

Introduction to copyright and licensing in an open access environment

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What is copyright?

As soon as an idea is expressed in a physical medium, such as writing a paper, it qualifies for copyright protection.

Copyright is a legal right that gives the copyright holder exclusive rights over how others use their work. The level and type of protection offered by copyright varies between countries.

A form of intellectual property, copyright can be dealt with like other types of property – it can be acquired, disposed of or licensed.

Copyright is time-limited. The period of protection varies, but in most countries a journal article created at the present time will be protected for between 50 and 70 years from the death of the last surviving author.

By means of a number of local and international laws and conventions, copyright which arises in one country is recognised and protected in many others.

Treatment of copyright in the digital environment is evolving at an unprecedented rate. Copyright exists to protect the rights of an owner of an original piece of work by imposing restrictions on reuse but it does not always fit well with how we use and share information in the digital sphere.

The growth of open access publishing has also added to the challenge as the right to reuse as well as read content has been emphasised



Who owns the copyright in an article?

The author(s) of an article will be the first owners UNLESS the paper was written in the course of employment, i.e. as part of their normal, paid duties for their employer, in which case in many countries the employer will be the copyright owner.

The output of government employees may be subject to different legislation depending on their country of origin.

If the author is a servant of the Crown – that is, he or she is employed by the UK government, the copyright in their article may belong to the Crown and be subject to different rules. A list of the public bodies whose material is protected by Crown copyright can be found [here](#).

Government employees in Australia, Canada and New Zealand are subject to similar arrangements.

If all of the authors of an article are employees of the US federal government, their work may not be protected by copyright at all.

When I publish with IOP, is my work protected by copyright?

When you publish your work with IOP we ask you to assign copyright to us. Since your work will be first published in the UK, it will be protected by UK copyright law.

Works protected by UK copyright law also have protection in the 179 countries which are signatories of the [Berne Convention](#) and/or members of the [World Trade Organisation](#).



What happens to copyright when you publish an article?

The majority of publishers ask for an assignment of copyright from authors.

Assignment is where a copyright owner may transfer ownership of his or her copyright to somebody else. Most peer-reviewed journals take an assignment of copyright and grant back to the author certain rights, for example the right to reuse figures in new articles or books, to use an article for teaching purposes, or in compilations of the author's works. Following assignment the publisher becomes the sole owner of the copyright.

The full reasons for transferring copyright are outlined in the STM position paper [Publishers Seek Copyright Transfers \(Or Transfers Or Licences Of Exclusive Rights\) To Ensure Proper Administration & Enforcement of Author Rights](#).

You can read more about IOP's assignment form in the [Copyright FAQs section](#).

As an author, if you wish to reuse your previously published content but you have assigned copyright to a publisher, you'll need to check the terms of the assignment to see what you're allowed to do.



Images inspired by contours of elastic and electric displacement, and hydrostatic stress, on the surface of a material under loading [H M Wang, E Pan, A Sangghaleh, R Wang and X Han 2012 *Smart Mater. Struct.* 21.075003](#).

What can I do with other people's copyright works?

You will need the permission of the copyright owner to reproduce the whole or any substantial part of a work, whether you have made direct use or your use is indirect (such as “redrawing”).

Images

If you wish to reproduce an image and the rights are owned by someone else, you need permission from the copyright owner (usually the publisher). A publisher may also require that you obtain the permission of the original author.

Creating a new image from scratch based on someone else's image or even modifying an existing image may result in the creation of a new copyright work. If permission is not sought there is the potential that the new or modified image could infringe the original's copyright.

Whether or not the new creation infringes will depend upon whether substantial elements of the original are incorporated into the new work. Such substantiality is to be judged in terms of its qualitative importance to the original, rather than in terms of quantity. For an example of an independently created work which was found to infringe a pre-existing one, [see here](#).

Many publishers, IOP included, are signatories to the [STM Permission Guidelines](#), which allow free reuse of small numbers of figures or portions of text in articles published by co-signatories.

