

EM Glossary: A community effort towards coordinated semantics in the electron microscopies

Semantic interoperability is one of the major challenges in implementing the FAIR principles [1] for research data. This is especially relevant for interdisciplinary projects, where people from different but related disciplines may use technical terms with differing meaning. Established vocabularies and semantic standards can harmonize domain-specific language and facilitate common understanding.

Electron microscopy (EM), as a fast-developing and widely used technique, with application across disciplines, lacks broadly applicable, formal and standardized metadata terminology. This limits research data interoperability and shows the need for terminology harmonization across the community.

Coordinated by the Helmholtz Metadata Collaboration (HMC) the EM glossary group [2] brings together researchers from more than 22 institutions across Switzerland, Austria and Germany. In a broad community effort, they work together towards a joint resource to harmonize semantics in the field of electron and ion microscopies. The EM glossary group strives for consensus on domain-specific terms via a remote, collaborative workflow on the platform GitLab. The developed resource aims to provide harmonized and machine-actionable semantics to act as a glue technology that can fundamentally support development efforts such as metadata schemas or ontologies in their respective fields.

1. Wilkinson, M.D. et al. Scientific Data. <http://dx.doi.org/10.1038/sdata.2016.18> (2016)

2. EM Glossary GitLab repository: https://gitlab.hzdr.de/em_glossary

Funding statement: This work was carried out at the Hub Information and the Hub Matter of the Helmholtz Metadata Collaboration (HMC) Platform

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Semantics

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electron microscopy, glossary, community, interoperability

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Session Classification: Postersession II

Track Classification: Postersession