

INSTRUCTIONS FOR AUTHORS

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PHOTOSYNTHETICA

publishes peer-reviewed, original, scientific papers, brief communications, reviews, letters to editors, announcements, and reports concerning all research on photosynthesis. Papers dealing with diverse aspects of photosynthesis are welcome, namely if they bring novelty and further understanding to this field. The language of the journal is English (British or American).

Photosynthetica is an open-access journal since 2019. Copyright remains with the author. The regular price of a published article is EUR 890,-.

When submitting an article, the author agrees to this payment if the article is accepted for publication.

All manuscripts are submitted and peer-reviewed exclusively in their electronic versions via an online system: <http://ps.ueb.cas.cz/submission-new-paper>.

If necessary, correspondence should be sent to the editorial office by e-mail: photosynthetica@ueb.cas.cz.

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All manuscripts are assigned by EIC to Associate Editors (AE), specialists in a particular field, and then peer-reviewed at least by two reviewers familiar with the relevant field of photosynthesis research. The authors can follow a state of paper evaluation by the online system. A final decision is made by EIC, usually based on recommendations of AE and reviewers. Papers are launched as soon as possible in their online version. Later, the issue of the journal is completed.

Papers already published or those elsewhere under consideration are not published. If the paper is published on any preprint server, the author is obliged to announce that fact to the editorial office and assign it to the title page below the title of the paper. The author is responsible for the correct assignment of a paper state on the preprint server (e.g. the paper must not be under review in any other journal, book, etc.) Plagiarism-suspected papers are checked by the plagiarism checker software.

IMPORTANT: All original files [text and tables in Word, figures in a graphic format (not Word, not PDF) as described in Detailed instructions] have to be combined in one PDF file. **Submit, please, both the original files and the PDF file. The manuscript cannot be reviewed without adding all the files.**

Using native English speakers to check the papers before their submission is highly recommended to the authors. For professional language editing services, see <http://www.enago.com/> or <http://www.editage.com/get-quote>.

Manuscripts should be typed double-spaced.

Authors are requested to prepare figures ready for printing. **The preferred formats are TIFF and JPG.**

• ORIGINAL PAPERS

Original papers should not exceed about **8,000 words**. The paper should be divided as follows: *Title* (up to 140 characters), names and addresses of the author(s), *Abstract*, *Introduction*, *Materials and methods*, *Results*, *Discussion*, and *References*.

Authors may provide their **ORCID** numbers (<https://orcid.org/>). The ORCID profile has to be completed before.

■ **Abstract** should be concise and accurate and contain all the necessary information and data for your paper. Its length should not exceed **150 words**.

Include a few of your article's **keywords in the title** of the article.

Use the maximum amount of **keywords in the first two sentences** of the abstract.

■ **Keywords**, together with the title and the abstract, are used for indexing purposes. They should list words (max. 6); avoid plural terms and multiple concepts.

■ **Highlights** are three bullet points that help increase the discoverability of your article *via* search engines. These bullet points should be a maximum of 85 characters or fewer, including spaces. Highlights should not contain abbreviations except of those generally known.

■ **Acknowledgements** list all individuals or supporting programs that provided help during the research.

■ **Conflict of interest:** During a submission procedure, authors have to state if there is any conflict of interest.

■ **Abbreviations** should be defined if not standard in this field (see [Detailed instructions](#) for the list of abbreviations used without explanation). After the first mention of a term together with its abbreviation in parentheses, use only the abbreviation in the following text. Abbreviation can be used in the *Abstract* only if unavoidable (if the term is used more than once there).

A separate paragraph of *Theory* can be included in the case of papers containing theoretical models and comprehensive calculations. The *Appendix* should contain more voluminous formulae, equations, or tables and figures.

■ **Introduction** provides adequate background, objectives, and goals of the work. Avoid the summary of the results in this section.

■ **Materials and methods** should provide sufficient details and correct descriptions of experimental conditions and plant materials to enable the work to be reproduced.

Plants (algae, bacteria, viruses, and fungi) should be given in full name at least in this section of the manuscript according to the corresponding nomenclature.

Bacteria and Archaea:

<https://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?lvl=0&id=2>

Virus nomenclature:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7157452/>

Plant nomenclature: <http://www.ipni.org>.