Text

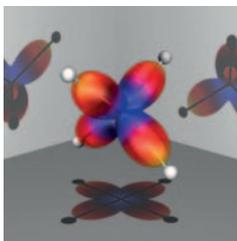
Short, properly attributed quotes will not usually need permission; however, the emphasis is again on the importance of the reproduced element to the original work. There is no ‘safe’ word-count or proportion of a work to copy.

Ideas & data

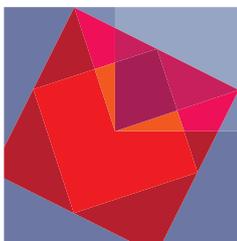
Copyright protects only the expression of an idea, not the idea itself. For example, you cannot infringe copyright by reporting facts or data in your own words. Reuse of graphs or tables created by another author expressing such data would, however, require permission. As a matter of best practice and professional courtesy, data sources should be acknowledged and properly referenced.

This [joint statement](#) by ALPSP and STM reflects IOP's stance on the relationship between journals and the data they publish.





Molecular-frame photoelectron angular distribution for K-shell ionization of CH_4 with photon energy of 295 eV
J B Williams et al 2012 *J. Phys. B: At. Mol. Opt. Phys.* **45** 194003.



Artistic interpretation of the magnetic Brillouin zone and the original lattice Brillouin zone of the checkerboard antiferromagnetic $\text{K}_{0.5}\text{Fe}_{1.6}\text{Se}_2$. **Huan Li and Ya Liu** 2012 *EPL* **98** 47006.

Licences

Licences allow the owner of copyright to grant and impose conditions on the reuse of content.

As a result of the growth of open access publishing, standard form licences have attracted significant attention, especially as many funders are mandating that specific licences be used by publishers when publishing work funded by them (for example, the Research Councils UK have expressed a preference for a CC BY licence for gold open access publishing). What CC BY stands for is explained on [page 8](#)).

What is a Creative Commons licence?

Creative Commons is a not-for-profit organisation which has created and published a number of standard form copyright licences. Creative Commons (or CC) licences, in common with all licences, allow the copyright holder to retain ownership, whilst attaching varying degrees of restriction on the use of works by third parties. You can read more about the different types of CC licences here: creativecommons.org/licenses/ and on [page 8](#) of this document.



What is open access publishing?

Open access (or OA) refers to making content available to readers without charge and giving the permission of the copyright owner to reuse content.

Broadly speaking, two OA publishing models have emerged:

GOLD OA

In this model, the final published version of an article is made freely available upon payment of an article publication charge (APC). This is paid to the publisher by the author, his or her funder or a third party. Copyright can either be licensed or assigned in the standard manner but the publisher makes the content immediately free to view and to reuse (subject to some restrictions, which vary by publisher) immediately.

IOP applies a CC BY licence to all articles published on a gold open access basis in its wholly-owned journals. This allows broad reuse – so long as IOP and the authors are credited. Some of our partner journals publish OA articles under a CC BY-NC-SA licence. Please check the individual journal homepages or e-mail us at copyright@iop.org if you are unsure.

GREEN OA

Green open access refers to the self-archiving of an article in a publicly/freely accessible repository, usually after an embargo period of up to 12 months. It is the author's peer-reviewed, accepted manuscript (but before any editing, coding etc.) that can be posted, not the final published version. The costs of publication have to be covered by subscription fees.

Copyright is generally assigned to the publisher and the author is given rights to post onto a repository within the restrictions detailed above.



Definition of different Creative Commons licences



CC BY

When this licence has been used you are free to:

- share – to copy, distribute and transmit the work
- remix – to adapt the work
- make commercial use of the work

under the condition that you must attribute the work in the manner specified by the author or licensor (but not in any way that suggests that they endorse you or your use of the work.)



