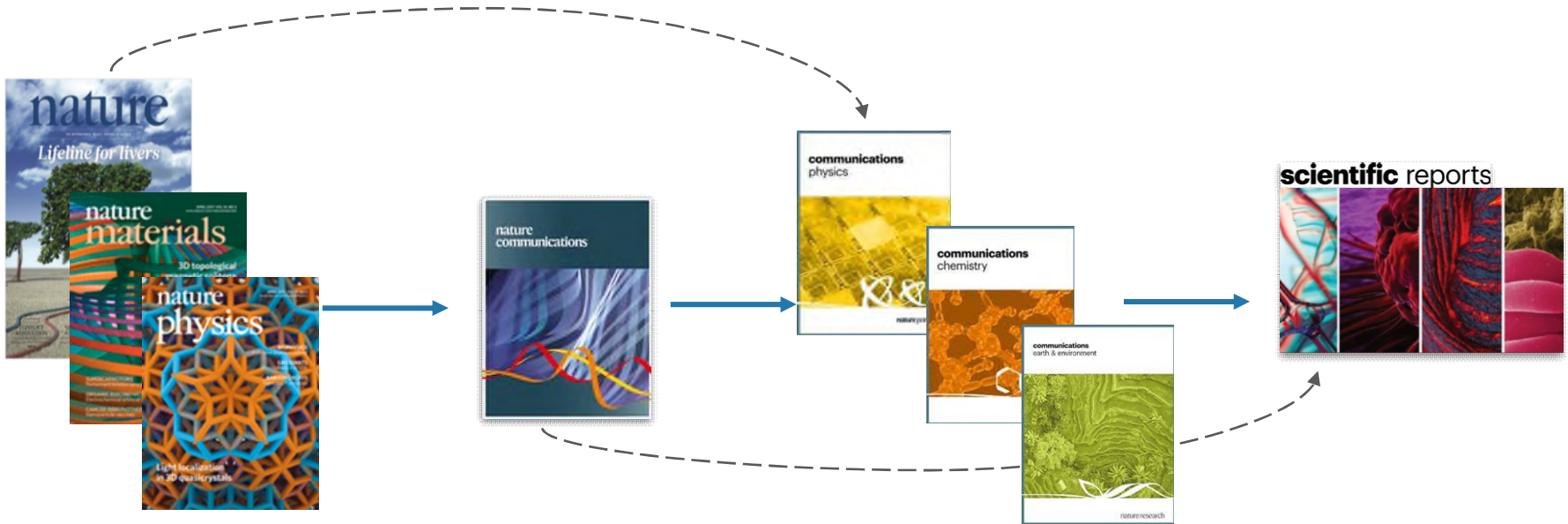
After Peer Review

- The conclusions and interpretations are **not sufficiently supported** by data
- There are significant **technical concerns**
- The findings are **not sufficiently novel or significant** enough for the field
- The paper lacks a **critical element**, such as a key experiment or impact

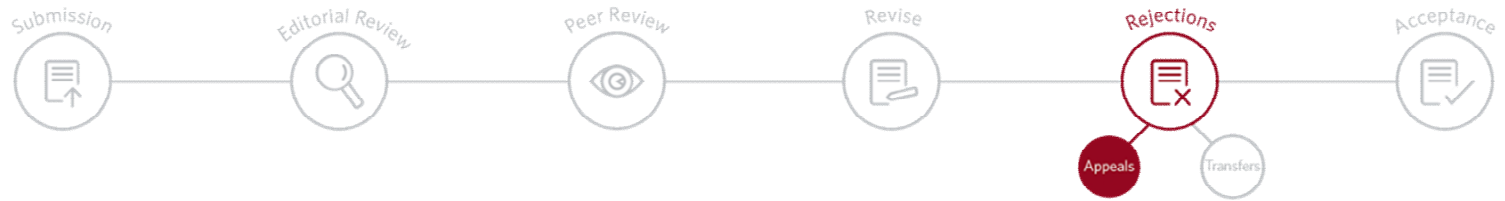
Moving on: manuscript transfer at in the nature portfolio



The editor may recommend a journal for transfer, but you are always welcome to transfer to any Nature Portfolio journal of your choice.



Appeals



If you think we've made a mistake and can explain why, let us know

What helps?

Specific errors of fact or understanding by the editor or referees

New data that address major criticisms



help?

"who I AM!?!"

"I don't like my work, therefore they"

"I really hard on this paper!"

"I am not qualified to make this decision!"

replacements

revisions

extensions

Key takeaways about the editorial process

- Make your **main message (why research is important and new)** clear in the cover letter and paper.
- Your **handling editor will guide you** through the editorial process.
- We look for **papers with potential**.
- The goal of peer review is to **improve papers**.
- Make the **most of your opportunity** to revise.
- Editors, not referees, **take the ultimate responsibility** for decisions.
- We consider appeals in cases where the **concerns can be resolved**.



