



FETPROACT

MAGnetic nanoparticle based liquid ENergy materials for Thermoelectric device Applications

MAGENTA

Data Management Plan

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Information about the project

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Project coordinator and partners	<p>Coordinator :</p> <p>COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)</p> <p>EPIC, 775685019, established in RUE LEBLANC 25, PARIS 15 75015, France,</p> <p>and the following other beneficiaries:</p> <p>2. CONSIGLIO NAZIONALE DELLE RICERCHE (CNR), 80054330586, established in PIAZZALE ALDO MORO 7, ROMA 00185, Italy,</p> <p>3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE CNRS (CNRS), 180089013, established in RUE MICHEL ANGE 3, PARIS 75794, France, VAT number FR40180089013,</p> <p>4. NATIONAL CENTER FOR SCIENTIFIC RESEARCH “DEMOKRITOS” (NCSR), 090085651, established in Patriarchou Gregoriou Str., AGHIA PARASKEVI 15310, Greece,</p> <p>5. SOLVIONIC (SOLVIONIC SA) FR39, 448566182, established in 195 RTE D'ESPAGNE SITE BIOPARC SANOFI, TOULOUSE 31100, France,</p> <p>6. C-TECH INNOVATION LIMITED (C-TECH) LTD, 04050834, established in CAPENHURST TECHNOLOGY PARK, CHESTER CH1 6EH, United Kingdom,</p> <p>7. CENTRO RICERCHE FIAT SCPA (CRF) SCPA, 833885CF07084560015, established in STRADA TORINO 50, ORBASSANO 10043, Italy,</p> <p>8. GEMMATE TECHNOLOGIES SRL (GEM) SRL, 1189884, established in VIA REANO 31, BUTTIGLIERA ALTA 10090, Italy,</p> <p>9. HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE (HES-SO), established in RUE DE LA JEUNESSE 1, DELEMONT 2800, Switzerland,</p> <p>10. POLITECHNIKA GDANSKA (GUT), 000001620, established in UL. GABRIELA NARUTOWICZA 11/12, GDANSK 80-233, Poland,</p>
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0.2	13/06/2017	Second IPR revision	Sawako Nakamae
0.3	23/06/2017	3rd IPR revision	Edd Jones/ S. Nakamae/ D. Samson
0.4	28/06/2017	Revision by Consortium members	S. Nakamae

Abbreviations and Acronyms (to be updated throughout the project)

DMP: Data management plan

GA: Grant Agreement

CA: Consortium Agreement

ORDP: Open research data pilot

WP: Work package

MTE: Magneto-thermoelectric

MTD: Magneto-thermodiffusion

FF: Ferrofluid

IL: Ionic Liquids

DoA: Description of Actions

1. Summary

MAGENTA is a research & innovation project that aims to bring a paradigm change in TE-technology by exploiting the magneto-thermoelectric (MTE) property of ionic-liquid based ferrofluids. The **primary objectives** are: **1) to provide founding knowledge of novel MTE phenomena in ferrofluids, 2) to build application-specific MTE prototypes** for their use in targeted industrial sectors (cars and portable electronics) and **3) to build an innovation ecosystem around the novel MTE technology in the field of waste-heat recovery research and development.**

During the course of the project, MAGENTA will generate data in a wide range of R&D activities from materials synthesis (ionic liquids, magnetic nanoparticles and ferrofluids), Magneto-ThermoElectric (MTE), Magneto-ThermoDiffusion (MTD) measurements, theoretical and numerical analysis to prototype device testing and validation. Since the MAGENTA technology is at an early stage, it is important that timely dissemination of these findings (data, publications, trial results) are open for scrutiny by other researchers, potential future partners and the wider research and regulatory community.

As a project participating in the Open Research Data Pilot (ORDP) in Horizon 2020, MAGENTA will make its research data findable, accessible, interoperable and reusable (FAIR). Nevertheless, data sharing in the open domain can be restricted, taking in account “the need to balance openness and protection of scientific information, commercialization and Intellectual Property Rights (IPR), privacy concerns, security as well as data management and preservation questions” as stated in Guidelines on FAIR Data Management in Horizon 2020 published by the European Commission.

