In 2012, forty five years have passed since the first issue of Photosynthetica was published. A lot of things have changed over time – the way of preparation of the journal and communication by using computers and internet and, off course, also people participating in – editorial board and editors-in-chief. Let me remind the only one of them – *Zdeněk Šesták*, who would be an octogenarian this year.

A single one thing has not changed – an effort to publish quality science articles attractive for researchers in the field of photosynthesis. The following chapters should also help reach that goal.

About quantities, units and precise description of measurements. ETR and enzyme activity as examples

This editorial is a reflection of my experience with some authors in discussion about their use of units, quantities and presentation of experimental conditions. I think that one of the first demands of a good journal is that measured or calculated quantities should be correctly presented. That is why I discuss these matters quite often with authors.

Physicists strictly obey the rules of units and quantities. For exact measurements and presentation of results, usage of the correct definition of measured or calculated quantities and their units is indispensable. Everyone would agree that presenting, for instance, tree height just by saying 6 would not be enough. It should be said that it is, for example, 6 m, 6 cm or 6 ft.

Most authors submitting their manuscripts to Photosynthetica are probably not physicists. However, even though they are not physicists, just for the logic of the subject the presentation of units should obey the above mentioned physical rules.

An extreme example is discussion of the units of ETR. As I will try to explain further, a deeper examination of this parameter (ETR) will serve to justify the demand for the correct presentation of measuring conditions.

ETR (electron transport rate) is defined as a product of four factors (quantum efficiency/irradiance/leaf absorptance/ PSII to PSI allocation factor). Three of them are dimensionless and only irradiance has units: μmol m^{-2} s^{-1}. ETR, like irradiance, has the same units. However, for ETR it is the number of electrons transferred, *i.e.* μmol (electrons) m^{-2} s^{-1}, whereas for irradiance it is μmol (photons) m^{-2} s^{-1}.

It has been argued that some journals publish papers in which ETR is not given units but I must say that this is a mistake which should not be transferred to other journals. In order to guarantee publication of highly professional papers such mistakes should be eliminated.

When discussing ETR values, the units signalize another problem with this parameter. It depends on the level of irradiance used (or is naturally present). Thus ETR is not an intrinsic property of the electron transport rate but reflects also the immediate situation (irradiance). Presenting only the ETR values yields no useful information if the irradiance (PAR) is not also presented. The values may even be misleading if the irradiance was not constant during the experiment.

The ETR value is a good example of another hidden problem. The value obtained depends on the Φ_{PSII} and this, the actual efficiency of PSII, also depends on the irradiance. That is why I always ask authors to state the irradiance of actinic light because it determines the value Φ_{PSII}. Furthermore, there is another experimental factor which is often ignored and many authors do not understand why I am asking about it. When dark-adapted material is illuminated there is an induction of photosynthesis; it takes some time (minutes or even tens of minutes) to reach the state called (probably not very accurately) the "steady state". Thus information about the time of actinic illumination used to measure the "steady state" level of F_m' is of importance.

At this point we could finish our discussion but, if we carefully examine the expression used calculate the ETR, two other problems may be discovered.

The absorptance of a leaf is often said to be 0.84. But this value only holds for a certain class of leaves and for a certain spectrum and character of the incident light. Let me discuss an extreme example. If leaves are nearly yellow (low amount of chlorophylls) and the light is mostly green (low general absorption by chlorophylls and carotenoids) the integral mean absorptance may be about 0.40, *i.e.* two times lower than that usually used. This is why from time to time I ask authors to consider a possible change in this generally accepted number, 0.84, especially in case of some ontogenetic experiments where yellowing or greening of leaves occurs. In summary, the absorptance value of 0.84 cannot necessarily be considered to be a fixed number.

At this time I will not prolong this (perhaps boring) analysis, but even the last factor in the equation, the number 0.5 (indicating an even distribution of excitation between PSII and PSI centers) may not be correct. Everyone knows about State 1-State 2 transitions and the fact that PSII/PSI stoichiometry may vary thus the distribution of excitation between PSII and PSI centers may well not be equal.

In conclusion, a last point about ETR measurements. If in a Figure the Φ_{PSII} is shown and the irradiance is constant and referred to in the text then the presentation of ETR data is a mere redundancy.

Some data provided by instruments have no specified units. This is true for the absolute value of chlorophyll fluorescence, for example. The signal depends on the detector sensitivity and geometrical arrangement of the instrument, *etc*.

The units are usually defined by the experimenter; reading the instrument just gives some numbers. A very typical example is the value of F_0 and F_m shown by commercial instruments. I think that a correct presentation would be to say that the units are arbitrary [a.u.], but usually no units are shown (in fact, this presentation is generally accepted and tolerated). In some cases, usually when emission spectra are presented, these spectra are normalized at some important point. In this case I suggest that it is best to designate the numbers as relative units [rel.u.].

J. NAUŠ (*Olomouc*)

Peer-review online system – how it works

More than two years ago, Photosynthetica started to use the editorial online system for receipt and peer review of papers submitted to the journal. On one hand, it has substantially simplified the editorial work and everyday handling with the papers; on the other hand, it has enabled more flexible communication with all participants of the review process (authors, editors, and reviewers).

Let me show and shortly describe the simple schema of the way of a paper through the system after its submission. The single steps are assigned identically to the assignments of the paper status which are available to authors visiting their Author Dashboard.

Awaiting admin checklist ⇒ Administrator checks if the paper contains all necessary parts and is suitable for a review.