Writing your paper

3.0

The framework of a compelling narrative

Question

Context

Knowledge Gap

Advance: What you did

How you did it

Tell us what it means

Broader Impacts

Title: Draw the reader in

Make the **main message** of the work clear

Be **descriptive** but not TOO detailed

Avoid **jargon** and acronyms

Include **keywords** to enhance discoverability

Be wary of using **punctuation** in titles,
especially question marks

Article | 09 May 2019 | **OPEN**

Single plasmon hot carrier
generation in metallic nanoparticles

Article | 18 February 2019 | **OPEN**

Unique crystal field splitting and
multiband RKKY interactions in Ni-
doped $\text{EuRbFe}_4\text{As}_4$

Introduction

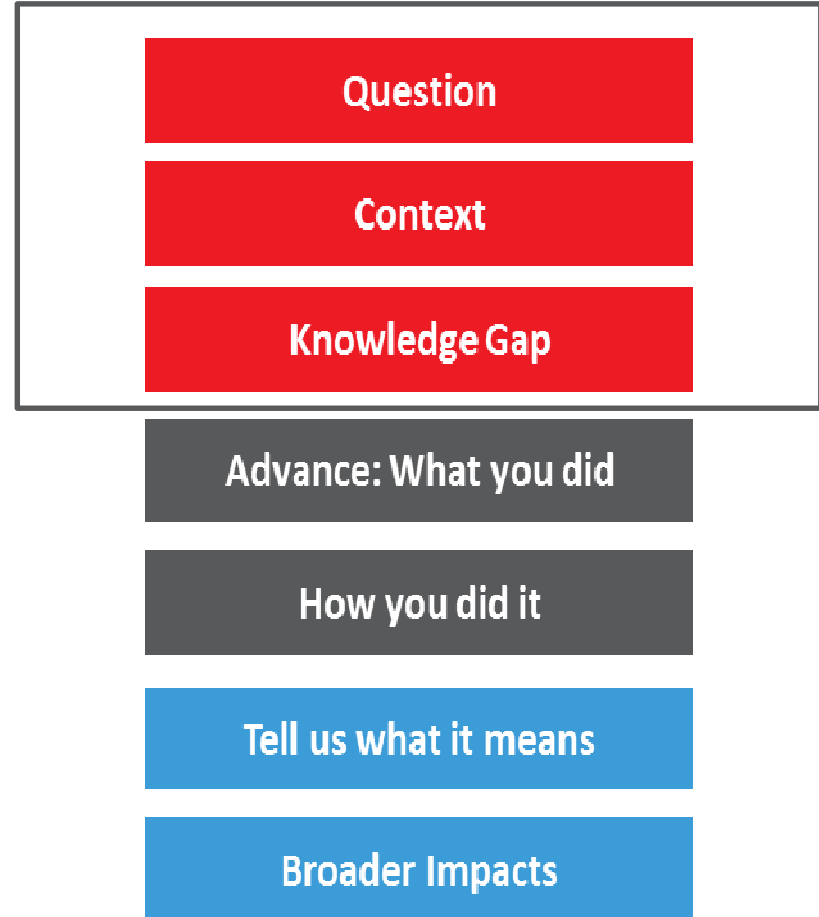
Tell us why we should care.

Clear rationale for the study.

Good scholarship: what is the state of knowledge?

How does your work address the major questions?

What is the **one most important thing** a reader should take away from your work?



Results

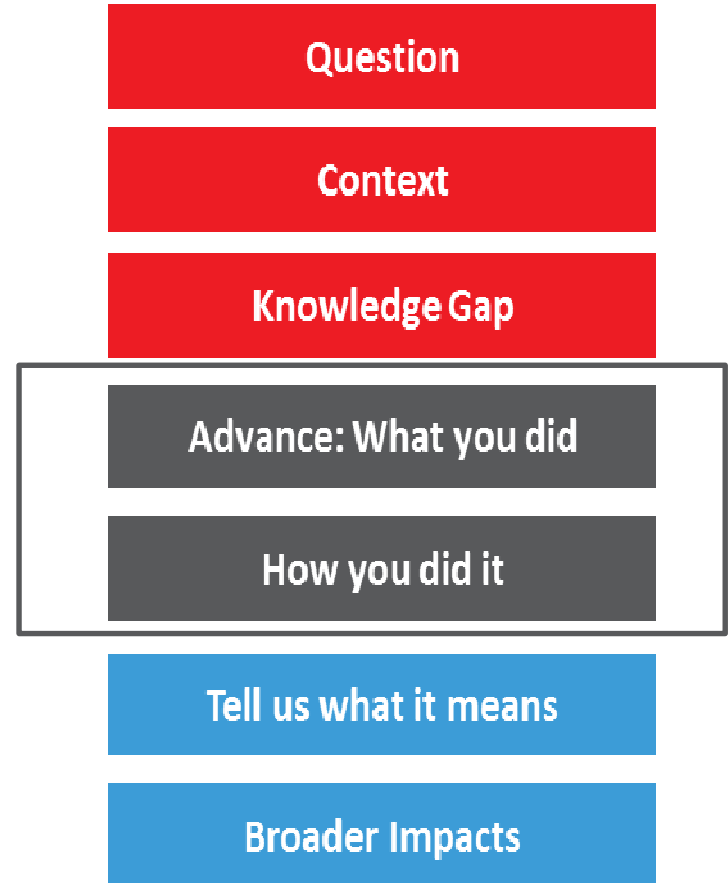
Identify **key** claims you want readers to understand.

Present evidence for each claim in the paper in **logical** order.

Clearly describe **methods** that were used for each result.

Editor tip: Explain, don't hype. Show, don't tell.

Clarity. The figures should speak for themselves. Clarity in the figures and tables is more important than beauty



Discussion and Conclusions

Brief summary of the results and conclusions.

How do the findings **fit** with previous research?

What are the next steps?

How should others use this research?

Question

Context

Knowledge Gap

Advance: What you did

How you did it

Tell us what it means

Broader Impacts

Methods: the how-to manual

Include enough **detail** to allow replication

Don't rely too much on citations,
describe **what you did**

Describe your **approach**
comprehensively

Consider posting an **online data or code**



Summary

Communications Physics is an awesome place to publish your next paper!

Editors **are there to help you** navigate the publication process. You deserve the best service possible. **Contact the editor!**

You are responsible to **maximize impact: strengthen** your work and make sure it reaches the **widest audience** possible

Thank you!



elena.belsole@nature.com



[@commsphys](https://twitter.com/commsphys)



nature.com/commsphys

communications
physics



nature portfolio