The DMP’s purpose is, therefore, to provide the main elements of the data management policy to be used by the Consortium regarding its complete research data cycle. It describes: types and formats of data to be generated or collected and how, the standards to be applied, the data-reservation methods, the data-sharing policies for re-use. The DMP reflects the exploitation and IPR requirements as defined in the Consortium agreement.

The present document is the 1st version of MAGENTA DMP, containing a summary of the datasets; i.e., types, formats and sources (WPs and partner names) and specific conditions to be applied for sharing and reuse. As a living document, the DMP will be modified and refined through updates as the project implementation progresses and/or significant changes occur. At minimum, it will be updated in the context of the periodic reporting/evaluation of the project.

2. Data Management Plan – Overview

The DMP covers the complete research data cycle of MAGENTA as described in Figure 1. In Step 1 of the DMP (Green oval in Figure 1), MAGENTA will produce raw data (generated through measurements and simulations, collected through market researching, etc.). The data will then be processed and analyzed into more usable forms; i.e., reports, publishable documents, data tables, codes, etc.). In Step 2 (blue oval), the data will be preserved using appropriate naming rules and metadata schemes. The project’s *open access policy* (see following sections) will be applied to determine which datasets shall be made accessible (share) for re-use in Step 3 (yellow oval). The publicly accessible datasets will then be re-used by public for verification.

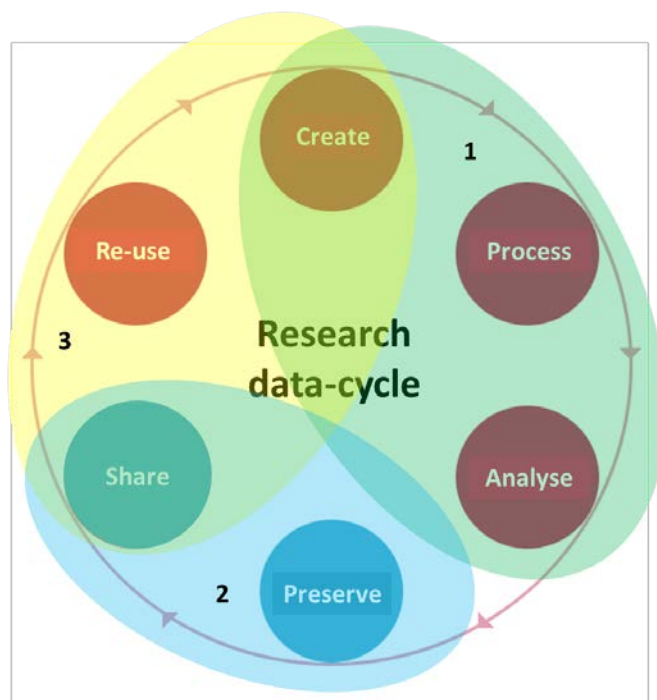


Figure 1: Research data life-cycle (Adapted from www.data-archive.ac.uk/create-manage/life-cycle)

2.1. Research data types and open access policy of MAGENTA

MAGENTA will produce data in a wide range of R&D activities that are summarized in the Table 1. Not that this list may require modifications (addition or removal of datasets) in the later versions of the DMP depending on the project developments. Once generated (or collected), these data will be stored in several formats, which are: Documents, Images, Data, and Numerical codes.

Table 1: Types of data to be generated in MAGENTA

	Data description	Main Partners	WPs
1	Ionic liquids (IL)	<u>SOLV</u> , GUT, CNR	WP2
2	Magnetic nanoparticles and ferrofluid (MNP&FF)	<u>CNR</u> , CNRS, NCSR	WP3, WP5, WP6
3	Magneto-Thermodiffusion (MTD)	<u>CNRS</u> , CNR, CEA	WP4, WP6
4	Magneto-Thermoelectric (MTE)	<u>CEA</u> , HESSO, GUT	WP5, WP6
5	Prototype (PT)	<u>CFR</u> , GEM, CTECH, CEA	WP7

Among the datasets described in Table 1 above, following categories of outputs are declared “ORDP” in the Grant Agreement (Annex 1, Part A, Section 1.3.2) and will be made “Open Access” (to be provided free of charge for public sharing). These will be included in the Open Research Data Pilot and thus be managed according to the present DMP.

