**Materials Ontology for Smart Materials**

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**ABSTRACT**

The information resources that are available in materials science and engineering are being constructed as materials ontologies which are computer readable concept maps. Materials ontology, a domain specific ontology describes the concepts and relationships in materials science and engineering. There is a growing interest in developing materials ontologies and sub ontologies using Web Ontology Language, OWL, for better design and development of new materials. This paper describes the available materials ontologies and their significance. An effort is being made to build a sub ontology for smart materials. Managing data and available literature on smart materials can be made easier using smart materials ontology. It would consist of material entity classes, subclasses and the relationships between these classes enabling easy access of data pertaining to classification, composition, processing, properties and applications of smart materials.

*Keywords: Materials ontology; Smart materials; Concept maps; Web ontology language*