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ABOUT THE JOURNAL

Aims and Scope

Light: Science & Applications (LSA) seeks to promote research from all aspects of optics and photonics, including basic, applied and engineering research and applications. This journal will primarily publish new research results in cutting-edge and emerging topics in optics and photonics, as well as covering traditional topics in optical engineering. The journal will publish Articles, Review Articles, Letters, Perspectives and News and Views that are of high quality, high interest and far-reaching consequence. *Light: Science & Applications* is an open access journal.

Topics of particular interest within the journal's scope include, but are not limited to, those listed below:

- Small-scale optics
 - Micro- and nano-optics
 - Quantum optics
 - Ultrafast photonics
 - Nanophotonics
- Optical material processing
 - New physics of light propagation, interactions, and behavior
 - Laser and UV light sources
 - Laser applications
- Optics in life science and the environment
 - Biophotonics and optics for biological and medical devices
 - Photovoltaics and solar energy
- Special optics
 - Nonlinear optics
 - Optoelectronic devices
- Optical data transmission
 - Optical data processing and storage
 - Optical communications
 - Plasmonics
- Optical measurement
 - Spectroscopy
 - Optical coherence tomography
- Optical materials
 - New optical materials

- Optical thin films and coatings
- Manufacture of optical elements
 - Optical design and engineering
 - Optical fabrication, testing, and metrology
 - Complex optical systems
- Organic optoelectronics
 - organic optoelectronic materials
 - organic optoelectronic devices
 - organic optoelectronic phenomena
- Guided light
 - Optical fibers and waveguides
 - Light processing devices

The journal publishes peer-reviewed Articles, Letters and Review Articles, as well as News and Views, Editorials and Research Summaries.

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ARTICLE TYPES

Article Description	Abstract	Word Limit	Tables/ Figures	References guideline
<p>Article The article denotes a relatively complete, comprehensive report of original research. An article usually has a fairly complex narrative that is based on multiple techniques and/or approaches.</p>	Unstructured abstract; max word limit: 250	6 000 words excluding abstract, references, figures and tables	Max of 8	Max of 50. Please use as current as possible.
<p>Editorial The editors invite editorials to discuss a topical issue or a paper published in the journal and set the problems addressed by the paper in the wider context of the field. These are usually commissioned, but unsolicited editorial submissions are considered for publication.</p>	No abstract required	1 000 words excluding references	Max of 2	Max of 15
<p>Letter A Letter reports an important novel research result, but is less substantial than an Article. Letters are peer reviewed, and typically occupy four printed journal pages. This format begins with an introductory paragraph (not abstract) of 150 words maximum, summarizing the background, rationale, main results and implications. This paragraph should be referenced, and should be considered part of the main text, so that any subsequent introductory material avoids too much repetition of the introductory paragraph. Letters are not divided by headings, except for the Methods section. Letters include received/accepted dates and may be accompanied by supplementary information.</p>	Unstructured abstract; max word limit: 250	1 500 words excluding abstract, methods, references, figures and tables	Max of 5	Max of 30
<p>News & Views News and Views are by prior arrangement only, although prospective authors are welcome to make proposals. They may be linked to articles in <i>LSA</i> or they may focus on papers of exceptional significance that are published elsewhere. News and Views are not peer-reviewed.</p>	Abstract should be less than 50 words	500-1500 words	Max of 2	Max of 12
<p>Perspective Perspective paper denotes a scholarly discussion of one recent major breakthrough or summary of a few new progresses to cohesively point out the emerging opportunities in light sciences, technologies and applications. Perspective papers may be opinionated but should remain balanced; therefore the editor may recommend an influential researcher in the field to co-author a perspective article and to stimulate discussion and consideration of new approaches to investigation and understanding of a commonly interested research topic.</p>	Unstructured abstract; max word limit: 250	2 000 words excluding abstract, references, figures and tables	Max of 2	Max of 20, not including reference to the original article.

<p>Review Article Review Articles cover a focused area on the advancing edge of optics and photonics and provide a balanced view of current research that can be understood by researchers outside that specialty. Review Articles do not require 'Materials and methods' or 'Results and discussion' sections but can be structured using short topical headings. Review Articles will be subject to the established review process.</p>	<p>Unstructured abstract; max word limit: 250</p>	<p>6 000 words excluding abstract, references, figures and tables</p>	<p>Max of 8</p>	<p>Max of 100</p>
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Word limit

Word limits are provided for guidance only. The Editors will consider submissions that exceed the recommended limit, subject to feedback received during peer review.