- Public deliverables specifically declared as ‘ORDP’ in the grant agreement:
 - D4.2: Database on MTD property in IL-FFs
 - D6.1: Single MNPs and FF structures
 - D6.2: Molecular descriptor data base on IL and IL/FFs
 - D6.3: Analytical model on TE and TD effects
- Articles published in Open Access scientific journal
- Conference and Workshop abstracts/articles

For all data types, the Consortium will examine the aspects of potential conflicts against commercialization and the IPR protection issues of the knowledge generated before deciding which information needs to be made public and when. The decision process, summarized in the figure below, will be overseen by the “Dissemination, Exploitation & Communication” subcommittee headed by CTECH and CEA (see Project Management Plan, Deliverable identifier: PMP-D.1.1-v1, submitted on February 28, 2017).

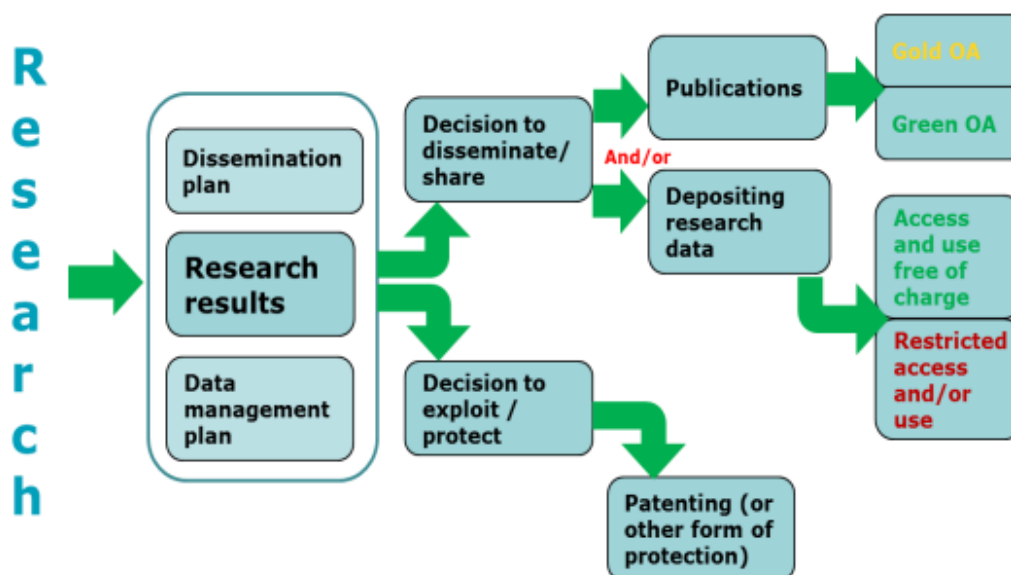


Figure 2: Open access to research data and publication decision diagram (from Guidelines to the Rules on Open Access to Scientific publications and Open Access to Research Data in Horizon 2020)

As stated in the Grant Agreement (Article 29.3) “As an exception, the beneficiaries do not have to ensure open access to specific parts of their research data if the achievement of the action's main objective would be jeopardized by making those specific parts of the research data openly accessible.” Such an exception applies to MAGENTA when the project findings present high innovation level (possibility of commercialization, etc.). In this case, the consortium will consider two forms of protection: 1) to withhold the data for internal use or 2) to apply for a patent in order to commercially exploit the invention and have in return financial gain. In the former case, appropriate IPR protection measures (e.g., NDA) must be taken for data sharing outside the consortium. In the latter case, publications will be delayed until the patent filing is completed. Otherwise, the results will be made “Open Access” by depositing the research data into an online repository service (see Section data repository options) or by publishing in journals (document, reports, articles, etc.) adhering to suitable “Open Access”

(‘green’ or ‘gold’). In parallel, public deliverables will be stored at one (or both) of the following locations: The MAGENTA website (<https://www.magenta-h2020.edu>) after approval by the consortium, and the MAGENTA page on CORDIS website where all public deliverables submitted to the European Commission are hosted.

