

Appendix 1

Policy on Open Science

at the Institute of Physical Chemistry, Polish Academy of Sciences

Preamble

1. The **Institute of Physical Chemistry, Polish Academy of Sciences (IChF)** commits to the advancement of science and the wide dissemination of knowledge to the benefit of society by adopting practices on open, reproducible, and responsible research.
2. **IChF** recognizes “openness” as one of its guiding principles and commits to promoting it by – among others – encouraging and supporting research processes and tools that encourage collaboration, enabling new working models and new social relationships, stimulating the dissemination of knowledge and the accessibility and re-usability of research outputs, encouraging open access to publications and data, and building the necessary infrastructure, skills, and incentives to support open science.

Jurisdiction and Effect of Policy

1. The Policy applies to all researchers affiliated with **IChF**. In cases where research is funded by a third party, any agreement with that party concerning access rights, deposit, and storage takes precedence over this Policy.
2. The Policy has been approved by **the Director of IChF** and has taken effect from 02.11.2022, the amendment of the Policy has taken effect from 28.11.2024.

Rights, Responsibilities, and Duties

The Institute of Physical Chemistry PAS is responsible for:

1. Supporting and empowering the transition to Open Access/Open Science through education, training and awareness-raising actions targeting researchers and other employees, along with the provision of the necessary infrastructure and funding to support this transition. Acquisition of Open Science and related skills should form an integral part of professional training and career development offered to researchers.
2. Collaborating with national repositories **managed by the Interdisciplinary Centre for Mathematical and Computational Modelling at the University of Warsaw (ICM UW), i.e., OPEN (previously CeON) and RepOD**, according to international standards, containing digital content and providing advanced tools for search, navigation, and Open Access to its content.
3. Mandating the use of persistent identifiers (e.g., DOI, ORCID, or others).
4. Appointing a Data Officer responsible for all data-related matters, including – but not limited to – issues related to the development of Data Management Plans (DMPs) and compliance with national and European laws, data curation, and stewardship.
5. Developing and providing mechanisms and services for the storage, safekeeping, registration, deposition, and sharing of data and other records, according to the FAIR principles, as well as their long-term preservation, and providing appropriate guidance to researchers, including DMP templates.
6. Taking steps towards embedding Open Science practices in recruitment, research assessment, and evaluation criteria, as well **as encouraging and promoting** involvement beyond the provision of open access to publications and data, like participation in citizen science projects, experimentation with open peer review or the use of Open Educational Resources (OER).
7. Monitoring policy compliance by comparing the content of the repository with information gathered from indexing services and through data on the use (access and downloads)
8. Producing transparent reports on the total cost of scholarly publication channels and individual publications and making them publicly available. Engaging in discussions

concerning agreements with publishers to include the right to publish all articles in Open Access or make them openly and immediately available via a repository route at the time of publishing. Encouraging and supporting new and innovative models for Open Access publishing, including Open Access publishers who do not charge Article Processing Charges (APCs).

9. Compiling information and producing reports about Research Data Management.

10. Ensuring the compliance of the institution's repository and other research infrastructures with certification requirements in relation to FAIR data principles and EOSC technical specifications.

11. Having IPR and data protection policies in place to support Open Science.

12. Encouraging researchers to use licenses as open and wide as possible for the given content and data in accordance with the Data Management Plan (DMP).

13. Developing knowledge on Open Science and related skills, especially among PhD students.

Researchers are responsible for:

1. Managing publications, data, and educational resources in adherence with the principles and requirements expressed in this Policy.

2. Registering new research projects at the proposal stage at IChF appropriate service to ensure that they are provided with the appropriate institutional support.

3. Complying with the organizational, regulatory, institutional, and other contractual and legal requirements related to the production, curation, deposit, management, and distribution of publications and data.

4. Ensuring that the principles governing the handling of data (in adherence with the present Policy and funders' mandates) are included in DMP.

5. Compiling a DMP for every research activity, they are coordinating funding from external sources, if required by the granting agency.

6. Choosing the appropriate type of licensing for their research outputs.

Open Access to Publications

The Institute of Physical Chemistry PAS:

1. Requires researchers to deposit in the OPEN repository (previously CeON repository) a machine-readable electronic copy of the full text (the published article or the final peer-reviewed manuscript accepted for publication – also called the author's accepted manuscript), as well as the related metadata before, at the same time, after publication or after an embargo period (unless the grant funding agency requires immediate deposition, e.g., "Horizon Europe" framework programme). Researchers are held responsible for the timely deposit of their publications in the institutional repository. This step also applies in the case of open access publishing ("Gold Open Access").

2. In the case of "Green Open Access", the Institute of Physical Chemistry PAS requires the full text of all publications referred to above to be submitted to the OPEN repository (previously CeON repository), marking the applicable embargo time. For monographs, deposit remains mandatory, but access could be closed unless the research funding agency requires otherwise (e.g., the "Horizon Europe" framework programme).

3. Requires the metadata of the publication to be made openly accessible in the case of 'closed' publications with the aim to increase their visibility. Metadata should be licensed under CC0 or equivalent, in line with FAIR principles (i.e., Findable, Accessible, Interoperable and Reusable).

