DATA MANAGEMENT PLAN

# 1. Data description and collection or re-use of existing data

## How will new data be collected or produced and/or how will existing data be re-used?

Within the scope of the project multiple types of qualitative and quantitative data will be generated. It will be related

to microscopic images, light scattering, electrochemical, electronic, mechanical and physico-chemical measurements,

SEM/AFM/TEM micrographs, rheometry, and molecular weight studies, copolymer designs and technology procedures.

Raw data will be analyzed and expressed as graphs, tables and annotated images, some of which are expected to be

published. Raw data will be stored in an organized manner by all research team members and sufficient care will be

taken to prevent any data loss. In essence, all data processed in this project will be generated by the research activities

of the team members within the scope of activities planned and described in the research plan.

Pozyskiwane lub opracowywane dane (np. rodzaj, format, ilość)

Data generated will be in various formats and sizes of databases, most of which will be accessible using common

## What data (for example the types, formats, and volumes) will be collected or produced?

software allowing easy access and long-term validity during and after the project, thus facilitating data sharing.

Micrographs in .jpg or .tiff format. The size of a single data set depends on the measurement approach and is typically

30 MB. Around 1500 various images are expected to be taken within the proposed project.

# 2. Documentation and data quality

## What metadata and documentation (for example methodology or data collection and way of organising data) will accompany data?

metadata. Data files will be labeled appropriately and placed in clearly labeled folders. Gdańsk Tech operates a

dedicated platform, MOST Wiedzy, which contains an Open Research Data Catalog (commonly named Bridge of Data) ,

entrepreneurs and the public. The available research data will be described by attributes developed by dedicated,

experienced scientific teams. This metadata will be in line with widely recognized metadata standards and schemas for

collected data. Metadata descriptions will be stored in JSON-LD format. Contributor will be identified and authorized

Stosowane środki kontroli jakości danych

Standard protocols will be optimized and used to collect data to ensure reliability and consistency. All experiments will

incorporate appropriate positive and negative controls to ensure validity. Whenever possible experimental setups

FAIR standards requirements.

## What data quality control measures will be used?

Most data will be collected in a highly automated manner by the equipment which in some cases will include additional

where part of the collected in this project data will be made available free of charge to the scientific community,

effective data dissemination as will allow other external computer systems, databases or web services to interpret the

involving internal controls will be preferred. Project staff will be trained in techniques they use to ensure quality data.

Data will be discussed in weekly lab meetings to ensure correct procedures. Data will be cataloged in a way to fulfill

# 3. Storage and backup during the research process

## How will data and metadata be stored and backed up during the research process?

Data will be kept at secured hard drives and on-line clouds (Microsoft OneDrive, A1 for faculty license) of all members

of the research team.

Data backups on hard drives will be done weekly.

Sposób zapewnienia bezpieczeństwa danych oraz ochrony danych wrażliwych podczas badań

No medical, personal or otherwise sensitive data is expected to be generated during the proposed project. Data

recovery will be possible thanks to backup procedures. Data storage will be kept in accordance with the policy of the

Gdańsk Tech, preventing access without the authorization.

## How will data security and protection of sensitive data be taken care of during the research?

# 4. Legal requirements, codes of conduct

## If personal data are processed, how will compliance with legislation on personal data and on data security be ensured?

the project's deliverables will be carried out using open-access channels, e.g., under CC BY or CC0 licenses. Metadata

descriptions for these datasets will always be available without any restrictions (CC0). No embargo or other restrictions

are necessary.

## How will other legal issues, such as intelectual property rights and ownership, be managed? What legislation is applicable?

# 5. Data sharing and long-term preservation

## How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?

and kept at open repository MOST Wiedzy Open Research Data Catalog. There are no restrictions regarding data

sharing and no sensitive data will be published. Majority of scientific journals do not require the direct sharing of raw

data. However, selected datasets published in a processed way in scientific journals, will be preserved according to the

which is CoreTrustSeal certified. This certificate confirms the repository's trustworthiness and sustainability. Data

deposited in the repository will be chosen on the basis of its scientific quality and exemplarity.

Moreover, all data not selected for sharing and preservation in the MOST Wiedzy repository will also be stored for at

least 10 years after the project is finished and access to them will be possible only with the PI consent.

Most of the data will be produced in standard ASCII formats and will require no further transformation. Data will be

## How will data for preservation be selected, and where will data be preserved long-term (for example a data repository or archive)?

Selected data will be uploaded as soon as possible (not later than after acceptance of the manuscript for publication)

The data will be stored in a dedicated MOST Wiedzy Open Research Data Catalog (described in detail in 2.1) repository,

deposited there will be automatically categorized for long-term storage without an expiration date. The data to be

numbers for each of the uploaded datasets. Data stored within this project will be linked with such unique DOI

## What methods or software tools will be needed to access and use the data?

rules imposed by the specific journal (e.g. for 2 or 5 years).

Sposób wyboru danych przeznaczonych do przechowania oraz miejsce długotrwałego przechowywania danych (np.

repozytorium lub archiwum danych)

Metody lub narzędzia programowe umożliwiające dostęp do danych i korzystanie z danych

stored using the dedicated repository MOST Wiedzy Open Research Data Catalogue.

Sposób zapewniający stosowanie unikalnego i trwałego identyfikatora (np. cyfrowego identyfikatora obiektu (DOI)) dla

każdego zestawu danych

The MOST Wiedzy Open Research Data Catalogue repository (described in detail in 2.1) supports obtaining unique DOI

## How will the application of a unique and persistent identifier (such us a Digital Object Identifier (DOI)) to each data set be ensured?

# 6. Data management responsibilities and resources

## Who (for example role, position, and institution) will be responsible for data mangement (i.e the data steward)?

## What resources (for example financial and time) will be dedicated to data management and ensuring the data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?