CC BY-NC

This licence has the same properties as that described above except that the user cannot use the content in a commercial way. The NC stands for non-commercial. There is some uncertainty over the definition of non-commercial in this context. Some publishers have created their own definition of 'NC'. You should be careful to check whether this is the case as definitions may vary from organisation to organisation.



CC BY-SA

The SA stands for ShareAlike. This means that any future work based on content published under this licence must be published under the same licence. Therefore the user can reuse the content and create a derivative work provided they publish the result under the same conditions and attribute the source. This is common in open-source computer coding, for example.

All of the licences (including CC BY) are also subject to the following conditions

- **Waiver** – Any of the licence conditions can be waived (disapplied) by the copyright holder.
 - **Public domain** – Where the work or any of its elements is in the public domain under applicable law, that status is in no way affected by the licence, because it is not protected by copyright. Please note, however, that public domain is not the same as 'freely available' or 'free to view'.
 - **Other rights** – In no way are any of the following rights affected by the licence:
 - Fair dealing (UK) or fair use (USA) rights, or other applicable copyright exceptions and limitations;
 - The author's moral rights (as discussed opposite, these offer useful, if limited, protection to the author);
 - Rights other persons may have either to the work itself or in how the work is used, such as publicity or privacy rights.
 - **Notice** – For any reuse or distribution, users must make clear to others the licence terms of the work.
- See creativecommons.org for more information.



What are moral rights?

Whereas copyright is concerned with protecting economic rights, moral rights provide the author with the ability to protect the artistic integrity of his or her work.

Moral rights can be summarised as:

- 1 The right of the author of a literary work to be acknowledged as the author or creator (known as the right of paternity)
- 2 The right of the author to object to false attribution
- 3 The right of the author not to have his or her work subjected to 'derogatory' treatment

Whilst copyright is a property right which can be transferred through being sold, assigned or through legacy, moral rights cannot be transferred, although they can be waived.

In some territories, to benefit from the right of paternity, the author must assert it. IOP's standard Assignment of Copyright includes an explicit assertion of this right.

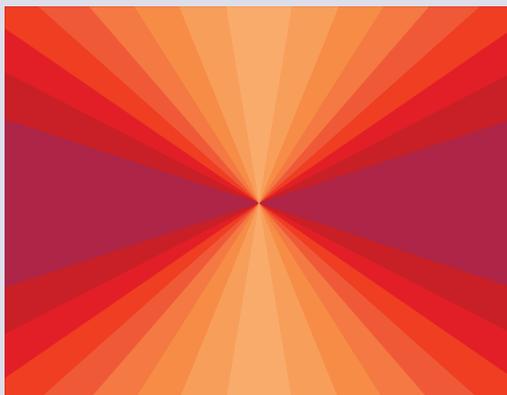
In most countries, the right of paternity and the right to object to derogatory treatment last for at least as long as a work is protected by copyright. The right to object to false attribution may be more limited.

In some countries, such as the US and the UK, work produced by staff during the course of their employment attracts a lower level of moral rights protection.

Moral rights are important to adhere to because of the ease with which content can be curated, altered, changed and manipulated, particularly when in electronic format. If digital images are reproduced electronically, it is important to ensure that they are reproduced in their entirety unless permission has been secured from the copyright owner for a change. Similarly, authors should be credited appropriately.

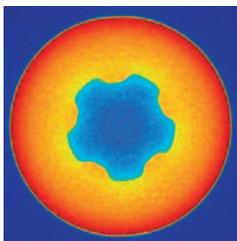
Moral rights and Creative Commons licences

Each of the Creative Commons licences provides protection very similar to that afforded by moral rights. Since moral rights are personal to the author, this gives the copyright holder the right to enforce the authors' moral rights on their behalf.

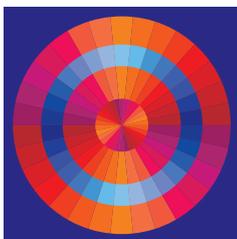


An artistic interpretation of the error distribution in PIV image data, showing that when measuring the peripheral displacement in the y-direction, measurements performed close to the x-axis result in the highest errors **A Armellini et al** 2012 *Meas. Sci. Technol.* **23** 025302.





