Abstract Submitted
for the MAR12 Meeting of
The American Physical Society

Growth of parent and electron doped NaFeAs YU SONG, University of Tennessee — It has been found hole doping on Fe sites in $BaFe_2As_2$ does not induce superconductivity with Cr and Mn as dopants, but doping on Ba sites with K induces superconductivity as high as 38K. We have investigated hole doping with Titanium to be compared with other hole doping compounds. Single crystals of Titanium doped $BaFe_2As_2$ were grown by flux method. Transport and susceptibility measurements were done showing doping Titanium suppresses the Neel temperature but no superconductivity was found up to 4% doping. Susceptibility measurements also showed spin glass behavior. Phase diagrams of temperature vs doping concentration have been constructed from transport and Susceptibility measurements.

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Date submitted: 02 Feb 2012 Electronic form version 1.4