The shorter version of the name can be used in the following text.

The conditions of cultivation should be described in detail (place, season, length of the day, temperature, air humidity, light intensity, nutrition, and growth regime). The ontogenetic stage of plants should be given.

Use *text tables* to present experimental sets of several different parameters.

Instruments or specific materials (chemicals) should be identified by their *type*, *producer*, and country of origin.

All enzymes assayed in the work should be identified by their corresponding EC number. Enzyme activities should be expressed as the amount of product (e.g. μmol) per time (e.g. s^{-1} or min^{-1} or h^{-1}) calculated per sample amount [e.g. g^{-1} (fresh or dry mass, protein, leaf area, etc.)].

Gene nomenclature should conform to accepted community standards. Some helpful resources follow:

www.arabidopsis.org/portals/nomenclature/guidelines.jsp (*Arabidopsis*)

www.maizegdb.org/maize_nomenclature.php (maize)

http://www.shigen.nig.ac.jp/rice/oryzabase_submission/gene_nomenclature/ (rice)

<http://wheat.pw.usda.gov/ggpages/wgc/98/> (wheat)

<http://tgrc.ucdavis.edu> (tomato)

www.chlamy.org/nomenclature.html

(*Chlamydomonas*)

Protein nomenclature should be used according to:

www.uniprot.org/docs/nomlist

Gene and protein symbols and abbreviations should be used consistently throughout the manuscript to clearly distinguish proteins and genes. Use schemes for the description of gene constructs used in the work.

Units, dimensions, terms, symbols, abbreviations, etc., recommended by the Système International d'Unités (SI) should be used (<https://www.bipm.org/en>) See also [Detailed instructions](#)

Statistical treatment should be described in detail including methods and software used for the evaluation.

■ **Results**

This section should bring the most important results of the work. **The total number of tables and figures is limited to 8.** A single table or figure should not exceed 1 printed page. Longer and additional tables or figures can be published as supplementary files in the online version.

The figures should be exclusively in the recommended format (see [Detailed instructions](#)) and have to be sent **in a quality suitable for the press**.

Photographs must be of the highest quality. The scale bars should be shown. Image manipulation for purposes of deception or fraud is seen as scientific ethical abuse and is dealt with accordingly. No specific feature of the image may be enhanced, obscured, removed, or introduced. Adjustments of brightness, contrast, and color balance are acceptable as long as they do not eliminate any information present in the original.

For figures formatting, the authors may also use the services of professional editing companies (e.g. American Journal Experts, etc.) or the figures can be partly formatted in the editorial office (see [Detailed instructions](#)).

The legends to tables and figures should be self-explanatory without reference to the text. Statistical bars should be shown together with the number of replicates.

■ **Discussion** should evaluate the significance of the results without repeating them. Avoid excessive overview of the field of study and mere speculations. A soundly based hypothesis may be included.

Quotations in the text should contain the authors' names followed by the year of publication in parentheses, if more references, then arranged chronologically.

■ **References** at the end of the paper should be arranged alphabetically (by authors' names). The EndNote template file is available at

https://ps.ueb.cas.cz/artkey/inf-990000-0200_For-Authors.php

If available, please **always include DOIs as full DOI links in your reference list** (e.g. "https://doi.org/abc").

The abbreviations of the journal titles should follow the generally accepted form according to [Web of Science, Journal Title Abbreviations](#). Use full stops after the abbreviations, not after the unabbreviated names.

Titles of articles (not books) written in languages other than English are given both in their original version and English translation (valid only for the Latin alphabet), the original language is mentioned in square brackets.

In the case of more than four authors in a reference, use only three first names and *et al.* For more examples see [Detailed instructions](#).

Articles in journals:

Alric J., Johnson X.: Alternative electron transport pathways in photosynthesis: a confluence of regulation. – *Curr. Opin. Plant Biol.* **37**: 78-86, 2017.

