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Overview of Mn-based Alloys: Measurement Status

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Mn-based Alloys are characterized by a wealth of properties, which are of interest both from fundamental physics point of view and particularly attractive for different applications in modern technology. In order to uncover new routes towards the optimization of the properties of these materials, it is crucial to establish a direct correlation between macro- and micro-scaled structural/magnetic properties.

The Mössbauer effect is applied at 57Fe and 119Sn sites following implantation of radioactive 57Mn and 119In ions, to probe the micro-structure and magnetism at atomic-scale level. Within this proposal, three different Mn-containing alloys have been studied: 1) MnSi, 2) MnGa and 3) Ni-Mn-Z (Z=Ga,Sn,In). The talk is directed to give a general overview of the proposal, as well as about its status and the remaining shifts.

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