Awaiting AE assignement ⇒ Editor-in-chief (EIC) chooses the associate editor (AE) responsible for the review process.
Awaiting reviewer selection ⇒ AE invites at least two reviewers.

Awaiting reviewer assignment ⇒ Reviewers decide if they accept or decline the invitation (in the second case AE invites another reviewer).

Awaiting reviewer scores ⇒ Reviewers are working on their reviews.

Awaiting AE recommendation ⇒ The paper received the sufficient number of reviews (usually 2) and, on their basis, AE makes recommendation to EIC.

Awaiting EIC decision ⇒ Taking into account the reviewers´comments, AE recommendation and his own opinion, EIC makes a final decision about the paper (accept – revision – reject).

Every step in this process has its preset time limit. After its exceeding, the person responsible for that step is warned by an automatically generated e-mail to do his task as soon as possible. In some cases, authors and reviewers are warned 1–2 weeks before the end of that time limit to have a possibility not to be overdue.

Authors can see the current status of their paper on their Author dashboard after login into the system. However, it may be a little misleading sometimes - *e.g*. the status *Awaiting reviewer selection* need not mean that no reviewers are being invited by AE but only that the required number of them have not agreed to do a review yet.

Formal layout as a neglected part of a paper

The question „How to be a successful author?“ seems to have a simple answer – to choose an interesting research topic, perform quality measurements, and write and submit a paper to a corresponding journal. This is nothing new even for the beginning researchers and students.

But that is only one (surely the most difficult) part of the success. The other one, by less experienced authors often underestimated, is the formal arrangement of the paper. Every journal publishes its more- or less detailed instructions for authors with the basic requests for formal layout of submitted papers. These include usually a list of necessary parts of the paper together with technical details and sometimes also with examples of a real text (figures) in the particular chapter.

The best and strongly recommended way is to *read all available instructions point by point* and check with a thoughtful care if the paper is in accordance with them. It is very worrying and time-consuming for an editor (and consequently for the author in the case the paper was unsubmitted or rejected from these reasons) to find that the author has not respected the special requests of his journal but left the paper (may be after its rejection in another journal) in the inadequate form – even if in apparent details.

The quality of figures is mostly the main formal problem of the paper. During the preparation of figures, authors should follow all instructions carefully and *maintain the figures´ style of the journal* as exactly as possible.

Language inaccuracies can devalue the otherwise quality paper and be a reason of its rejection. Non-native English speakers are recommended to have their paper checked by a native English-speaking colleague or to make use of professional language-editing services (*see*, *e.g.*, Notice to contributors).

Some statistical data from 2011

All the data were assumed from ScholarOne statistical reports and concern the period from 1st January 2011 to 31st December 2011.

The editorial office received 186 papers in total, of which 167 were original papers (OP), 16 brief communicatins (BC), and 3 reviews (R). In four issues of the last volume 68 OP, 8 BC, and 1 R were published.

Table 1. The decision ratios for originally submitted and revised papers.

Originally submitted papers				Revised papers		
Decision	OP	BC	R	OP	BC	R
Accept	-	-	-	37	40	29
Minor revision	9	-	-	46	25	43
Major revision	49	45	67	11	20	14
Reject	42	55	33	6	15	14

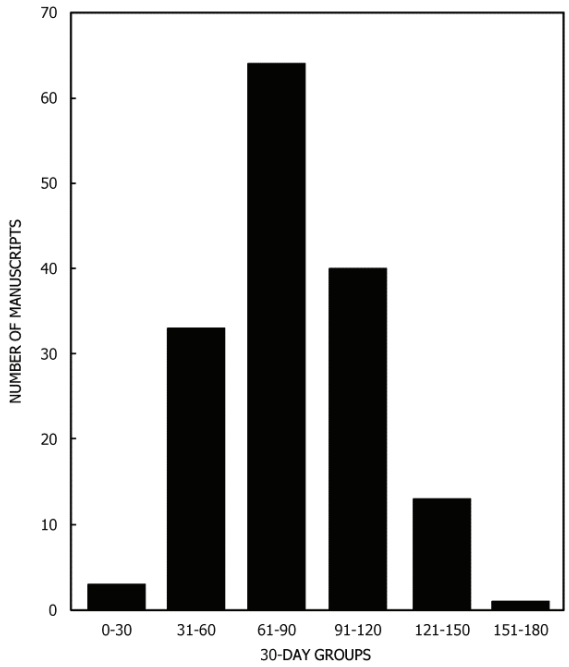

Fig. 1. Time from submission to decision – 30-day groups.

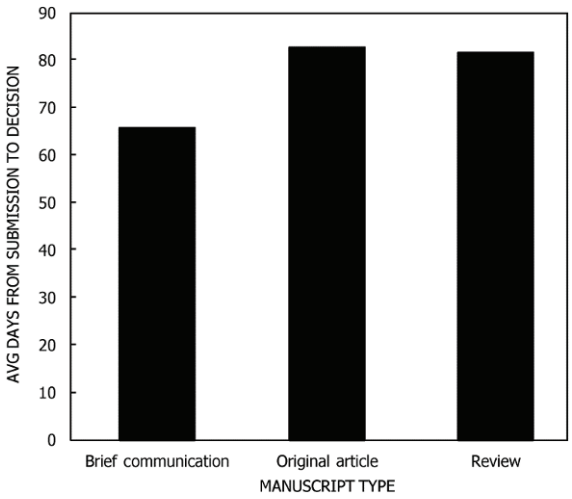

Fig. 2. Time from submission to decision – average days by a manuscript type.

I. ŠTĚTINOVÁ (*Praha*)