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The NFDI4NanoSafety consortium

Opportunities

Risks
Nanosafety – an interdisciplinary challenge
Cooperations and organisational structure

NFDI

- Consortia Committee
- NFDI4Chem
- NFDI4Life
- NFDI4MSE

NFDI4NanoSafety

- Consortium Management
  - Consortium Spokesperson (Scientific Institution)
  - Deputy Spokesperson (Infrastructure)

- Consortium Plenary
- User Advisory Board
  - Working Group
  - Working Group

NFDI4NanoSafety User Community

International
- Scientific Advisory Board
- EU Nano-safety cluster
- OECD

National
- MAK Kommission
- SKLM
- Leibniz Research Alliances
Key-topics of NFDI4Nanosafety

Increase the quality of research data to derive **structure-activity relationships** (modelling, prediction)

- To advance **regulatory tools and standards**
- To implement „**safe by design**“ into materials development

Measures:

- Set standards for **acquisition of quality-assured data** in a highly interdisciplinary field
- Define **quality criteria** for interdisciplinary research
- Develop a **modular and interoperable metadata scheme** for heterogeneous data
- Increase reproducibility by **development of standard operation procedures**
- Define **curation criteria** to enable re-use of data
- Implement „Smart Lab“ concepts:
  - Electronic lab notebooks
  - Interfaces to lab equipment
What has been developed already?

- **Leibniz Research Alliance Nanosafety**
  - Interdisciplinary cooperation network
  - Awareness of the importance of standardisation within the Nanosafety community

- **BMBF-funded project NanoS-QM**
  - Quality criteria
  - Metadata standards

- **Bootstrapping a consortium**
  - National and international partners
  - Spanning from science to regulation and innovation
Data types
Our contribution to the NFDI

Next level SOPs
Automated metadata acquisition
Interoperable data
Curation criteria
Interdisciplinary metadata standards
Expansion of quality criteria
What do we expect from the NFDI?

- Registration and storage of experimental data obtained from laboratory equipment in databases/data repositories
- Easy selection of data for publication purposes including DOI assignment for citability
- Secure sharing of data on the level of research groups, institutes, selected peers and the general public
- Discovery, exchange and findability of relevant data sets across institutes and disciplinary boundaries, including complex data and aspects of material characterisation, requirements for biological assays as well as applicability of existing test systems
- Meet funders and publishers' requirements to make data available (also for peer review)
- Integration of existing relevant databases and repositories for comprehensive searches
- Improved risk assessment for regulatory purposes