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Paramagnetism in Mn/Fe implanted ZnO

Prompted by the generally poor understanding [1,2] of the nature of magnetic phenomena in 3d-metal doped ZnO, we have undertaken on-line 57Fe Mössbauer spectroscopy at the ISOLDE facility at CERN on ZnO single crystal in an external magnetic field of 0.6 T, following implantation of radioactive 57Mn+ (T½ = 1.5 min.) ions at room temperature. The Mössbauer spectra of the dilute Fe impurities are dominated by sextets whose angular dependence rules out an ordered magnetic state, but are well accounted for on the basis of Fe3+ paramagnetic centres with long relaxation times.

Are you a student, a delegate from developing countries or a participant with physical needs and would like to apply for a sponsored accomodation. Please answer with yes or no.

no

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oral

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