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Evropské strukturální a investiční fondy
Operační program Výzkum, vývoj a vzdělávání



FZU

Fyzikální ústav
Akademie věd
České republiky

Methodology manual for publishing and providing research results in Open Access

Library of the Institute of Physics of the Czech Academy of
Sciences



Methodology manual for publishing and providing research results in Open Access

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Introduction

This methodology manual for publishing research results in Open Access is an easy method of supporting scientists at the FZU, making the full text versions of their publication research results available in an Open Access.

This methodology follows from the Director's Decision (FZU, Czech Academy of Sciences) No. 39/2021¹, laying down rules for recording the results of scientific, research and other creative activities by the FZU employees into the FZU Publication Database, and imposing an obligation to save full text versions for as many research results as possible.

The initial chapter gives a general introduction on Open Access and its variants – Gold and Green Open Access. The next part describes how to apply Gold or Green Open Access to the FZU environment. The final part of this manual gives practical instructions on how to insert author-accepted manuscripts into the FZU Publication Database.

¹ <https://www.fzu.cz/en/pro-zamestnance/reditel/rozhodnutireditele/internal-communications/rr-392021-fzu-publication>

1 Open Access



Open access (OA) is a publishing model aiming to provide immediate, free, permanent and unrestricted online access to the results of science and research funded from public sources. Publishing an article in an “open access” model increases its visibility and accessibility. It is thus possible to build on the results of prior research and, on the other hand, to avoid creating duplicated results.

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1.1 OA General Characteristics²

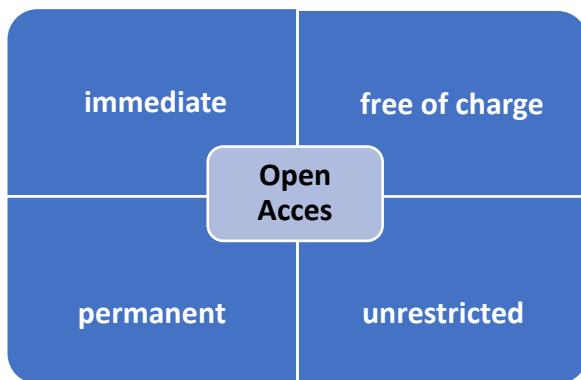


Fig. 1 – OA General Characteristics

Open Access is:

immediate access needs to be guaranteed at the moment when the result is published

free of charge access for end users needs to be free of charge

permanent results need to be archived in the repositories ensuring long term preservation

unrestricted results should be accessible not only for reading, but they should be accessible in such a way so that they could be used repeatedly (e.g. when published under **Creative Commons Licences**³)



An article should be ideally published under **Creative Commons Licence**. It is a set of public licenses that strengthen the author's position in deciding under what conditions the work will be made public.

² <https://www.slideshare.net/terkakliste/vdeck-publikovn-v-21-stolet-oteven-a-bez-predtor>

³ <https://www.creativecommons.cz/>

1.2 Gold and Green Open Access

Open Access can be provided in two ways – **Gold OA** and **Green OA**.

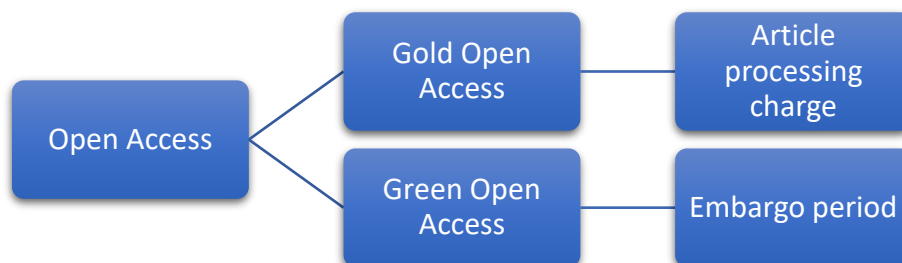


Fig. 2 –Gold and Green Open Access main conditions



Article processing charge (APC) is a fee paid to a publisher for publishing an article in a professional journal in an OA model.



Embargo period is a period of time specified by a publisher during which a professional publication must not be freely accessible. The embargo period begins on the day when an article is officially published.

1.2.1 Gold Open Access

Gold OA means that an article is accessible immediately after an article processing charge has been paid **APC**. An article is published either in an **open access journal** (Database of open access journals – DOAJ) or in a **hybrid journal** and usually it is published under **Creative Commons licence**, and can thus be used repeatedly. In this case, open access is ensured by the publisher.



