

## Ontology and metadata for materials modelling

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**Abstract:** Materials Modelling has become an essential part of research, development, engineering and upscaling of advanced materials in a wide range of industry sectors. Many industrial applications depends on combining models and methods from different domains, requiring increasing integration and interoperability. Progress beyond syntactically based scripted workflows calls for interoperability solutions that are based in semantic approaches with metadata backed up by an ontology framework. The European Materials Modelling Ontology (EMMO), developed within EMMC and a network of H2020 projects, is a multidisciplinary efforts aimed to provide a standard representational framework for materials modelling and characterization knowledge. One of its intentions is to provide a common reference for metadata in a semantic architecture for interoperability.