

NOTICE TO CONTRIBUTORS

PHOTOSYNTHETICA

publishes original scientific papers and brief communications, reviews on specialized topics, book reviews and announcements and reports covering wide range of photosynthesis research or research including photosynthetic parameters of both experimental and theoretical nature and dealing with physiology, biophysics, biochemistry, molecular biology on one side and leaf optics, stress physiology and ecology of photosynthesis on the other side. The language of journal is English (British or American). Papers should not be published or under consideration for publication elsewhere.

Electronic version of manuscript should be prepared in MS Word for Windows in format .doc (.rtf). All correspondence should be sent to the editorial office of Photosynthetica by e-mail: photosynthetica@ueb.cas.cz.

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Every manuscript is reviewed usually by two reviewers familiar with the relevant field of photosynthesis research, being from a different country from author. Papers accepted are published as soon as possible. The author receives a PDF file with a final version of the paper free of charge.

The authors are asked to suggest at least 4 reviewers and send their addresses and e-mail addresses on an independent page.

ORIGINAL PAPERS

Original papers should in an optimal extent address a still unresolved question of the photosynthetic process. The paper should be divided as follows: Title, names and addresses of the author(s), *Abstract* (up to 20 typed lines), *Introduction*, *Materials and methods*, *Results*, *Discussion*, and *References*.

Additional key words, Acknowledgements and Abbreviations might be added.

In case of more theoretical papers containing some theoretical models, a paragraph *Theory* may represent a separate part or the theoretical calculations can be shortly explained in *Appendix*. A specifically named part can be introduced when necessary.

Introduction

The authors are expected to respect, if possible, most relevant papers on the subject (covering most important papers of different laboratories) including a qualified short review of the problem. The goal of the paper should be outlined.

Materials and methods

A detailed and correct description of experimental conditions is a prerequisite of reliable and reproducible results.

The names of plants (algae, bacteria) should be given in full when appearing for the first time in the manuscript (e.g. *Rhizomnium punctatum* Hedw., *Picea abies* [L.] Karst., *Hordeum vulgare* L. cv. Dvoran) and in a shorter version in the following text (e.g. *P. abies*).

The conditions of plant, algal or bacterial growth in nature, greenhouse, cultivation units or growth chamber should be described in detail (place, season, length of day, temperature (mean or maximal), air humidity and light intensity (mean or maximal). In a growing chamber or algal cultivator, usually more precise conditions can be described. The soil or substrate, nutrition and watering regime should be specified.

The ontogenetic stage of the plant should be described (age, morphological parameters, before or after flowering *etc.*). The growth (ontogeny) phases of some cultural plants have their numerical phenological descriptions (e.g. corn plants).

When presenting instruments or specific materials (chemicals) usually 4 parameters should be given: type, producer, town, state (e.g. *Portable Photosynthesis System LI-6400*, *LI-COR Inc.*, Lincoln, NE, USA).

Statistical treatment should be described in detail. More than 3 replicates are usually necessary for a reliable statistical treatment and hence at least 5 replicates are recommended. Usually means and SD (standard deviation) or SE (standard error) are evaluated. The SD is preferred as it describes the real statistical variance of measured parameter of a symmetric distribution. In case of asymmetric distribution a presentation of medians and quartiles might be recommended (Point and Whiskers Plot). If statistical tests are performed, name of the tests and description of the software used must be given. If

possible, the power of the test should be checked and shown.

In case of a series of experiments, a note on reproducibility of the trends or dependences should be given.

Results

A single table should not exceed one printed page.

The figures should be surrounded by a frame that forms their axes. Grid marks should point inwards. Alongside the scale of the ordinate and abscissa the quantity measured should be given, followed by an appropriate symbol and SI units *e.g.*: P_N [$\mu\text{mol}(\text{CO}_2) \text{ m}^{-2} \text{ s}^{-1}$]. As far as possible, different curves should be individually labelled. The lettering should be in capitals, in Arial or a similar sans-serif type. If possible, figures should be combined together and signed as *A*, *B*, *C* etc.

Photographs must be of the highest quality with a full range of tones and of good contrast.