A hybrid journal is a reviewed science journal which is accessible after paying a subscription fee, but which allows authors to make their articles freely available after paying an APC. This payment duplication (the subscription fee and the APC) makes this kind of journal ineligible to the new European funding programmes (such as Horizon Europe).

1.2.2 Green Open Access

In the green OA model an article is published in a journal that allows users access to their articles based on subscription. After being published, an article is saved usually in a form of **author's postprint** in a publicly accessible open repository (Database of open repositories – OpenDOAR or ROAR) in accordance with licence terms and conditions of a publisher. Publishers usually allow access after an **embargo period** lapses which can last for a number of months up to three years. Articles are saved by authors themselves through **self-archiving** and this model is completely without the APC.



The author's postprint (the author-accepted manuscript) is the final author's version of an article after the review procedure, but without publisher's formatting for printing, supplemented with publisher's data by the author.



2 FZU Open Access

For internal purposes, the FZU has been using its own institutional database – the FZU Publication Database. It aims mainly at providing information about research results generated by both research teams and individual researchers. Its entries form a basis for recording the FZU research results into ASEP (Czech Academy of Sciences' automated system for recording research results), and subsequently into RIV (Registry of information about research results).

The Czech Academy of Sciences supports principles of open access to scientific information by building an open repository ASEP, which allows transferring records and full texts to European databases via a portal OpenAIRE. ASEP repository provides long-term archiving and thus permanent access to records and full texts entered in it.

According Action Plan⁴ for the Implementation of the National Strategy of the Czech Republic's Open Access to Scientific Information for 2017-2020⁵ (in Czech) the aim is to ensure meeting the minimum requirements for open access to scientific information from July 1, 2020 without undue delay, and thus meet the requirement of the European Commission stated in Commission's Recommendation dated 24/04/2018⁶.

The Institute of Physics of the Academy of Sciences supports the principles of open access to scientific information by:

- financial contribution in consortium **SCOAP3**⁷
- extending the FZU Publication Database with a feature for uploading the full text version **of the author-accepted manuscript**
- creating an information and advisory OA centre in the FZU library⁸, for more complex problems, we can help you by providing legal consultation
- organizing training on the theme of Publishing in OA and Copyright

⁴ <https://www.vyzkum.cz/FrontClanek.aspx?idsekce=876326>

⁵ the same link as in 4

⁶ <https://eur-lex.europa.eu/legal-content/CS/TXT/HTML/?uri=CELEX:32012H0417&from=EN>

⁷ <https://scoap3.org/>

⁸ <https://www.fzu.cz/en/employees/support-teams/library/open-access/contact-and-faq>

2.1 5 steps to Gold Open Access at the FZU



Fig. 3 – 5 step sequence of the FZU Gold Open Access

If you want to have gold OA for your article, the procedure is as follows:

1. For the payment of **APC** to be covered from a grant or research project budget, it is **necessary to plan the payment** already in the grant application and to check the terms and conditions of the funds provider.
2. Next, it is **necessary to find a suitable and credible open access journal** and to avoid predatory journals, mainly in the case of new and unknown journals. An open access journal can be selected e.g. via DOAJ⁹ or ROAR¹⁰.
3. At the end, it is necessary **to pay the APC** and after a review procedure **to publish an article in a selected journal**. After an article is published, the full text will be immediately accessible to all readers.
4. After the article is published, **a record must be made about this to the FZU Publication Database**.
5. Then, a worker from the FZU ASEP library must be notified in order to create a record in ASEP and to insert the publisher's version of the article along with the record.