Tomography reconstruction from x-ray cone-beam data **Alfred K Louis** 2011 *Inverse Problems* **27** 065010.



Artistic interpretation of phase distributions of Cartesian electric field components, in the image plane of a high numerical aperture double lens system with coincident foci **M R Foreman and P Török** 2011 *New Journal of Physics* **13** 063041.

Frequently asked questions about copyright

Q: I am employed by a university; who owns the copyright in my article?

A: In the UK, the US and some European countries, the default owner of works created by employees in the course of their usual duties is the employer. However, many universities allow for employees to retain the copyright in their work. If you are employed by a university, you should check to see if there is a copyright policy in place or if the matter of copyright is addressed in your employment contract. If not, then you should assume that the copyright is owned by the university and that they should sign the copyright form.

Q: My co-authors and I are each employed by different companies/universities. Who owns the copyright?

A: If the article was created collaboratively, the copyright is owned by each of the companies in undivided shares (i.e. each of the owners owns all of the copyright, rather than a particular percentage or proportion).

If each author made a distinct contribution, for example one author wrote the text, whilst another created the illustrations, then each of the authors' respective employers will own the copyright in their contributions.

Q: The research my article is based upon was funded by a third party. Do I need them to sign the copyright form?

A: No, unless agreed otherwise, you (or your employer) will be the first owner of the copyright, so there is no need for them to sign the form.

Q: I wrote a paper which was included in a conference proceeding which wasn't peer reviewed. Will I still own the copyright and can I submit the paper to a peer-reviewed journal?

A: Conference organisers may ask for:

- a full assignment so that you no longer own the copyright;
- an exclusive licence where you retain the copyright but give the publisher exclusive rights of publication;
- a non-exclusive licence where you keep the copyright and grant limited rights to the publisher.

Because of this variation you should carefully check the terms under which you submitted your paper.

If you assigned the copyright or granted an exclusive licence, you will need to obtain the permission of the publisher or conference organiser before submitting your article. Even if you granted a non-exclusive licence, you may be prohibited by the publisher from submitting your article, or there may be certain conditions attached.



Frequently asked questions about CC BY

Q: My work has been published under a CC BY licence and another research group has reused my published data, added their analysis and comments and published this as a new paper. They have also reproduced the figures I published in my article without asking my permission or that of the publisher. Is this allowed under a CC BY licence?

A: Yes, all forms of reuse are allowed under the CC BY licence provided the authors of the new paper have cited the original source of the work.

Q: How does this differ from traditional copyright protection and current practice?

A: Figures and text protected by traditional copyright cannot be reused without permission. However, many scientific publishers will grant permission for scholarly reuse as a matter of course; and many will not charge a fee. Data, that is, information and ideas, are not protected by copyright.

Q: What if I disagree with how someone uses my content?

A: If you disagree on a scientific basis you may wish to address this through a 'Comment and Reply' process on journals that allow this, or you may wish to write a further paper discussing the differences in approach. You may object to use of your work in ways that amount to distortion or are prejudicial to your reputation. Such use is not an infringement of copyright, but of your moral rights. Use which alters your work but does not amount to mutilation is permitted under the terms of the CC BY licence.

Q: What if my work is used to promote a cause or a commercial operation with which I do not wish to be associated?

A: Use of your work for commercial purposes is permitted by the CC BY licence. Unless the use infringes your moral

rights (see previous question), such use is legitimate provided it is made clear that you do not endorse or sponsor the work. Permission to endorse or sponsor something has to be obtained from you beforehand.

Q: Can I object to an inaccurate translation of my work if it is published under a CC BY licence?

A: In most jurisdictions you may object to a translation which distorts your work. Misleading or inaccurate translations should be addressed directly with the translation's publisher.

