

Structural, Electrical and Magnetic properties of Non-Stoichiometric
Perovskite $\text{SrFe}_x\text{Mo}_{1-x}\text{O}_3$

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$\text{Sr}_2\text{FeMoO}_6$ is ferro(ferri)magnetic metal and has become an important topic of scientific interest in view of large tunneling type magnetoresistance (TMR) effect at room temperature ($\sim 10\%$) can be observed due to half metallic band structure and high Curie temperature ($T_C \sim 420\text{K}$). The crystal structure, electronic transport and magnetic properties of a series of $\text{Sr}_2\text{Fe}_x\text{Mo}_{1-x}\text{O}_6$ ($0 \leq x \leq 1.0$) have been studied. The polycrystalline samples were prepared by conventional solid state reaction method.