In the following section, details on the five datasets identified in MAGENTA are given. They will be updated as more data are produced in the project.

3. Datasets

3.1. Ionic liquids:

Data set reference and name*	DS_IL
Purpose and relation to the objectives of the project *	The datasets include information on ionic liquid synthesis protocol, molecular structure and physical property calculation results, property measurement results. The data will be used for producing novel ionic liquid based ferrofluids.
Data types*	Document, data, images, codes
File formats*	Documents and images: All common electronic document formats (.docx, .pdf, .tex, etc.) Data: text format tables that are readable by common data analysis software, or encrypted for specific data treatment software (to be defined) Numerical codes: written in programming languages such as Fortran 77, Fortran 90, C, C++, Perl and Bash
Reuse of existing data*	Processed and aggregated data will be shared by partners not collecting data for the advancements of the project.
Data production methods*	The dataset will be generated by partner laboratories through experimental trials, measurements, and numerical simulations. The dataset will also include summaries of project meetings and discussions between partners, and relevant publications in scientific journals.
Expected size of the data*	To be determined
Data utility*	The collected dataset will be used for identifying ionic liquids with optimal thermoelectric properties. It will also be used to design and synthesize novel ionic liquid based ferrofluids.
Potential for reuse*	In addition to the project itself, the dataset will be useful for other research groups working on related subjects in the area of ionic liquids.
Diffusion principles*	The dataset generated will be shared among project partners through private section of MAGENTA website, as well as through a secure file-sharing platform CoRe (see section 4.2)

	overseen by CEA and CTECH. Consortium will determine which data shall be made publicly available according to Open Access Decision scheme (see Section 1). Institutional as well as public data repositories (ZENODO) will be used along with open access publications in scholarly journals.
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3.2. Magnetic Nanoparticles and Ferrofluids

Data set reference and name*	DS_MNP&FF
Purpose and relation to the objectives of the project *	<p>The datasets concerns various aspects of the magnetic nanoparticle (MNP) synthesis and their dispersions in ionic liquids (ferrofluids, FF). Both experimental and theoretical methods will be taken; which are,</p> <ul style="list-style-type: none"> • Several magnetic materials to be used nanoparticles • Surface coating methods • Dispersion in ionic liquids (ferrofluids) and their stability (including the compatibility with redox couples) • Magnetic properties of MNPs and FFs • Electrostatic nature of FFs • Theoretical and numerical modelling of above results <p>These datasets will guide researchers for identifying optimal ionic liquid-based ferrofluids for their use as a magneto-thermoelectric liquid.</p>
Data types*	Document, data, images, codes
File formats*	<p>Documents and images: All common electronic document formats (.docx, .pdf, .tex, etc.)</p> <p>Data: text format tables that are readable by common data analysis software, or encrypted for specific data treatment software (to be defined)</p> <p>Numerical codes: written in programming languages such as use Fortran (for the atomistic and mesoscopic simulations) and VASP (Vienna Ab-initio Simulations Package) package for the electronic structure calculations, etc.</p>
Reuse of existing data*	Processed and aggregated data will be shared by partners not collecting data for the advancements of the project.
Data production methods*	<p>The dataset will be generated by partner laboratories through experimental trials, measurements, and theoretical/numerical simulations.</p> <p>The dataset will also include summaries of project meetings and discussions between partners, and relevant publications in scientific journals.</p>
Expected size of the data*	To be determined

Data utility*	The collected dataset will give a practical guide on which MNPs and their coating conditions can be used to create stable IL-based FFs. These IL-FF's magnetic, physico-chemical and electrostatic nature will be compared to their corresponding magneto-thermodiffusion and magneto-thermoelectric properties.
Potential for reuse*	As only few examples of IL-based ferrofluids exist, the dataset will be useful for other research groups trying to produce novel IL-FFs. The surface coating effect on magnetic properties of MNPs can also be exploited in areas of research beyond thermoelectricity, such as hyperthermia.
Diffusion principles*	The dataset generated will be shared among project partners through the private section of MAGENTA website, as well as through a secure file-sharing platform CoRE (see Section 4.2) overseen by CEA and CTECH. Consortium will determine which data shall be made publicly available according to Open Access Decision scheme (see Section 1). Institutional as well as public data repositories (Zenodo) will be used along with open access publications in scholarly journals.