PREPARATION OF ARTICLES

Please note that Articles must contain the following components in the order stated. Please see below for further details.

- Title page
- Abstract
- Introduction
- Results
- Discussion
- Materials and methods
- Acknowledgements
- Conflict of interests
- Contributions
- References
- Figure legends
- Tables
- Figures

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Each manuscript must be accompanied by a cover letter including statements that:

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For first submissions (i.e. not revised manuscripts), article should include continuous line number. Supplementary

Information should be supplied as a separate file in word or PDF format, preferably in Word format.

Alternatively authors can follow the guidelines outlined below, which must be followed when submitting files for revisions.

All textual content should be provided in a single file, prepared using Microsoft Word; figures should be provided in individual files. The manuscript text file should include the following parts, in order: a title page with author affiliations and contact information (the corresponding author should be identified with an asterisk); the sections required for each content type (see information for different content types) then References, Acknowledgements (optional), Author Contributions, Competing Financial Interests statement, Figure Legends and Tables. Footnotes to the text are not allowed and any such material should be incorporated into the text as parenthetical matter.

(i) Title page

The title page should include a succinct title (less than 200 characters); a concise running title (which should normally not exceed 50 characters); the full names of all authors including their given names; the affiliations (including city, state, country and zip code) of all authors; the official email addresses of all authors, and the full contact details of the corresponding author (including telephone and fax numbers).

(ii) Abstract

A brief abstract (**maximum 250 words**) should state the **purpose, basic procedures, main findings and principal conclusions of the study**. The abstract should not contain abbreviations or references and should not be structured.

(iii) Introduction

The Introduction should summarize the rationale for the study and outline pertinent background material. The Introduction should not contain either results or conclusions.

(iv) *Results*

The Results should be presented in a logical sequence in the text, tables and figures; repetitive presentation of the same data in different forms should be avoided. The Results should not include material appropriate to the Discussion.

(v) *Discussion*

The Discussion should not reiterate Results, but rather should consider them in relation to any hypotheses advanced in the Introduction. This may include an evaluation of methodology and the relationship of new information to the existing body of knowledge in that field.

(vi) *Materials and methods*

Materials and Methods should be described in sufficient detail to allow the experimental work to be reproduced in another laboratory, and to leave the reader in no doubt as to how the results were derived.

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Light: Science & Applications strongly encourages that all datasets on which the conclusions of the paper rely should be available to readers. We encourage authors to ensure that their datasets are either deposited in publicly available repositories (where available and appropriate) or presented in the main manuscript or additional supporting files whenever possible. Please see Springer Nature's [information on recommended repositories](#). General repositories - for all types of research data - such as [figshare](#) and [Dryad](#) may be used where appropriate.

Where a widely established research community expectation for data archiving in public repositories exists, submission to a community-endorsed, public repository is [mandatory](#). Persistent identifiers (such as DOIs and

accession numbers) for relevant datasets must be provided in the paper.

(vii) *Acknowledgements*

Authors should acknowledge the source of financial grants and other funding, and declare any industrial links or affiliations. The contribution of colleagues or institutions should also be acknowledged. Personal thanks and thanks to anonymous reviewers should not be included.

(viii) *Conflict of interests*

A conflict of interest statement must be included for each contributing author. Please see the Conflict of Interest guidelines in the Editorial Policies section for more information and for guidelines on what constitutes a conflict of interest.

(ix) *References*

References: All necessary references should be included in order to credit previous work directly relevant to the article. References should follow the *Nature* style available in most reference management software. In the text they should appear as superscript numbers starting at 1 and at the end of the paper they should be listed (double-spaced) in numerical order corresponding to the order of citation in the text. Where a reference is to appear next to a number in the text, for example, following an equation, chemical formula or biological acronym, citations should be written as (ref. X) and not as superscript. Example: "detectable levels of endogenous Bcl-2 (ref. 3), as confirmed by western blot."

All authors should be listed for papers with up to five authors; for papers with more than five authors, the first only should be listed, followed by *et al.* Abbreviations for titles of medical periodicals should conform to those used in the latest edition of Index Medicus. The first and last page numbers for each reference should be provided. Abstracts must be identified as such. Papers in press and preprints hosted on a recognized server may be included in the list of references.