Q: What will happen if I raise an objection based upon my moral rights?

A: Since moral rights belong to and stay with the creator of a work and not the copyright holder, any objection must be raised by you personally. If a court finds that a specific use infringed your moral rights, they may order that publication of the infringing material cease, or they may allow it to continue, subject to a disclaimer dissociating you from the derivative work. Financial recompense for breach of moral rights varies widely by jurisdiction.

We are unaware of any cases specifically concerned with infringement of moral rights arising out of use of material published under a CC BY licence. We will update this guidance note if we become aware of any.

The Creative Commons licences stipulate conditions of use which echo the protection afforded by moral rights. This adds an additional, contractual, layer of protection which can be enforced by the copyright holder (which, as noted above, may be different to the holder of the moral rights).



Q: Does publication under a CC BY licence make plagiarism easier?

A: No. Plagiarism is an issue quite separate to copyright and licensing. Nothing in any of the Creative Commons licences permits or facilitates plagiarism. You can read more about this issue in [IOP's ethical policy here](#).

Q: If I reuse something published under a CC BY licence then am I free to reuse, modify and distribute the resulting work without having to ask the original author's permission, including use in a commercial context?

A: Yes, subject to correct attribution of the original work.

Q: My work has been published under a CC BY licence; will this affect my ability to apply for a patent?

A: An invention's eligibility for patent protection is not affected by publication under a CC BY licence any more than publication under traditional copyright.

Q: What happens if I want to use a figure/picture in my CC BY-licensed paper that is not available under a CC BY licence?

A: We strongly recommend you discuss the issue with the copyright owner. We may be able to assist (as we do now) but it will be your responsibility to ensure that you can demonstrate that you have the right to use the image in an article distributed under the CC BY licence. The figure itself will continue to be protected by traditional copyright.



Artistic interpretation of two-qubit Bell-diagonal states ordering with quantum discords
M Okrasa and Z Walczak
2012 *EPL* **98** 40003.

What if my question is not answered here?

Your question may be answered in the Copyright FAQs, available on [IOP's Author services](#) website which deal with the practical issues of copyright in relation to IOP journals. Otherwise, please e-mail copyright@iop.org and we will be happy to answer specific questions wherever possible.



Glossary

Accepted manuscript

The author's original version of an article after any changes made during peer review but before any editing, typesetting etc. by the publisher.

Assignment

The process by which a copyright owner may transfer ownership of his or her copyright to somebody else. In many countries an assignment must be in writing.

Creative Commons

Creative Commons is a not-for-profit corporation dedicated to making it easier for people to share and build upon the work of others within the framework of national copyright laws. The Creative Commons suite of free copyright licences provides a simple, standardized way to give users permission to share and use creative and scholarly work.

Creativecommons.org

Copyright

Copyright is a property right which automatically arises when a new intellectual work is created. The protection afforded to copyright works varies by country.

Copyright holder

The copyright holder is the owner of the copyright and has the exclusive right to prevent or impose restrictions upon the use by others of his or her work.

Derivative works

A work based upon one or more pre-existing copyright works, for example an adapted figure or a rewritten article.

Final published version

The typeset and copy-edited version of an article published by the publisher in the relevant journal.

Licensing

The owner retains his or her copyright and grants permission for use of their work within set terms and conditions.

Open access

Content is made available to read and reuse with no financial or technical barriers.

Plagiarism

A form of scientific misconduct where the authors copy results or material from someone else's work, claiming it as their own.

User rights

In this context, the rights granted to someone using a copyright-protected work, laying out what can and cannot be done with the content



Artistic interpretation of contour map for the density probability of an electron state in a graphene ring calculated at the absolute minimum eigen-value as a function of the radial coordinate (horizontal axis) and the relative height of the core barrier (vertical axis) **L Villegas-Lelovsky et al** 2012 *Nanotechnology* **23** 385201.