3.3. Magneto-thermodiffusion:

Data set reference and name*	DS_MTD
Purpose and relation to the objectives of the project *	The datasets are produced in 3 distinct areas. <ul style="list-style-type: none"> • Instrumental: High temperature Forced Rayleigh Scattering spectroscopy device development • Experimental: MTD measurements on IL-FFs • Theoretical: Analytical and numerical modelling of MNP movements under thermal gradient <p>The thermodiffusion of MNPs is believed to play a key role in the production of high thermoelectric coefficients in FFs. The purpose here is to experimentally observe the MTD behavior of MNPs at high temperature and to provide theoretical understanding of such phenomena.</p>
Data types*	Documents, images, data, codes
File formats*	Documents and images: All common electronic document formats (.docx, .pdf, .tex, etc.) Data: text format tables that are readable by common data analysis software, or encrypted for specific data treatment software (to be defined) Numerical codes such as Mathematica and COMSOL will be used.

Reuse of existing data*	Processed and aggregated data will be shared by partners not collecting data for the advancements of the project.
Data production methods*	The dataset will be generated by partner laboratories through experimental trials, measurements, and theoretical calculations. The dataset will also include summaries of project meetings and discussions between partners, and relevant publications in scientific journals.
Expected size of the data*	To be determined
Data utility*	The collected dataset will be used compared to the MTE dataset in order to understand the impact of MTD in increasing (or decreasing) the FF's thermoelectric efficiency. This and MTE datasets will then be used to identify the optimal IL-FFs for the use in the prototype thermoelectric cells.
Potential for reuse*	In addition to the project itself, the dataset will be useful for other research groups working in the general field of colloids and nanofluids.
Diffusion principles*	The dataset generated will be shared among project partners through the private section of MAGENTA website, as well as through a secure file-sharing platform CoRE (see Section 4.2) overseen by CEA and CTECH. Consortium will determine which data shall be made publicly available according to Open Access Decision scheme (see Section 1). Institutional as well as public data repositories (Zenodo) will be used along with open access publications in scholarly journals.

3.4. Magneto-thermoelectric:

Data set reference and name*	DS_MTE
Purpose and relation to the objectives of the project *	The dataset also consists of 3 types of research works: <ul style="list-style-type: none"> • Instrumental: Development of high temperature and under-field thermoelectric property measurement cell for liquid materials • Experimental: Magneto-thermoelectric property measurement results (Seebeck coefficient, capacitance, power output). • Theoretical: analytical and numerical modelling of MTE phenomena in IL-FFs <p>We aim to identify IL-FFs with optimal MTE performance and provide theoretical understanding of observed phenomena. Stated as such, these are the 1st of the 3 objectives of the project.</p>
Data types*	Document, data, codes

File formats*	<p>Documents: All common electronic document formats (.docx, .pdf, .tex, etc.)</p> <p>Data: text format tables that are readable by common data analysis software, or encrypted for specific data treatment software (to be defined). Other possible formats include: jpg (snapshots), mp4 (simul. movies), png, tiff, xcf and svg (vector graphics)</p> <p>Numerical codes: written in programming languages such as Fortran 77, Fortran 90, C, C++, Perl and Bash.</p>
Reuse of existing data*	<p>Processed and aggregated data will be shared by partners not collecting data for the advancements of the project, adhering to the access rights conditions to results and background as described in the CA – Section 9</p>
Data production methods*	<p>The dataset will be generated by partner laboratories through experimental trials, measurements, and numerical simulations.</p> <p>The dataset will also include summaries of project meetings and discussions between partners, and publications in scientific journals.</p>
Expected size of the data*	To be determined
Data utility*	<p>The collected dataset will be used for identifying IL-FFs with optimal magneto-thermoelectric properties, to be tested in the prototype devices within the project.</p>
Potential for reuse*	<p>In addition to the project itself, the dataset will be useful for other research groups working on related subjects such as thermogalvanic cells, thermally charged ionic supercapacitors and electrochemical cells.</p>
Diffusion principles*	<p>The dataset generated will be shared among project partners through the private section of MAGENTA website, as well as through a secure file-sharing platform CoRE (see Section 4.2) overseen by CEA and CTECH. Consortium will determine which data shall be made publicly available according to Open Access Decision scheme (see Section 1). Institutional as well as public data repositories (Zenodo) will be used along with open access publications in scholarly journals</p>