⁹ <https://doaj.org/>

¹⁰ <http://roar.eprints.org/>



2.2 4 steps to Green Open Access at the FZU

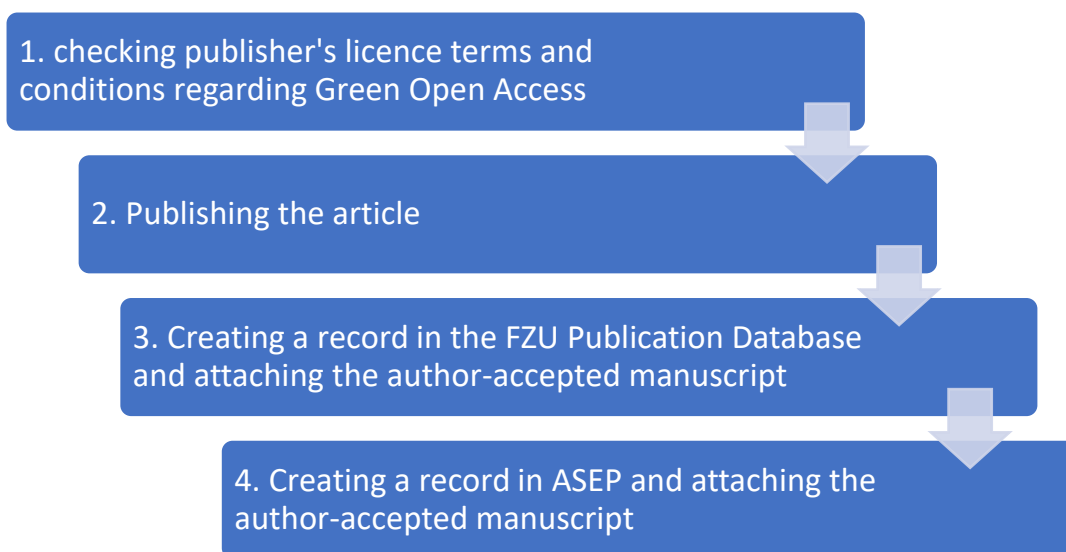


Fig. 4 – 4 step sequence of the Green Open Access at the FZU

For green OA, the article is published in a journal which provides access to articles to its users against a subscription, and, at the same time, it is archived as the author-accepted manuscript in publicly accessible open repositories in accordance with the publisher's terms and conditions. The article is archived by the authors themselves using **the self-archiving** feature. For authors from the FZU self-archiving means to save the author-accepted manuscript to the FZU Publication Database.

If you want to have green OA for your article, the procedure is as follows:

1. First you need to check **licence terms and conditions of self-archiving** of a selected journal and answer the following questions:
 - a) Does the selected journal allow self-archiving?
 - b) If so, what version of an article does the journal allow to publish?
 - c) If a postprint, what is the embargo period?
 - d) Is the embargo period of a journal in accordance with the terms of the funds provider?



*Not only when looking to ensure compliance with auto-archiving licence conditions, you can ask for help at the FZU Library's **OA Information and Consultation Centre**. We will do our best to answer all your questions on the publication in Open Access; if you have a more complex problem, we will seek legal advice for you. The guarantor for the Open Access agenda is **Jitka Šiborová**, tel.: 266 052 979, e-mail: siborova@fzu.cz.*



*In the case of the results of scientific research within the Horizon 2020 program, authors have an opportunity to submit an addendum **Open Access Publishing Agreement Addendum (H2020)**¹¹ to the publisher and in this way **negotiate about shortening of the embargo period.***

2. After finding out all the above-mentioned requisites and going through possible negotiations of shortening the embargo period, **an article can be published after the standard review procedure.**
3. The J and D research results in the FZU Publication Database must be complemented with the author-accepted manuscript in the PDF format (as it is not a publisher's version), with the exception of results published in gold OA. After a result is published, it is necessary to **make a record of the publication to the FZU Publication Database**, to attach **the full text of the author-accepted manuscript** to it, and if a shortened embargo period has been agreed, to specify the agreed number of months of the embargo period.
4. Subsequently, a worker of the FZU's ASEP library must be notified in order to create a record to ASEP and to insert the author-accepted manuscript that was previously archived in the FZU Publication Database, and to make the full text of the article available in accordance with the publisher's **Licence Terms and Conditions.**



For publications in some EU projects, the European Commission requires that repositories are adapted to **OpenAIRE**¹²; the ASEP repository complies with this requirement and sends its entries approx. once per month to OpenAIRE.

¹¹ https://ec.europa.eu/research/participants/data/ref/h2020/other/hi/oa-pilot/h2020-oa-guide-model-for-publishing-a_en.pdf

¹² <https://www.openaire.eu/>



3 Adding author-accepted manuscripts into the FZU Publication Database

There are two ways to add an author-accepted manuscript into the FZU Publication Database. If no entry for a research article has been made yet, we can add the author-accepted manuscript at the end of the whole process by adding a new publication (for details please see instructions in 3.2). If an entry already exists, we can add an author-accepted manuscript to the existing entry using the “Publications check” field (for details please see instructions in 3.3).

3.1 The author-accepted manuscript

The author-accepted manuscript is **the author’s manuscript final version** accepted for publication including all modifications from a review process but without the publisher’s print formatting.

An author-accepted manuscript is added into the database if the publication **is not available via Gold Open Access** and if adding it is in compliance with the license terms and conditions.



