Plan Overview

A Data Management Plan created using DMPonline

Title: F-QUANT: Ultralow concentration f-element spectro-microscopy with computational quantum imaging

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F-QUANT: Ultralow concentration f-element spectro-microscopy with computational quantum imaging

Manchester Data Management Outline

1. Will this project be reviewed by any of the following bodies (please select all that apply)?

- None of the above

2. Is The University of Manchester collaborating with other institutions on this project?

- No - only institution involved

3. What data will you use in this project (please select all that apply)?

- Acquire new data

4. Where will the data be stored and backed-up during the project lifetime?

- University of Manchester Research Data Storage Service (Isilon)

5. If you will be using Research Data Storage, how much storage will you require?

- < 1 TB

6. Are you going to be receiving data from, or sharing data with an external third party?

- No

7. How long do you intend to keep your data for after the end of your project (in years)?

- 0-4 years

Guidance for questions 8 to 13

Highly restricted information defined in the Information security classification, ownership and secure information handling SOP is information that requires enhanced security as unauthorised disclosure could cause significant harm to individuals or to the University and its ambitions in respect of its purpose, vision and values. This could be: information that is subject to export controls; valuable intellectual property; security sensitive material or research in key industrial fields at particular risk of being targeted by foreign states. See more examples of highly restricted information.

Personal information, also known as personal data, relates to identifiable living individuals. Personal data is classed as special category personal data if it includes any of the following types of information about an identifiable living individual: racial or ethnic origin; political opinions; religious or similar philosophical beliefs; trade union membership; genetic data; biometric data; health data; sexual life; sexual orientation.

Please note that in line with data protection law (the UK General Data Protection Regulation and Data Protection Act 2018), personal information should only be stored in an identifiable form for as long as is necessary for the project; it should be pseudonymised (partially de-identified) and/or anonymised (completely de—identified) as soon as practically possible. You must obtain the appropriate ethical approval in order to use identifiable personal data.

8. What type of information will you be processing (please select all that apply)?

- No confidential or personal data

9. How do you plan to store, protect and ensure confidentiality of any highly restricted data or personal data (please select all that apply)?

- Not applicable

10. If you are storing personal information (including contact details) will you need to keep it beyond the end of the project?

- Not applicable

11. Will the participants' information (personal and/or sensitive) be shared with or accessed by anyone outside of the University of Manchester?

- Not applicable

12. If you will be sharing personal information outside of the University of Manchester will the individual or organisation you are sharing with be outside the EEA?

- Not applicable

13. Are you planning to use the personal information for future purposes such as research?

- No

14. Will this project use innovative technologies to collect or process data?

- No

15. Who will act as the data custodian for this study, and so be responsible for the information involved?

Patrick Parkinson

16. Please provide the date on which this plan was last reviewed (dd/mm/yyyy).

2022-02-28

0. Proposal name

0. Enter the proposal name

F-QUANT: Ultralow concentration f-element spectro-microscopy with computational quantum imaging

1. Description of the data

1.1 Type of study

Instrumentation Development, and benchmarking.

1.2 Types of data

Optical imaging and spectroscopy (quantitative) of inert samples.

1.3 Format and scale of the data

Custom file format to be developed based on photon-records.

2. Data collection / generation

2.1 Methodologies for data collection / generation

Incidental data will be generated during the development phase. Benchmarking will be carried out using community standards for illumination, system description, and reporting.

2.2 Data quality and standards

Calibration standards – including quantum dots with known quantum efficiency and centre wavelength – will be used. Benchmarking against a state-of-the-art commercial laser-scanning microscopy platform will be used.

3. Data management, documentation and curation

3.1 Managing, storing and curating data

Experimental data will be saved directly onto a replicated and snapped network drive. Design and process data will be stored on the same networked drive, providing backup.

3.2 Metadata standards and data documentation

Metadata standards will be developed for this novel methodology.

3.3 Data preservation strategy and standards

There is no specific need for long-term data storage for this project, where primary outputs will be new experimental techniques. However, data associated with publications will use institutional data archiving (including figshare).

4. Data security and confidentiality of potentially disclosive information

4.1 Formal information/data security standards

Not relevant to this project.

4.2 Main risks to data security

Not relevant to this project.

5. Data sharing and access

5.1 Suitability for sharing

Data associated with publications will use institutional data archiving (including figshare). Narrative data associated with system development is not typically suitable for sharing.

5.2 Discovery by potential users of the research/innovation data

The primary output of this project is an experimental technique; as such, the data itself is only of value in answering the

problem domain questions.The PI will have final say over the supply of unpublished data, unless an NDA is in place related to commercial samples.

5.3 Governance of access

The PI will have final say over the supply of unpublished data, unless an NDA is in place related to commercial samples.

5.4 The study team's exclusive use of the data

For data associated with a NDA, no release of narrative data will be provided. For other unpublished data, the PI will release data at their discretion.

5.5 Restrictions or delays to sharing, with planned actions to limit such restrictions

NDAs may be in place for commercial sensitive research with project partners.

5.6 Regulation of responsibilities of users

Not relevant to this project.

6. Responsibilities

6. Responsibilities

Question not answered.

7. Relevant policies

7. Relevant institutional, departmental or study policies on data sharing and data security

Question not answered.

8. Author and contact details

8. Author of this Data Management Plan (Name) and, if different to that of the Principal Investigator, their telephone & email contact details

Question not answered.