3.5. Prototype:

Data set reference and name*	DS_PT
Purpose and relation to the objectives of the project *	<p>The datasets contain technical specifications of ‘prototype’ thermocells to be produced in WP7. These include; feasibility assessments, device development, validation, performance optimization and market research. These are one of the final objectives of the project.</p>

Data types*	Documents, images, data, codes and computer assisted drawings (CAD)
File formats*	Documents and images: All common electronic document formats (.docx, .pdf, .tex, etc.) Data: text format tables that are readable by common data analysis software, or encrypted for specific data treatment software (to be defined). CAD Formats (.dwg, .stp, .igs, etc) Mesh file format for computational fluid dynamics (.msh, etc)
Reuse of existing data*	Processed and aggregated data will be shared by partners not collecting data for the advancements of the project, adhering to the access rights conditions to results and background as described in the CA – Section 9.
Data production methods*	The dataset will be generated by partner laboratories through experimental trials, measurements, and numerical simulations. The dataset will also include summaries of project meetings and discussions between partners, as well as presentations at conferences, science fairs and technological showcasing events.
Expected size of the data*	To be determined
Data utility*	The data generated within this dataset are likely to generate patents.
Potential for reuse*	All reuse of data in DS_PT will be restricted whose terms and conditions to be determined by the IPR team.
Diffusion principles*	The dataset generated will be shared among project partners through private section of MAGENTA website, as well as through a secure file-sharing platform CoRe, overseen by CEA and CTECH. Deliverables associated to these datasets are declared “confidential” in the Grant Agreement. Thus, the DS_Prototype will not be shared with public, or with the third parties without proper licensing and other IPR measures (ex. Non-disclosure Agreement). In case of diffusion (publications, demonstrations, etc.) the Consortium will determine which data shall be made publicly available according to Open Access Decision scheme (see Section 1). Once the Open Access decision is granted, these data will be made public through data repositories (ZENODO) and/or open access publications in scholarly journals.

4. FAIR Data : common provision for datasets 1, 2, 3 and 4

The following FAIR methods to make MAGENTA’s data “findable, accessible, interoperable and reusable” apply to Datasets 1 through 4. The deliverables associated to the Prototype dataset are declared “confidential” in the Grant Agreement. Thus, the DS_PT (prototype) will not be shared with public or with the third parties without proper licensing and other IPR measures (ex. Non-disclosure Agreement). If the Consortium determines that some parts of DS_PT can be made publicly available, then they will comply with the provisions described in this section.

4.1. Making data findable

<p>Metadata*</p>	<p>Metadata is data on the research data themselves. It enables other researchers to find data in an online repository and is, as such, essential for the reusability of the dataset. By adding rich and detailed metadata, other researchers, can better determine whether the dataset is relevant and useful for their own research. In the online depositories used by MAGENTA partners, metadata (type of data, location, etc.) will be uploaded in a standardized form. This metadata will be kept separate from the original raw research data.</p> <p>As described in the project Grant Agreement (Article 29.2), the bibliographic metadata include all of the following:</p> <ul style="list-style-type: none"> • the terms “European Union (EU)” and “Horizon 2020”; • the name of the action, acronym and grant number; • the publication date, and length of embargo period if applicable • a persistent identifier <p>Note: All publications resulting from MAGENTA actions must acknowledge the financial support by EU by the statement: “MAGENTA project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 731976.”</p>
<p>Persistent and unique identifier* (ex: DOI Digital Object Identifier)</p>	<p>DOI and Creative Common’s license numbers will be used as persistent identifiers on open data repositories.</p>
<p>Naming conventions* (see 1.1)</p>	<p>Files and folders at data repositories will be versioned and structured by using a name convention consisting of project name, dataset name and ID; ex. MAGENTA_DS_IL_XXX.yy.zz (xxx = doc, img, code, etc., yy = data number, zz = version number) in compliance with the project’s PMP.</p>
<p>Search keywords*</p>	<p>Example keywords (will be modified with the project advancement)</p> <p>DS_IL: Synthesis, simulation, structure</p> <p>DS_MNP&FF: Synthesis, structure, magnetism, stability, simulation</p> <p>DS_MTD: Device, Soret coefficient, Diffusion coefficient, field effect, simulation, theory</p>