3.2 Adding an author-accepted manuscript when adding a new publication

- 1) The first step is a standard method of adding a new publication into the database. After filling-in the form available on the first page and after pushing the “Preview” button, you add any supporting projects to a publication.

Insert publication (dept. 86)

[HOME](#) (data will not be saved)

DEPARTMENT: [Help](#)
dept. number-number of authors, e.g. 27-3, 26-2, 100-4 means 3 authors from dept. 27, 2 from dept. 26 and 4 from other institutions

Number of authors: Language of the publication:
If the original language of the work is English, there is no need to fill in the relevant data in Czech.
 If the original language of the work is not English, the data shall be filled in the original language and in English.

YEAR: (in case of PhD / diploma thesis, the year of completion.)
Shorten the first names, e.g. A. Dvořák, B. Novák, J. Skála
 A large number of authors in cooperation - help.

Authors:
[INSTRUCTIONS for writing sub/super scripts, mathematical symbols.](#)

English title of the contribution:

Title in the language of work:

To be completed in case of PhD / diploma thesis:

Supervisor:
 Consultant:
 University, faculty: (workplace)
 Year of submission: Number of pages:
 Degree: (title)

Journal:
 short list: the first letter of the journal title
 Volume:
 first page: last page: [Online journal](#)
Note: In case the first page of the journal is for example 223344 and the number of pages e.g. 4 (Phys. Rev. J. Chem. Phys.) it is recommended to write the first page: 223344(1) and last page: 223344(4).

If the journal is not listed [CONTACT ADMINISTRATOR](#) or the department secretary. Specify the journal you wish to add to the database. You can temporarily put the journal in the box below: **Conference/book**
 You can find help on how to fill in the conference/book [here](#).
 The journal on the following line should be filled in (including the volume and pages) only if it is not on the list of Journals above.

Conference/book:

English abstract:
64 - 1000 characters

Abstract in the language of the work:
(if not in English)
 64 - 1000 characters

Select the publication type:
 Conference with articles in proceedings
 Conference with a 'book of abstracts'
 Conference Proceedings
 Book, monograph
 Book chapter
 College textbook
 PhD thesis
 Diploma thesis
 Patents
 Software
 Organization of a conference
 Organization of a workshop
 Utility and industrial design
 Prototype and functional sample
 Pilot operation, proven technology
 Certified methodology
 Other

Publication was created at FZU: yes no (if the Institute of Physics is not included in the List of workplaces, check no.)

Publication web link:
(max 250 characters)

DOI:
(15 digits in total)

WOS Number:
(15 digits in total)

Keywords: **required**
In English, comma separated max 150 characters

Field by OECD **required**

Do you want to add projects that support publication: yes no
 Do you want to send an email to the authors of the publication from the Institute of Physics? yes no

[>> Preview](#)

[HOME](#) (data will not be saved)

Fig. 5 – A form for Adding a new publication in the FZU Publications Database

- 2) At the end of the whole process of adding a new publication, you can find a summary of publication details that were inserted into the database. There is an orange window at the bottom of the page „PostPrint (a PDF file only)“. Using a “Browse” button, we select the
- 3) PDF author-accepted manuscript file, and we upload it using “Upload PDF file”.

The screenshot shows the 'Publication database (dept. 86)' interface. At the top, there are buttons for 'Insert another publication', 'HOME', and 'Logout'. Below this, a message states: 'The following data have been entered into the database:'. The main content area displays the following information:

- 22540 (publication reg. number) year: 2021
- Department: 86-1, 86-1 (department-number of authors)
- Number of authors: 2 (language of the publication: English)
- Publication type: Journal
- Authors: K. K. Swanson, A. J. Gonsalves, H.-S. Mao, T. Sipla, S. S. Bulanov, N. A. Bobrova, P. V. Sasorov, G. Korn, C. Benedetti, C. V. Pieronek, C. B. Schroeder, C. G. R. Geddes, E. Esarey, W. P. Leemans
- The English title of the publication is missing.
- Physical review accelerators and beams 24 (2021) 091301(1)-091301(6)
- doi: <https://doi.org/10.1103/PhysRevAccelBeams.24.091301>
- English abstract: We describe the development and operation of a regenerative, cryogenically-formed discharge waveguide formed by freezing nitrous oxide gas onto the inner wall of a sapphire capillary. We demonstrate a technique for varying the channel diameter in situ and present guiding of low-power laser pulses through 6-cm long waveguides with channel diameters of 0.7, 0.8, and 1 mm. Measurements and simulations of the output laser fluence showed that the matched spot size could be adjusted with the thickness of the solid nitrous oxide layer.
- Keywords: Laser Wakefield Acceleration, Capillary Discharge Plasma, Laser Pulse Guiding
- Field: ()
- Field RIV:
- Field OECD: 10305 Fluids and plasma physics (including surface physics)
- Projects supporting publication:
 - 1. CZ.02.1.01/0.0/0.0/15_003/0000449
HIFI - High Field Initiative
[CZ.02.1.01/0.0/0.0/15_003/0000449
HIFI - High Field Initiative (Výzkum velmi intenzivních polí)]
S. Bulanov (2017-2022)

