Abstract Submitted
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**Magnetism in ZnO**[1] CHANYONG HWANG, W. KIM, Korea Research Institute of Standards and Science, JISANG HONG, Department of Physics, Pukyung National University, H.J. KIM, Chungnam National University, Y.P. LEE, Department of Physcis and q-Psi, Hanyang University — DMS has drawn a lot of attention for the possible use in spintornics. Ferromagnetic order showed up after the doping the oxide such as ZnO with transition metals. The origin of this ferromagnetic order is still controversial. Especially addition of Cu as a dopant material for ferromagnetic order raises the question on the role of transition metal dopant for the existence of ferromagnetic order. We have used high energy electron beam to build the Zn vacancy. SQUID and MCD results will be presented for the existence of long range ferromagnetic order. First principles calculation also supports our model for the origin of this ferromagnetism.

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