NFDI MatWerk / Materials Data Infrastructure

The German National Research Data Infrastructure (NFDI) aims to systematically develop sustainably secure and make accessible the data holdings of science and research. It is being established as a networked structure of consortia acting on their own initiative. In NFDI-MatWerk, a reliable digital platform for the materials and nanosciences is being established, which enables the digital representation of materials data and specific metadata. Within NFDI-MatWerk the Task Area Materials Data Infrastructure will provide services to easily store, share, search, and analyze data and metadata while ensuring data integrity, provenance, and authorship.

The concept of FAIR Digital Objects, developed in the Research Data Alliance and in the FAIR Data Commons of HMC, will be utilized to represent data objects. Data sets and metadata documents will be stored in research data repositories and metadata repositories, respectively.

Metadata is one of the key elements to implement both human-readable as well as machine-actionable representations of materials-related information. Additional services will be provided for metadata enrichment and annotation, harvesting and indexing, as well as for documenting the provenance of the data objects. Collections of FAIR Digital Objects will be fed into a knowledge graph based on relevant Materials Science and Engineering ontologies connecting materials information and data.

Web front-ends will provide access to data, optimized for the particular perspectives of the user groups. Support and training will be provided for the use as well as the operation of the Materials Data Infrastructure services and tools.

First adopters of the research data and metadata infrastructures are participant projects providing data sets from various fields that will be transformed into exemplary reference data sets.

Please assign your poster to one of the following keywords.

Tools

Please assign yourself (presenting author) to one of the stakeholders.

Data Infrastructure Provider

Please specify "other" (stakeholder)

In addition please add keywords.

FAIR, NFDI, Metadata, Materials Science

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