Below the summary, there is a section for uploading a PDF file. It includes a 'Choose' dropdown menu with 'Vybrat soubor' and 'Soubor nevybrán' options, and an 'Upload PDF file' button. A note states: 'The maximum file size is 8 Mb!'. Below this, there is a section titled 'PostPrint (a PDF file only)'. It contains a message: 'For peer-reviewed scientific articles and papers in the collection, it is necessary to add to the database an author's PostPrint in the PDF format - if the article was not published in the Gold Open Access mode. More information is available [here](#).' Below this, there is a section for uploading a PostPrint file. It includes a 'Select a PDF file of the publication (PostPrint)' dropdown menu with 'Vybrat soubor' and 'Soubor nevybrán' options, and an 'Upload PDF file' button. Below this, there is a 'Shortened embargo' dropdown menu with 'no' selected and 'to be set' as an option. A note states: 'An author may, in the form of an addendum to the contract, agree with a publisher to shorten an embargo, so that an author's postprint may be published for the purposes of a European project. If an author has a shortened embargo based on a contractual provision, please indicate the number of months, to which the embargo is shortened.'

Fig. 6 – Uploading a PDF file of the author-accepted manuscript

- 4) The file is uploaded and designated with a publication registration ID. An author may **negotiate a shortened embargo period** with the publisher, which means that the author-accepted manuscript will be published earlier in order to comply with any requirements that may be imposed by a European project (such as Horizon 2020, Horizon Europe); this is done by way of an addendum to the agreement with the publisher. If an author has negotiated this shortened embargo period, he or she must identify the number of months by which the embargo period was shortened. After the period elapses, the author-accepted manuscript will be published in the form of Green Open Access in the ASEP database.

The screenshot shows the 'PostPrint (a PDF file only)' interface. It contains a message: 'For peer-reviewed scientific articles and papers in the collection, it is necessary to add to the database an author's PostPrint in the PDF format - if the article was not published in the Gold Open Access mode. More information is available [here](#).' Below this, there is a message: 'File Manuscript_for_submission.pdf size 25710 (bytes) has been successfully uploaded to the server under the name 22540pp.pdf'. Below this, there is a section for uploading a PostPrint file. It includes a 'Select a PDF file of the publication (PostPrint)' dropdown menu with 'Vybrat soubor' and 'Soubor nevybrán' options, and an 'Upload PDF file' button. Below this, there is a 'Shortened embargo' dropdown menu with 'no' selected and 'to be set' as an option. A note states: 'An author may, in the form of an addendum to the contract, agree with a publisher to shorten an embargo, so that an author's postprint may be published for the purposes of a European project. If an author has a shortened embargo based on a contractual provision, please indicate the number of months, to which the embargo is shortened.'

Fig. 7 – left – original name of the uploaded file, right – uploaded file with the registration number as its name, below – setting the number of months for a shortened embargo

3.3 Adding an author-accepted manuscript using the “Publication check”

- 1) The first step is to insert a record registration ID of the publication into the “**Publication check**” on the main page of the database.