	DS_MTE: Thermogalvanic, Supercapactiance, theory, simulation, Power output DS_PT: Device, feasibility, simulation, power output
Version numbers*	Individual file names will contain version numbers that will be incremented at each revision.

4.2. Making data accessible

Data openly available*	The MAGENTA project datasets will be first stored and organized in a database by the data owners (personal computer, or on the institutional secure server) and on the project database (project website's private section and CoRe). Some datasets, for which the Consortium declares no confidentiality or IPR issues, will also be stored in ZENODO, the open access repository of the Open Access Infrastructure for Research in Europe (OpenAIRE) In such case, data access policy will be unrestricted. An embargo period may incur if collected datasets are linked to a green open access publication.
Tools to read or reuse data*	Most data are produced in common electronic document/data/image formats (.docx, .pdf, .tex, .jpg, .eps, ASCII etc.) that do not require specific software. Numerical codes may require specific compilers. (to be specified)
Ways to make data available*	Data objects will be deposited in ZENODO by CTECH under: <ul style="list-style-type: none"> • Open access to data files and metadata and data files provided over standard protocols such as HTTP. • Use and reuse of data permitted. To protect the copyright of the project knowledge, Creative Commons license will be used in some cases.
Data and publication repository*	For preservation and sharing of internal data and datasets, MAGENTA will use: <ul style="list-style-type: none"> • Individual researchers data storage media • Partner's individual institutions' secure data repositories • Project website's private section (https://www.magenta-h202.eu member only section) • Dedicated collaborative data/file sharing space on CoRe: The CoRe platform is a SharePoint based data/file sharing service administered by CNRS, Centre National de la Recherche Supérieur. The CoRe guarantees service availability of 7 days/week and 24 h/day except during the blocking incident, and which will be reestablished within h+5. The service may be affected during the system maintenance period, which will be communicated to the users. For Open Access data and publications, MAGENTA will use: <ul style="list-style-type: none"> • MAGENTA website's public section

	<ul style="list-style-type: none"> • OpenAIRE • ZENODO (https://zenodo.org) for ORDP data and datasets • Open archive HAL-page dedicated to MAGENTA publications on HAL-CEA, a repository for self-archiving of scientific publications of the CEA's researchers and laboratories and providing free access to articles, conferences, reports, thesis, etc. (https://hal-cea.archives-ouvertes.fr/HAL-MAGENTA/) • Other national or institutional open access archiving platforms used by consortium partners. The links toward these platforms (websites) will be included in the HAL-MAGENTA site (see above) • Open access journals
Access procedures*	All data deposited on ZENODO will be accessible without restriction for public. For other data, potential users must contact the IPR team or the data owner in order to gain access. If necessary, appropriate IPR procedure (such as non-disclosure agreement) will be used.

4.3. Making data interoperable

Standards, vocabularies, or methodologies for data and metadata*	Controlled vocabularies will be used in descriptive metadata fields to support consistent, accurate, and quick indexing and retrieval of relevant data. Keywords (see section 4.1) and their synonyms will be used for indexing and subject headings of the data and metadata. As controlled vocabularies change within different disciplines of Science, these keywords will be updated during the course of the project to increase the interoperability of the project's data and metadata.
Inter-disciplinary interoperability*	In order to ensure the interoperability, all datasets will use the same standards for data and metadata capture/creation

4.4. Increase data re-use

Data licensing*	Creative Common Licensing will be used to protect the ownership of the datasets. Both Share-Alike and NonCommercial-ShareAlike licenses will be considered for the parts of datasets for which the decision of making that part public has been made by the Consortium.
Date of data release*	Immediately after the Consortium decision to make data Open-Access. However, an embargo period may be applied if the data (or parts of data) are used in published articles in "Green" open access scholarly journals. The recommended maximum embargo period length by European Commission is 6 months.

