Light: Advanced Manufacturing

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ABOUT THE JOURNAL

Aims and Scope

Light: Advanced Manufacturing (LAM) is a sister research journal of Light: Science & Applications. The aim for Light: Advanced Manufacturing is to be a journal that publishes the high quality, important papers with following characteristics:

- Publishing important work in optical manufacturing and testing research
- ♦ Rigorous but fair, rapid peer review
- ♦ Diamond Open Access
- International Editorial Board of renowned researchers
- ♦ Rapid publication
- ♦ Online interaction between authors and readers
- Topics of particular interest within the journal's scope include, but are not limited to, those listed below:

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

- Advanced Information Technologies for Manufacturing
- Additive Manufacturing Technologies
- Advanced Materials: Design, Fabrication and Application
- Artificial Intelligence for Product Design, Manufacturing & Operation
- Digital Production Technologies
- AR, VR and MR: Industrial Application
- Bio-Medical-Technologies:Instrumentation, Fabrication and Application
- Precision Instruments: Design, Fabrication and Application

- Light Weight Technologies
- Large Optics Fabrication and Testing
- New Fabrication Tools
- Smart Home Equipment: Design, Fabrication and Application
- Micro and Nano Fabrication: Tools and Technologies
- Energy Harvesting and Storage Technologies
- Manufacturing of Functional Surfaces
- High-Precision Optical Surface Finishing
- In-Line-Measurement and Inspection Technologies
- Uncertainty Estimation and Quality Assurance
- Reverse Engineering Technologies
- Norms and Standards
- Robot and Autonomous Vehicle Applications
- Remote Sensing
- Integrated Photonics Green Photonics Technologies

The journal publishes peer-reviewed Articles, Letters, Review Articles and News & Views.

Journal Details

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ARTICLE TYPES

Article Description	Abstract	Word Limit
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.	Unstructured abstract; max word limit: 250	6,000 words excluding abstract, references, figures and tables
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.	None	1,500 words excluding methods, references, figures and tables
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.	Unstructured abstract; max word limit: 250	6,000 words excluding abstract, references, figures and tables
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 LAM or they may focus on papers of exceptional significance that are published elsewhere. News and Views are not peer-reviewed.	Abstract should be less than 50 words	500-1500 words

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

Article Requirements

Cover letter

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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Data availability statements: Data availability statements provide a statement about where data supporting the results

reported in a published article can be found - including, where applicable, hyperlinks to publicly archived datasets analysed or generated during the study. For all original research articles, we require the provision of data availability statements, examples and details can be seen on our data policy web page. The statement should be placed at the end of the Methods section (titled, 'Data availability'), after the code availability statement if one is present. For further guidance, please refer to the Data availability and data citations policy information and Frequently Asked Questions (FAQs).

Light: Advanced Manufacturing 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. 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 <u>mandatory</u>. 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

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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:

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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).

Please add reference examples for dissertation/thesis, scientific report, patent, materials on internet

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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 thousands. Unusual units or abbreviations should be spelled out in full, or defined in the legend.

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.
- Use the same typeface (Arial, Helvetica or Times New Roman) for all figures. Use symbol font for Greek letters.
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Display items that contain chemical structures should be produced using ChemDraw or a similar program. Authors using ChemDraw should use our ChemDraw Template and submit the final files at 100% as .cdx files. All chemical compounds must be assigned a bold, Arabic numeral in the order in which the compounds are presented in the manuscript text.

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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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Color figures must be supplied in the following format.

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Graphs, Histograms and Statistics

• Error bars must be described in the figure legend

- Axes on graphs should extend to zero, except for log axes
- Statistical analyses (including error bars and p values) should only be shown for independently repeated experiments, and must not be shown for replicates of a single experiment
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 (N) must be stated in the legend

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- 8. Use a common word-processing package (such as Microsoft Word) for the text
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Supplementary information is peer-reviewed material directly relevant to the conclusions of an article that cannot be included in the printed version owing to space or format constraints. It is posted on the journal's website and linked to the article when the article is published and may consist of data files, graphics, movies or extensive tables.

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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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Requirements for all categories of articles largely conform to the standard practices of life sciences journals. A manuscript will be considered for publication with the understanding that:

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- 2. Drafted or revised the manuscript
- 3. Approved the final version

Other individuals who made direct contributions to the work but do not meet all of the above criteria may be recognized in the Acknowledgements section of the manuscript.

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It is difficult to specify a threshold at which a financial interest becomes significant, but note that many US universities require faculty members to disclose interests exceeding \$10,000 or 5% equity in a company. Any such figure is arbitrary, so we offer as one possible practical alternative guideline: "Declare all interests that could embarrass you were they to become publicly known after your work was published." We do not consider diversified mutual funds or investment trusts to constitute a competing financial interest.

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Following the Competing Interests heading, there must be a listing for each author, detailing the professional services relevant to the submission. Neither the precise amount received from each entity nor the aggregate income from these sources needs to be provided. Professional services include any activities for which the individual is, has been, or will be compensated with cash, royalties, fees, stock or stock options in exchange for work performed, advice or counsel provided, or for other services related to the author's professional knowledge and skills. This would include, but not necessarily be limited to, the identification of organizations from which the author received contracts or in which he or she holds an equity stake if professional services were provided in conjunction with the transaction.

Examples of declarations are:

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 The authors declare no conflict of interest.
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 Dr Caron's work has been funded by the NIH. He has

received compensation as a member of the scientific advisory board of Acadia Pharmaceutical and owns stock in the company. He also has consulted for Lundbeck and received compensation. Dr Rothman and Dr Jensen declare no potential conflict of interest.

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