The legends to Tables and Figures should be typed on separate pages and should be self-explanatory without reference to a text. Meaning of the points or curves in the graphs (*e.g.* means) and statistical bars (*e.g.* SD or SE) should be shown together with the number of replicates (*e.g.* $n = 10$).

Discussion

Reasonable compromise between length and depth of discussion has to be found to prevent futile words or mere speculations. However, stimulating well based hypotheses may be incorporated.

References

References in the text should contain the authors' names followed by the year of publication *e.g.* Ames (1989) or in parentheses arranged chronologically (Pokorný *et al.* 1989, Herbert and Nilson 1991). References at the end of the paper should be arranged alphabetically (by authors' names) as follows. The abbreviations of the journal titles should follow the generally accepted form (*e.g.* according to Web of Science, Journal Title Abbreviations). For instance: Photosynth. Res., Photosynthetica, Plant Physiol., J. Plant Physiol. *etc.*

Units, dimensions, terms, symbols, abbreviations, *etc.*, recommended by the Système International d'Unités (SI) should be used. (Consult the manuals of Socrates and Sapper 1969, and Šesták *et al.* 1971 and the paper of Salisbury 1991—*see* the references below.)

Manuscripts should be typed double-spaced throughout, *i.e.* including figure captions, tables, and references.

The figures should be prepared electronically preferably in the commonly accessible programmes MS-Excel, Sigma-plot, MS-Word (also the graphic

systems TIF and JPG are acceptable, *e.g.* in case of more complicated figures).

Titles of articles (not books) written in languages other than English, French, or German are given only in English translation—*see* the following example. For other details consult recent issues of Photosynthetica.

Golik, K.N.: [Dark respiration and photosynthesis of buckwheat during ontogeny.] – Fiziol. Biokhim. kul't. Rast. **21**: 118-123, 1989. [In Russ.]

Perrier, A.: Leaf temperature measurement. – In: Šesták, Z., Čatský, J., Jarvis, P.G. (ed.): Plant Photosynthetic Production. Manual of Methods. Pp. 632-671. Dr W. Junk Publ., The Hague 1971.

Salisbury, F.B.: Système Internationale: The use of SI units in plant physiology. – Plant Physiol. **139**: 1-7, 1991.

Socrates, G., Sapper, L.J.: SI and Metrication Conversion Tables. – Newnes-Butterworths, London 1969.

BRIEF COMMUNICATIONS

Manuscript not longer than 100 typed lines of text [including title, abstract in English (usually one sentence only), text without subdivision, references] plus maximum of one table and one figure or two figures or two tables are published more rapidly than the longer papers.

REVIEWS ON SPECIALISED TOPICS IN PLANT PHYSIOLOGY

Short but comprehensive reviews with full bibliography are accepted after preliminary discussion of the intended topics with the editors.

BOOK REVIEWS

Reviews of new books (usually up to 60 typed lines) dealing in full or part with any field of photosynthesis, sent to the Editor, are published as soon as possible.

ANNOUNCEMENTS AND REPORTS

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

LETTER TO THE EDITOR

A short commentary on a paper published earlier is possible in a form of a Letter to the Editor. The Letter to the Editor does not represent an original paper and should not contain new, yet unpublished results. An answer or rebuttal by the authors of the original paper may be presented in another Letter to the Editor. These Letters are subjected to reviews.

SI units and symbols

Basic SI units

metre	m	kelvin	K
kilogram	kg	candela	cd
second	s	mole	mol
ampere	A		

Remarks:

Unit, dimension	Symbol	Do not use
micrometre	μm	μ
nanometre	nm	m μ , Å
gram	g	gr
microgram	μg	-
second	s	sec
minute*	min	min.
hour*	h	hr, hrs
day	d	-
year	a	-
kelvin	K	°K
degree Celsius (centigrade)	°C (<i>e.g.</i> 20 °C)	° C (<i>e.g.</i> 20° C)
pasqual	Pa	atm, torr, mm Hg, bar
joule	J	cal, kWh
watt per metre square	W m^{-2}	$\text{cal cm}^{-2} \text{min}^{-1}$
mole, millimole	mol, mmol	-
molar, millimolar	M, mM	-
becquerel	Bq	Ci, C, c
counts per second	s^{-1}	cpm
hertz	Hz	c/sec
volume per volume	$\text{cm}^3 \text{m}^{-3}$	vpm
mass per mass	mg kg^{-1}	ppm

The following form of dimensions is preferred:

$\text{kg m}^{-2} \text{s}^{-1}$; if plant as reference unit: μg per plant

Avoid the following usage:

$\text{kg} \cdot \text{m}^{-2} \cdot \text{s}^{-1}$, $\text{kg/m}^2\text{s}$, or completely incorrect $\text{kg/m}^2/\text{s}$

Note that mW is milliwatt
m W is metre $\times$ watt

The abbreviation kDa is acceptable for characterizing proteins.