Personal communications must be allocated a number and included in the list of references in the usual way or simply referred to in the text; the authors may choose which method to use. In either case authors must obtain permission from the individual concerned to quote his/her unpublished work.

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Belkaid, Y. & Rouse, B. T. Natural regulatory T cells in infectious disease. *Nat. Immunol.* **6**, 353–360 (2005).

Journal article, e-pub ahead of print:

Bonin, M. *et al.* F-ara-A pharmacokinetics during reduced-intensity conditioning therapy with fludarabine and busulfan. *Bone Marrow Transplant.* <http://dx.doi.org/10.1038/sj.bmt.1705565> (2007).

Journal article, in press:

Gallardo, R. L., Juneja, H. S. & Gardner, F. H. Normal human marrow stromal cells induce clonal growth of

human malignant T-lymphoblasts. *Int. J. Cell Cloning* (in the press).

Complete book:

Atkinson, K. *et al.* (eds) *Clinical Bone Marrow and Blood Stem Cell Transplantation* (Cambridge Univ. Press, 2004).

Chapter in book:

Harley, N. H. & Vivian, L. in *Mechanisms of Disease* 4th edn, Vol. 2 (eds Sodeman, W. A. & Smith, A.) Ch. 3 (Saunders, 1974).

Abstract:

Feig, S. A. *et al.* Bone marrow transplantation for neuroblastoma. *Exp. Hematol.* **13**, abstr. 102 (1985).

Preprint:

Starrfelt, J. & Liow, L.H. How many dinosaur species were there? Fossil bias and true richness estimated using a Poisson sampling model (TRiPS). Preprint at <http://biorxiv.org/content/early/2015/12/04/025940> (2015).

Research dataset:

Hao, Z., AghaKouchak, A., Nakhjiri, N. & Farahmand, A. Global Integrated Drought Monitoring and Prediction System (GIDMaPS) Data sets. figshare. <http://dx.doi.org/10.6084/m9.figshare.853801> (2014).

Dissertation/Thesis

Draper, C. *et al.* An inventory of the South African fitness industry. (2006).

Scientific report

Internal Displacement Monitoring Centre. Internal Displacement: Global Overview of Trends and Developments in 2006. 6-8 (IDMC, 2007)

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Use distinct colours with comparable visibility and consider colour-blind individuals by avoiding the use of red and green for contrast. Recoloring primary data, such as fluorescence images, to colour-safe combinations such as green and magenta, turquoise and red, yellow and blue or other accessible colour palettes is strongly encouraged. Use of the rainbow colour scale should be avoided. Use solid colour for filling objects and avoid hatch patterns. Avoid background shading. Figures divided into parts should be labelled with a lower-case, boldface 'a', 'b', etc. in the top left-hand corner. Labelling of axes, keys and so on should be in 'sentence case' (first word capitalized only) with no full stop. Units must have a space between the number and the unit, and follow the nomenclature common to your field. Spaces, not commas should be used to separate

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Final Figure Submission Guidelines

Should your manuscript be accepted, you will receive more extensive instructions for final submission of display items. However, a summary of our guidelines for final figure preparation are included here.

- Each figure should be saved in a separate file. Figures including multiple parts (e.g. Fig.1a, 1b, 1c) should be saved in a single file (e.g. Figure1a-c). The figure number should be placed above each figure. Figure legends should be inserted in the article's text file.
- Images should be saved in CMYK color mode at 600 dpi or higher resolution.
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Tables should be labelled sequentially as Table 1, Table 2, etc. Each table should be numbered, titled and cited in the text. Reference to table footnotes should be made by using Arabic numerals. Tables should not duplicate the content of the text. They should consist of at least two columns, and each column should have a heading. Authors should ensure that the data in the tables are consistent with those cited in the relevant places in the text, totals add up correctly, and percentages have been calculated correctly. Unlike figures or images, tables may be embedded into the main manuscript file if necessary, or supplied as separate electronic files.

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8. Use a common word-processing package (such as Microsoft Word) for the text
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Authors submitting a revised manuscript after review are asked to include the following:

- (1) A rebuttal letter, indicating point-by-point how you have addressed the comments raised by the reviewers. If you disagree with any of the points raised, please provide adequate justification in your letter.
- (2) A marked-up version of the manuscript that highlights changes made in response to the reviewers' comments in order to aid the Editors and reviewers.

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