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Metadata schema and ontologies for FAIR research data in plasma technology[1] MARKUS M. BECKER, STEFFEN FRANKE, DETLEF LOFFHAGEN, LAURA VILARDELL SCHOLTEN, Leibniz Institute for Plasma Science and Technology (INP), FABIAN HOPPE, TABEA TIETZ, H. SACK, FIZ Karlsruhe - Leibniz Institute for Information Infrastructure — The findability (F), accessibility (A), interoperability (I), and re-usability (R) of research data are essential and acknowledged factors for an efficient re-use of data, e.g. for data driven science. However, in the field of plasma technology there is currently a lack of common standards and tools to publish data according to these FAIR data principles. To address this issue, the present contribution reports on the development of a modular metadata model for the representation of subject- and method-specific metadata in the field of plasma technology, which is based on the core plasma metadata schema, Plasma-MDS (https://arxiv.org/abs/1907.07744). The linking and semantic description of the metadata modules are carried out via ontologies. The developed tools and services are made available via a plasma technology knowledge graph and the data platform https://www.inptdat.de/. They are intended to be reviewed and further developed by the low-temperature plasma community to provide a common basis for open science and research data management according to the FAIR principles.

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