*Units h (for hour; not hr, hrs) and min (for minute; not min.) can be used only for description (*e.g.* centrifuged for 50 min), not as dimensions.

Recommended symbols

Most frequent radicals:

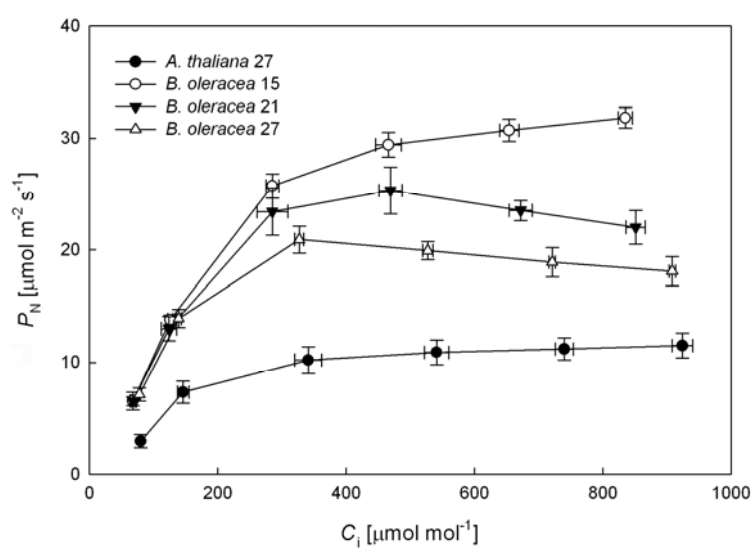
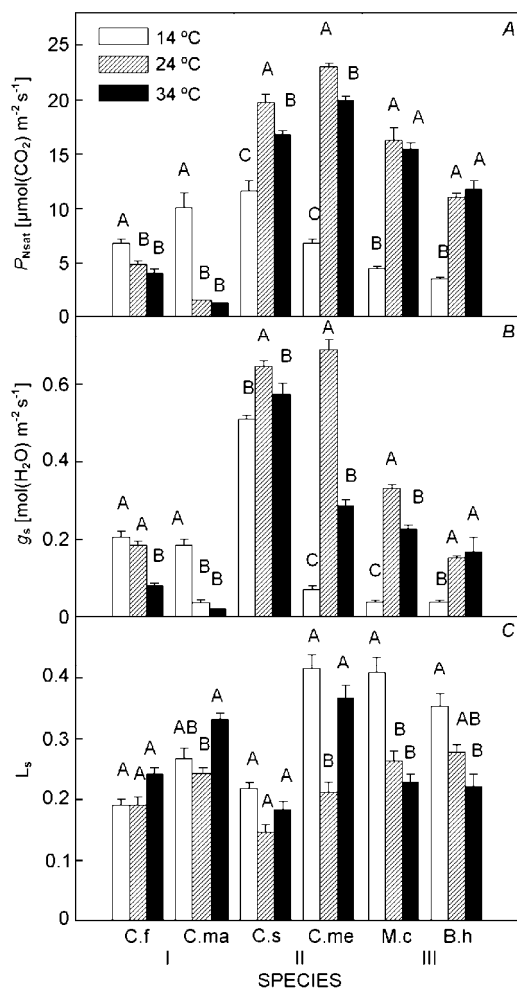
Superoxide radical: $\text{O}_2^{\bullet-}$

hydroxyl radical: $\cdot\text{OH}$, please, do not mismatch with hydroxyl anion OH^-

hydroperoxyl radical: $\text{HO}_2^{\bullet}$

Examples of the figures:

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