<https://doi.org/10.1016/j.pbi.2017.03.014>

Gao G.L., Feng Q., Zhang X.Y. *et al.*: [An overview of stomatal and non-stomatal limitations to photosynthesis of plants.] – *Arid Zone Res.* **35**: 929-937, 2018. [In Chinese] <https://doi.org/10.13866/j.azr.2018.04.22>

Lavorel J.: Hétérogénéité de la chlorophylle *in vivo*: II. Polarisation et spectres d'action de fluorescence. [Heterogeneity of chlorophyll *in vivo*: II. Polarisation and fluorescence action spectra.] – *Biochim. Biophys. Acta* **88**: 20-36, 1964. [In French] [https://doi.org/10.1016/0926-6577\(64\)90151-2](https://doi.org/10.1016/0926-6577(64)90151-2)

Nath K., Jajoo A., Poudyal R.S. *et al.*: Towards a critical understanding of the photosystem II repair mechanism and its regulation during stress conditions. – *FEBS Lett.* **587**: 3372-3381, 2013a.

<https://doi.org/10.1016/j.febslet.2013.09.015>

Nath K., Poudyal R.S., Eom J.-S. *et al.*: Loss-of-function of OsSTN8 suppresses the photosystem II core protein phosphorylation and interferes with the photosystem II repair mechanism in rice (*Oryza sativa*). – *Plant J.* **76**: 675-686, 2013b. <https://doi.org/10.1111/tpj.12331>

Books:

Baker S., Satish S., Prasad N., Chouhan R.S.: Nanoagro-materials: Influence on plant growth and crop protection. – In: Thomas S., Grohens Y., Pottathara Y.B. (ed.): *Industrial Applications of Nanomaterials*. Pp. 341-363. Elsevier Academic Press, Amsterdam 2019.

<https://doi.org/10.1016/B978-0-12-815749-7.00012-8>

Only fully accepted and reviewed articles should be cited. **Do not cite articles published only on preprint servers.**

• BRIEF COMMUNICATIONS

Manuscripts are not longer than about **4,000 words** of a text (including title, abstract, text without subdivision, references) plus a maximum of **1 table and 1 figure or 2 figures or 2 tables**. Brief Communications are peer-

reviewed in the same way as Original Articles.

• REVIEWS

Short, but comprehensive reviews on specialized topics are welcome. The manuscript should not exceed **12,000 words** and up to **10 tables or figures** in total. The written permission from a copyright owner is needed in case of already published tables or figures. Reviews are peer-reviewed similarly to above mentioned.

• ANNOUNCEMENTS AND REPORTS

The journal publishes short announcements and reports from conferences, symposia, *etc.* in all fields of photosynthesis research.

• LETTER TO THE EDITOR

A short commentary on a paper published earlier in the journal or elsewhere is possible as a Letter to the Editor. This form is not considered an original paper and should not contain unpublished results. Answers or counter-arguments of the authors of the original paper may be published in the next journal issue.

• HISTORY PAPER

The journal publishes short reminiscences (personal memories other than obituaries) of leading figures or important events in the field of photosynthesis research.

• OBITUARY

Biography of a deceased member of the Editorial Board of the journal or another well-known person in the field of photosynthesis research. It can be combined with the personal memories of an author.

GRAPHICAL ABSTRACT

A graphical abstract is a unique, simple, concise, and visual summary of the main findings of the article and helps readers identify more quickly papers most relevant to their research. We prefer a figure that is specially designed for this purpose.

Submit the graphical abstract as a PowerPoint file by using the Photosynthetica template on https://ps.ueb.cas.cz/artkey/inf-990000-0200_For-Authors.php (among the attached files)..

The graphical abstract will be displayed on our home page within the list of other graphical abstracts, the online content of the article, but will not appear in the article PDF file.

The graphical abstract is **optional**.

INSTRUCTIONS FOR AUTHORS

Authors must provide an original image that represents the summary of the work described in the paper. Graphical abstract should be submitted as a separate file.

The graphical abstract should have a clear start and end, preferably "reading" from top to bottom or left to right.

■ For the graphical abstract insert images with a minimum of 1600×900 pixels (w \times h) using a minimum resolution of 600 dpi.

■ *Font*: use Times, Arial, and Symbol with a large enough font size as the image will be reduced in size.

■ Any text or label must be part of the image file.

Advice and further tips on how to create a graphical abstract is provided below.

[Professor Andrew Ibrahim's visual abstract primer](#)