IOP publications

- Advances in Natural Sciences: Nanoscience and Nanotechnology
- Applied Physics Express
- The Astronomical Journal
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- Bioinspiration & Biomimetics
- Biomedical Materials
- Chinese Physics B
- Chinese Physics C
- Chinese Physics Letters
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- Communications in Theoretical Physics
- Computational Science & Discovery
- Environmental Research Letters
- EPL
- European Journal of Physics
- Fluid Dynamics Research
- Inverse Problems
- IOP Conference Series: Earth and Environmental Science
- IOP Conference Series: Materials Science and Engineering
- Izvestiya: Mathematics
- Japanese Journal of Applied Physics
- Journal of Breath Research
- Journal of Cosmology and Astroparticle Physics
- Journal of Geophysics and Engineering
- Journal of Instrumentation
- Journal of Micromechanics and Microengineering
- Journal of Neural Engineering
- Journal of Optics
- Journal of Physics A: Mathematical and Theoretical
- Journal of Physics B: Atomic, Molecular and Optical Physics
- Journal of Physics: Condensed Matter
- Journal of Physics: Conference Series
- Journal of Physics D: Applied Physics
- Journal of Physics G: Nuclear and Particle Physics
- Journal of Radiological Protection
- Journal of Semiconductors
- Journal of Statistical Mechanics: Theory and Experiment
- Laser Physics
- Laser Physics Letters
- Measurement Science and Technology
- Methods and Applications in Fluorescence
- Metrologia
- Modelling and Simulation in Materials Science and Engineering
- Nanotechnology
- New Journal of Physics
- Nonlinearity
- Nuclear Fusion
- Physica Scripta
- Physical Biology
- Physics Education
- Physics in Medicine & Biology
- Physics—Uspekhi
- Physiological Measurement
- Plasma Physics and Controlled Fusion
- Plasma Science and Technology
- Plasma Sources Science and Technology
- Quantum Electronics
- Reports on Progress in Physics
- Research in Astronomy and Astrophysics
- Russian Chemical Reviews
- Russian Mathematical Surveys
- Sbornik: Mathematics
- Science and Technology of Advanced Materials
- Semiconductor Science and Technology
- Smart Materials and Structures
- Superconductor Science and Technology



Contact information

UK

IOP Publishing
Temple Circus
Temple Way
Bristol BS1 6HG
UK

Tel +44 (0)117 929 7481
Fax +44 (0)117 929 4318
E-mail custserv@iop.org

USA

IOP Publishing Science and
Editorial Office
Suite 1010
1325 G St. NW
Washington, DC 20005
USA

Tel +1 202 747 0330
Fax +1 202 747 0338
E-mail info@ioppubusa.com

China

Professor Mingfang Lu FlInstP
IOP Publishing China Editorial Office
Room A512,
Institute of Physics,
Chinese Academy of Sciences
8 Zhong-Guan-Cun Nan San Jie
Beijing 100190
China

Tel +86 (10) 8264 9679
Fax +86 (10) 8264 9678
E-mail iopchina@aphy.iphy.ac.cn

Japan

Dr Kosei Kameta
IOP Publishing Tokyo Office
9th Floor Buyo Building
Nihonbashi 3-8-16
Chuo-ku
Tokyo 103-0027
Japan

Tel +81 (0)3 3245 6820
Fax +81 (0)3 3245 6820
E-mail iopp-tokyo@iop.org

Russia

Dr Grigorii Sokolovskii
Ioffe Physico-Technical Institute
26 Polytekhnikeskaya Street
St Petersburg 194 021
Russia

Tel +7 812 292 7914
Fax +7 812 297 1017
E-mail gs@mail.ioffe.ru

Dr Margarita Man'ko
P. N. Lebedev Physical Institute
Leninskii Prospect 53
Moscow 119991
Russia

Tel +7 499 132 6197
Fax +7 499 783 3648
E-mail iopp@sci.lebedev.ru

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