Abstract

Here we report a special type of diluted magnetic semiconductor i.e Fe doped NiO . Ni(x)Fe(y)O(z) is synthesized by using chemical coprecipitation method and post- thermal decomposition processing. The resultant material show ferromagnetic behaviour at room temperature, which is strongr than most DMS oxide systems. e.g. Mn doped ZnO, Co doped NiO reprted recently. The various characteristics of this material studied by XRD, Photolminescence spectra analysis, hysteresis loop, two probe method and the origin of room temperature ferromagnetism is reported.