

Enhanced Nernst effect in 112-phase nickel oxide superconductors

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Jinjin Wang 1, Yuefeng Nie 2, Zhu-An Xu 1

1 Zhejiang University

2 Nanjing University

We investigated the temperature dependence of resistivity, Hall effect, Seebeck effect and Nernst effect on high-quality $(\text{La}_{0.8}\text{Sr}_{0.2})\text{NiO}_2$ superconducting thin films with T_c of 17 K. The linear temperature dependence of resistivity in normal state strongly suggests a strange metal behavior. The Hall coefficient (R_H) shows a deviation from high temperature behavior below 90 K and a significantly enhanced Nernst effect is observed in the same temperature region. We compared the results with the cases of high- T_c cuprates and iron-based arsenides. Whether the strongly Nernst enhanced effect above T_c is an indicator of strong phase fluctuations or originates from the strange metal state is discussed.