Access to third parties*	For datasets deposited on a public data repository (ZENODO) the access is unlimited.
Restricted re-use : exception to the general diffusion principles*	<p>Restrictions on re-use policy are applied for all protected data (see Figure 2: Open access to research data and publication decision diagram), whose re-use will be limited within the project partners.</p> <p>Other restrictions include:</p> <ul style="list-style-type: none"> • The “embargo” period imposed by scholarly journals publication policy (Green Open access) • Some or all of the following restrictions may be applied with Creative Commons licensing of the dataset: <ul style="list-style-type: none"> ○ Attribution: requires users of the dataset to give appropriate credit, provide a link to the license, and indicate if changes were made. ○ NonCommercial: prohibits the use of the dataset for commercial purposes by others. ○ ShareAlike: requires the others to use the same license as the original on all derivative works based on the original data.
Data quality assurance processes*	Quality and Risk committee (composed of WP leaders) holds monthly video-conference meeting to ensure the proper conduct of project’s data management.
Length of time for reuse*	At least 1 year after the project.

5. Allocation of resources – common provision for all datasets

Costs for making data FAIR and how to cover these costs*	<ul style="list-style-type: none"> • Fees associated with the publication of scientific articles containing project’s research data in “Gold” Open access journals. The cost sharing, in case of multiple authors, shall be decided among the authors on a case-by-case basis. • Project Website operation: to be determined • Data archiving at ZENODO: free of charge • Copyright licensing with Creative Commons: free of charge
Data manager responsible during the project*	During the project data will be updated regularly as new results are submitted by partners. The data/metadata on a CoRe server will be backed up monthly.
Responsibilities of partners	Every partner is responsible for the data they produce. Any fee incurred for Open Access through scientific publication of the data will be the responsibility of the data owner (authors) partner(s) in compliance with the CA, Article 8.4.2.1: During the Project and for a period of 1 year after the end of the Project, the dissemination of own Results by one or several Parties including but not restricted to publications and presentations, shall be governed by the procedure of Article

	29.1 of the Grant Agreement subject to the following provisions. etc...
Potential value of long term preservation*	To be determined
Costs of long term preservation*	Data preservation of at least 1 year after the project is required by the Grant Agreement (Article 31.3). The associated costs for dataset preparation for archiving will be covered by the project itself. Long-term preservation will be provided and associated costs covered by a selected disciplinary repository.

6. Archiving and preservation

Data at the end of the project	January 1 st , 2021
Data selection*	To be decided by the Consortium at the end of the project
Estimated final volume	To be determined
Recommended preservation duration*	The MAGENTA project database will be designed to remain operational for at least 1 year after the project end.
Long term preservation storage*	The final dataset will be transferred to the ZENODO repository, which ensures sustainable archiving of the final research data. Additional data storage will be ensured by individual partner institution's data repositories and at CoRe.

7. Data security*

Provisions for data security*	<p>MAGENTA will use methods that emphasize easy access and extended contact and trust building among participants. The following guidelines will be followed in order to ensure the security of the data:</p> <ul style="list-style-type: none"> • Store data in at least two separate locations to avoid loss of data; • Encrypt data if it is deemed necessary by the participating researchers; • Limit the use of USB flash drives; • Label files in a systematically structured way in order to ensure the coherence of the final dataset. • The CoRe platform offered by CNRS guarantees service availability of 7 days/week and 24 h/day except during the blocking incident, and which will be reestablished within h+5. The service may be affected during the system maintenance period, which will be communicated to the users.
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Security of long term preservation*	Long term data preservation security will be ensured by partner institution's data repositories.
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8. Ethical aspects*

Impact of ethical or legal issues*	No ethical issue has been identified.
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9. Other issues*

Other data management procedures*	No other issues to report at this time.
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