Diffusion analysis by rapid thermal sampling (DARTS)
Application DMP

Questionnaire

The questions in this section should only be answered if you are currently applying for FWO funding.
Are you preparing an application for funding?

- No

Diffusion analysis by rapid thermal sampling (DARTS)
DPIA

DPIA

Have you performed a DPIA for the personal data processing activities for this project?

- Not applicable

Diffusion analysis by rapid thermal sampling (DARTS)
GDPR

GDPR

Have you registered personal data processing activities for this project?

- No

Diffusion analysis by rapid thermal sampling (DARTS)
FWO DMP (Flemish Standard DMP)

1. Research Data Summary

List and describe all datasets or research materials that you plan to generate/collect or reuse during your research project. For each dataset or data type (observational, experimental etc.), provide a short name & description (sufficient for yourself to know what data it is about), indicate whether the data are newly generated/collected or reused, digital or physical, also indicate the type of the data (the kind of content), its technical format (file extension), and an estimate of the upper limit of the volume of the data.

type of data	Format	volume	how created
Spectroscopic data	.txt	30 GB	FTIR spectroscopy
Volumetric data	.xls	10 GB	Static and dynamic volumetric adsorption experiments
Mass spectromtery	.csv	10 GB	Adsorption and diffusion experiments
Gravimetric data	.xls	10 GB	Gravimetric adsorption experiments
Data processing	.mat .opju .xls	1 GB	performed in matlab, excel and origin
Text	.docx .txt	5 GB	proposals, protocols, SOPs
Data representation	.pptx	100 GB	Agglomeration of data-output, finished presentations

If you reuse existing data, please specify the source, preferably by using a persistent identifier (e.g. DOI, Handle, URL etc.) per dataset or data type:

no

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? Describe these issues in the comment section. Please refer to specific datasets or data types when appropriate.

- No

Will you process personal data? If so, briefly describe the kind of personal data you will use in the comment section. Please refer to specific datasets or data types when appropriate.

- No

Does your work have potential for commercial valorization (e.g. tech transfer, for example spin-offs, commercial exploitation, …)? If so, please comment per dataset or data type where appropriate.

- Yes

The study aims towards the development of a new technique for performing multicomponent adsorption and diffusion measurements in systems that cannot be studied with existing techniques. Therefore, this technique will be of great interest towards both research and industry. Steps are being undertaken to protect the idea's that will be developed during this project.

Do existing 3rd party agreements restrict exploitation or dissemination of the data you (re)use (e.g. Material/Data transfer

agreements/ research collaboration agreements)? If so, please explain in the comment section to what data they relate and what restrictions are in place.

- No

Are there any other legal issues, such as intellectual property rights and ownership, to be managed related to the data you (re)use? If so, please explain in the comment section to what data they relate and which restrictions will be asserted.

- No

2. Documentation and Metadata

Clearly describe what approach will be followed to capture the accompanying information necessary to keep data understandable and usable, for yourself and others, now and in the future (e.g., in terms of documentation levels and types required, procedures used, Electronic Lab Notebooks, README.txt files, Codebook.tsv etc. where this information is recorded).

The host group implements a data management system to preserve the collection, storage and reuse of data generated by group members. The data gathered in this project is saved per instrument that is used and further categorized per material and analyte. An electronic lab book (powerpoint presentation) is generated, with a short description of the experiments as well as a graphical representation of the data. The raw data is stored either in excel files or directly in origin if plots of the raw data would be needed. All data is stored in a data storage system, which contains the entire project data and is stored in a secured cloud (Dropbox/Drive).

Will a metadata standard be used to make it easier to find and reuse the data? If so, please specify (where appropriate per dataset or data type) which metadata standard will be used. If not, please specify (where appropriate per dataset or data type) which metadata will be created to make the data easier to find and reuse.

- No

No uniform metadata standard is available for all different aspects and disciplines of this project. Therefore, the data management system, implemented by all group members, provides a uniform system to enhance the use of secondary data. The meta data (date, objective, protocol (data types and conducted characterization techniques), processed data, roadmap,…) is covered by a number of predetermined topics which are entailed in the Electronic Lab Book.

3. Data storage & back-up during the research project

Where will the data be stored?

The applicant will curate all data he generates in consultation with the PI (R. Ameloot). All data will be stored via a secure cloud storage solution.

How will the data be backed up?

Unlimited versioning via dropbox.

**Is there currently sufficient storage & backup capacity during the project? If yes, specify concisely.
If no or insufficient storage or backup capacities are available, then explain how this will be taken care of.**

- Yes

There is currently sufficient storage & backup capacity, more precisely, 10 TB of storage is provided. This can be expanded if necessary.

How will you ensure that the data are securely stored and not accessed or modified by unauthorized persons?

A secured environment is provided by the cloud system (Dropbox). Only after receiving an invitational link one can access a predetermined space in the cloud. Hereby unauthorized persons cannot access the information unless personally given access.

What are the expected costs for data storage and backup during the research project? How will these costs be covered?

The cost is 12 euro per month per person, which will be covered by the bench fee.

4. Data preservation after the end of the research project

Which data will be retained for at least five years (or longer, in agreement with other retention policies that are applicable) after the end of the project? In case some data cannot be preserved, clearly state the reasons for this (e.g. legal or contractual restrictions, storage/budget issues, institutional policies...).

All data will be preserved for at least 5 years after the end of this project.All data will be preserved for at least 5 years after the end of this project.

Where will these data be archived (stored and curated for the long-term)?

All data will be stored using secure cloud storage, also on the long term.

What are the expected costs for data preservation during the expected retention period? How will these costs be covered?

No practical funding is available, other means will be used.

5. Data sharing and reuse

Will the data (or part of the data) be made available for reuse after/during the project? In the comment section please explain per dataset or data type which data will be made available.

- Yes, in a restricted access repository (after approval, institutional access only, …)

If access is restricted, please specify who will be able to access the data and under what conditions.

All collaborators of the involved research groups will be authorized to have access to data relevant to their contributions during and after the project. Published data will be publicly available.

Are there any factors that restrict or prevent the sharing of (some of) the data (e.g. as defined in an agreement with a 3rd party, legal restrictions)? Please explain in the comment section per dataset or data type where appropriate.

- No

Where will the data be made available? If already known, please provide a repository per dataset or data type.

Made available in common folder within a secure cloud storage system

When will the data be made available?

upon publications of results

Which data usage licenses are you going to provide? If none, please explain why.

Question not answered.

Do you intend to add a PID/DOI/accession number to your dataset(s)? If already available, you have the option to provide it in the comment section.

Question not answered.

What are the expected costs for data sharing? How will these costs be covered?

Expected cost is very low due to the flexible nature of the used cloud storage.

6. Responsibilities

Who will manage data documentation and metadata during the research project?

The PhD student who will work on this FWO project will be responsible for the data collection, documentation and metadata. Supervisors will manage the data storage facilities.

Who will manage data storage and backup during the research project?

The PhD student on this FWO project will curate the data in structures folders within a secure cloud storage solution. According to the data management plan in the host group, the files will be named using a predetermined convention, referring to the date, sample name and brief description. Further description of the samples will be provided in a centralized table containing a description of all samples.

Who will manage data preservation and sharing?

The PI bears the end responsibility of updating & implementing this DMP.

Who will update and implement this DMP?

The applicant bears the end responsibility of updating & implementing this DMP