Polyamine as a novel polymer material for ultra-stable membranes

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.

Dataset name / ID	Description	New or reuse	Digital or Physical data	Data Type	File format	Data volume	Physical volume
		*Indicate: **N**(ew data) or **E**(xisting data)*	Indicate: **D**(igital) or **P**(hysical)	Indicate: **A**udiovisual **I**mages **S**ound **N**umerical Textual **M**odel **SO**ftware Other (specify)		Indicate: <1GB <100GB <1TB <5TB >5TB NA	
Lab notes	Description of the practical execution of experiments	New	Digital and if Physical, they will be digitalized as materials and method section	Observational and experimental	.docx	<100 GB	5-10 note books
UV-vis	UV-vis spectra	New	Digital	Experimental	.xlsx	< 100 GB	
Filtration results	Results form the filtration experiments	New	Digital	Experimental	.xlsx	< 100 GB	
IR	infrared spectroscopy data	New	Digital	Experimental	.xlsx/.dpt/.0	< 100 GB	
Porometry	Porometry data	New	Digital	Experimental	.txt/.xlsx/.docx	< 100 GB	
Microscopy data	SEM, TEM, AFM	New	Digital	Experimental	.tif	< 100 GB	
Zeta-potential data	Zeta-potential measurements	New	Digital	Experimental	.xlsx	< 1 TB	
Performance data	Redox flow battery and electrolyzer experiments	New	Digitla	Experimental	.xlsx	<1 TB	

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:

N.a.

Are there any ethical issues concerning the creation and/or use of the data (e.g. experiments on humans or animals, dual use)? If so, refer to specific datasets or data types when appropriate and provide the relevant ethical approval number.

- No

Will you process personal data? If so, please refer to specific datasets or data types when appropriate and provide the KU Leuven or UZ Leuven privacy register number (G or S number).

- 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

Before every publication, the potential towards IP creation will be assessed. If there is IP potential, the relevance will be communicated with the relevant tech transfer offices. Therefore, all relevant data will be kept restricted until assessment towards filing a patent. Once these granted, this data can be made public.

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

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 data files will be named using a standardized naming system, including date of the experiment, name of the researcher, sample code,... The used codes will correspond to the codes used in the lab notebooks.
An index or table of content file will be provided with the explanation of each code and a short description of each related project. In this index, also a link will be embedded to the data file location.

Will a metadata standard be used to make it easier to find and reuse the data?
If so, please specify which metadata standard will be used.

If not, please specify which metadata will be created to make the data easier to find and reuse.

- No

An index or table of content file will be provided with the explanation of each code and a short description of each related project. In this index, also a link will be embedded to the data file location.

Data Storage & Back-up during the Research Project

Where will the data be stored?

- Shared network drive (J-drive)
- OneDrive (KU Leuven)
- Large Volume Storage

How will the data be backed up?

- Standard back-up provided by KU Leuven ICTS for my storage solution
- Personal back-ups I make (specify below)

Every 3 months a backup will be made of all files in the OneDrive folder to the Archive K drive.

Is there currently sufficient storage & backup capacity during the project?

If no or insufficient storage or backup capacities are available, explain how this will be taken care of.

- Yes

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

Data will only be stored on OneDrive and the internal KU Leuven drives. Both are only accessable through a 2-step autentication protocol (password and KU Leuven authenticator).

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

The costs for storage on the shared J: drive are 500 euro/TB. OneDrive is free of charge.

Data Preservation after the end of the Research Project

Which data will be retained for 10 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 10 years according to KU Leuven RDM policy

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

- Large Volume Storage (longterm for large volumes)

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

The costs for long term data storage are 50 euro per TB per year.

Data Sharing and Reuse

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

- Yes, as restricted data (upon approval, or institutional access only)

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

All researchers and PI will have access at all time to the data. Externals can get access to the data upon approval of the PI.

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 per dataset or data type where appropriate.

- Yes, intellectual property rights

Only data with potential IP protection will be restricted to the consortium members and will not be published before filing a patent.

Where will the data be made available?

If already known, please provide a repository per dataset or data type.

- KU Leuven RDR (Research Data Repository)

When will the data be made available?

- Upon publication of research results

Which data usage licenses are you going to provide?

If none, please explain why.

- Data Transfer Agreement (restricted data)
- CC-BY 4.0 (data)

Do you intend to add a persistent identifier (PID) to your dataset(s), e.g. a DOI or accession number? If already available, please provide it here.

- No

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

KU Leuven RDR free for 50 GB

Responsibilities

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

The researchers

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

The researchers

Who will manage data preservation and sharing?

Guy Koeckelberghs

Who will update and implement this DMP?

Guy Koeckelberghs