4. Encourages researchers to publish articles as preprints before submitting them to a journal whenever possible. If the funding agency for the research accepts a preprint as a form of open access, submitting a preprint is mandatory.

5. Retain intellectual property rights and licenses to publishers only those rights necessary for publication. Authors are encouraged to provide Open Access to the Author Accepted Manuscripts (AAMs) or the Version of Record (VoR) of research articles, at the time of publication. If possible, all research articles should be made available under a Creative Commons Attribution CC BY 4.0 license or equivalent.

6. Encourages researchers to deposit in the institutional repository publications authored before the date of effect of the current policy and make them openly accessible whenever possible.

Open Access to Research Data

The Institute of Physical Chemistry PAS:

1. Requires researchers to deposit the data needed to validate the results presented in scientific publications as well as essential digital data generated during the implementation of research projects in RepOD ICM UW. Data should be provided with persistent identifiers and must be linked with publications where possible.

2. Requires that data and services are handled according to open and FAIR principles (i.e., Findable, Accessible, Interoperable, and Re-usable). Data should also be traceable and, whenever possible, available for subsequent use.

3. The ICM UW repositories follow the principle “as open as possible as closed as necessary”. If data cannot be open due to legal, privacy, or other concerns (for example, sensitive data, personal data, plans of commercial exploitation, granting agency requirements), this should be clearly explained.

4. Metadata ensuring that data are findable should be provided in all instances. Metadata must include at least: (a) data description along with the date of deposition, venue of acquisition, authors involved, embargo time if required, and (b) funding details such as granting agency name, project id, name, and acronym.

5. Encourages researchers to prepare a Data Management Plan (DMP) for every research activity they are involved in even if the funder does not require it.

6. Requires researchers to define usage rights through the assignment of appropriate licenses – CC BY or CC0 (or equivalent) license.

7. Requires that data are stored for 10 years after the assignment of a persistent identifier. In the event that these records need to be deleted or destroyed after the expiration of the required archived duration or for legal and ethical reasons, such actions need to consider all legal and ethical perspectives.

Open Science and Citizen Science

The Institute of Physical Chemistry PAS encourages the uptake of Open Science practices (beyond open access to publications and data) such as the involvement in citizen science projects, open peer review, the use and creation of open educational resources, the release of data and content under open and standard open licenses, etc., and tracks their uptake.

Infrastructure

1. Proposed repository – i.e., RepOD ICM UW meets trusted quality standards (OpenAIRE compatible, meeting FAIR principles, has a transparent repository policy) and are linked with EOSC.

2. RepOD ICM UW is registered in appropriate registries and is interoperable through the OpenAIRE Guidelines.

Research Assessment and Evaluation

The Institute of Physical Chemistry PAS commits to:

1. Taking steps towards developing in cooperation with the Institute's units a framework for research assessment and evaluation that incentivizes research quality and Open Science behaviours and practices. Such systems should take into consideration disciplinary differences and their impact on researchers at different career stages.
2. Taking steps towards setting up reward mechanisms for researchers using Open Science practices (e.g., sharing provisional results through open platforms, using open software and other tools, participation in open collaborative projects (citizen science), sharing data, etc.).

Training

The **Institute of Physical Chemistry PAS** commits to developing training courses to facilitate the adoption of open science and equip researchers, librarians, and other support staff with the necessary skills and expertise. Such training courses should include skills necessary for open access publishing, FAIR and open data and data management, research integrity, reproducibility and open science.

Monitoring Policy Compliance and Validity of the Policy

1. IChF will set up institutional workflows and define responsibilities at the institutional level for monitoring policy compliance.
2. This policy will be reviewed and updated by **the Director of IChF at least every two years**.

ANNEX: GLOSSARY

- **Gold Open Access:** the process of achieving open access through publication in an open access journal (open access publishing).
- **Green Open Access:** the process of providing open access through an open access repository (also known as “self-archiving”).
- **Machine-readable copy** of a publication is a publication in a format that can be used and understood by a computer.
- **Metadata** are the descriptors used for describing, tracing, use and management of the deposited item (indicatively: title of publication, author(s), institutional affiliation, name of journal where the publication has been accepted).
- **Open Peer Review** may refer to a scholarly review mechanism where both the identities of the reviewer and the author are known to one another during the review and publication process, or to systems where reviewer reports are published alongside the articles, or systems where not only “experts” can comment, or a variety of combinations of the above or other novel methods
- **Publication** is defined as the peer-reviewed published (or under publication) work describing original research outcomes or systematizing current knowledge on certain topic (e.g., review works).
- **Research Data** is the data (such as statistics, results of experiments, measurements, observations, interview recordings, images, etc.) used to validate the results presented in scientific publications or other data used during a project and described in the Data Management Plan.
- **Research** is defined as any creative and systematically performed work with the goal of furthering knowledge.
- **Researcher** is defined as any member of the research staff of **IChF**, of any level and irrespective of their employment status including employees and doctoral students.