Superconducting and Magnetic Properties of FeSe\textsubscript{1-x}As\textsubscript{x}\textsuperscript{1}

KHALIL ZIQ, T. OWOLABI, A. SALEM, King Fahd University of Petroleum and Minerals — Magnetic and transport measurements have been performed on FeSe\textsubscript{1-x}As\textsubscript{x} samples in the normal and superconducting state. The normal state resistivity increases to a broad maximum ($T_m$) near room temperature that persists down to about 80K then linearly drops down to just above the superconducting transition temperature ($T_c$). The normal state behavior of the resistivity is found to insensitive to the applied magnetic field. The normal state magnetic measurements revealed ferromagnetic like behavior for samples with As-doping above $x=4\%$. Moreover; $T_c$ is reduced drastically with increasing As-concentration above 2\%.

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