

Abstract Submitted
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Doping-dependent inter-plane transport in electron doped $\text{Ba}(\text{Fe}, TM)_2\text{As}_2$ ($TM=\text{Co}, \text{Ni}, \text{Rh}, \text{Pd}$)¹ M. A. TANATAR, Ames Laboratory, N. NI, A. N. THALER, Department of Physics and Astronomy, Iowa State University, S. L. BUD'KO, P. C. CANFIELD, RUSLAN PROZOROV, Ames Laboratory and Department of Physics and Astronomy, Iowa State University — We report comprehensive characterization of the inter-plane resistivity in $\text{Ba}(\text{Fe}, TM)_2\text{As}_2$ as a function of transition metal doping, $TM=\text{Co}, \text{Ni}, \text{Pd}, \text{Rh}$. For all dopants we find different T -dependence of in-plane and inter-plane transport and moderate resistivity anisotropy at room temperature. The temperature-dependent inter-plane transport correlates well with NMR Knight shift and relaxation time [1], revealing effect of spin gap on electrical charge transport in iron-arsenic compounds. Doping phase diagram of the behavior is determined. [1] F. Ning, et al. J. Phys. Soc. Jpn **78**, 013711 (2009).

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Makariy Tanatar
Ames Laboratory

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