Fig. 8 – Button “Publication Check” on the main page

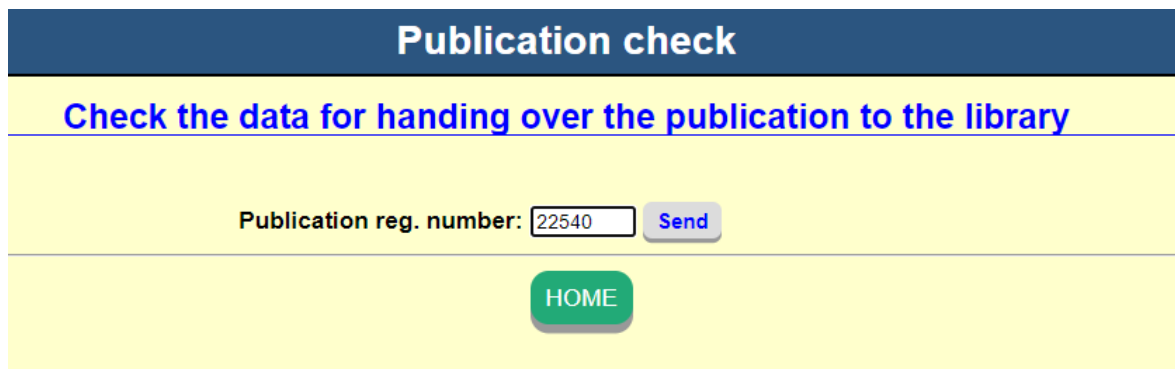


Fig. 9 – Entering a publication registration ID.

- 2) The second and the last step is to **save the author-accepted manuscript**. The “Check information for submitting the publication to the library” page contains an orange window named “Postprint (PDF file)”. By clicking on “Select file”, you can select a PDF file and after clicking on “Upload PDF file”, the file is uploaded and designated with a publication registration ID.
If a shortened embargo period had been negotiated, it is necessary to specify the agreed number of months.



Publication check

[Check the data for handing over the publication to the library](#)

22540 (publication reg. number) year: 2021
Open access: no
Aspects of use within the infrastructure: uživatelské

Department: 96-1, 86-1 (department-number of authors)
Number of authors: 2 language of the publication: English
Publication type: Journal

K. K. Swanson, A. J. Gonsalves, H.-S. Mao, T. Sipla, S. S. Bulanov, N. A. Bobrova, P. V. Sasorov, G. Korn, C. Benedetti, C. V. Pieronek, C. B. Schroeder, C. G. R. Geddes, E. Esarey, W. P. Leemans
Cryogenically formed discharge waveguide
Physical review accelerators and beams 24 (2021) 091301(1)-091301(6).
doi: <https://doi.org/10.1103/PhysRevAccelBeams.24.091301>

English abstract: We describe the development and operation of a regenerative, cryogenically-formed discharge waveguide formed by freezing nitrous oxide gas onto the inner wall of a sapphire capillary. We demonstrate a technique for varying the channel diameter in situ and present guiding of low-power laser pulses through 6-cm long waveguides with channel diameters of 0.7, 0.8, and 1 mm. Measurements and simulations of the output laser fluence showed that the matched spot size could be adjusted with the thickness of the solid nitrous oxide layer.

Keywords: Laser Wakefield Acceleration, Capillary Discharge Plasma, Laser Pulse Guiding
Field - ()
Field RIV:
Field OECD: 10305 Fluids and plasma physics (including surface physics)

Projects supporting publication:

- LM2018141, MEYS
RI Extreme Light Infrastructure - ELI Beamlines
[LM2018141, MSMT
VVI Extreme Light Infrastructure - ELI Beamlines]
R. Hvizda (2020-2022)
- CZ.02.1.01/0.0/0.0/15_003/0000449
HIFI - High Field Initiative
[CZ.02.1.01/0.0/0.0/15_003/0000449
HIFI - High Field Initiative (Výzkum velmi intenzivních polí)]
S. Bulanov (2017-2022)

[HOME](#) [Publication check](#)

PDF file of the publication:

You can attach a PDF file to the publication:

Select the PDF publication file: Soubor nevybrán [Upload PDF file](#)

PostPrint (a PDF file only):

For peer-reviewed scientific articles and papers in the collection, it is necessary to add to the database an author's PostPrint in the PDF format - if the article was not published in the Gold Open Access mode. More information is available [here](#).

You can attach a PostPrint to the publication in the PDF format:

Select a PDF file of the publication (PostPrint): Soubor nevybrán [Upload PDF file](#)

Shortened embargo: to be set (number of months)

An author may, in the form of an addendum to the contract, agree with a publisher to shorten an embargo, so that an author's postprint may be published for the purposes of a European project. If an author has a shortened embargo based on a contractual provision, please indicate the number of months, to which the embargo is shortened.

[File for WORD: find here](#)

Fig. 10 – Full publication record, including an option to save an author-accepted manuscript and its embargo period.



Final provisions

This methodology manual should serve as a supporting material for meeting the obligation to publish research results in Open Access. If you have any questions on Open Access, you can contact the FZU Library, which offers consultation and support for publication in Open Access.

Icons used:



Note



Tip