

Abstract Submitted
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Investigation of Pairing Symmetry in Pt-Substituted BaFe₂As₂¹

S. ZIEMAK, K. KIRSHENBAUM, S.R. SAHA, R. HU, J. PAGLIONE, University of Maryland, College Park, Center for Nanophysics and Advanced Materials, J.-PH. REID, R. GORDON, L. TAILLEFER, Universite de Sherbrooke, A. IGNATOV, D. KOLCHMEYER, G. BLUMBERG, Rutgers University, D. EVTUSHINSKY, S. THIRUPATHAIAH, S.V. BORISENKO, IFW-Dresden — We present results from several measurements on BaFe_{1.9}Pt_{0.1}As₂ single crystals designed to measure the superconducting gap structure. Low temperature thermal conductivity was measured in magnetic fields up to 15 T and will be compared to other materials. Point-contact Andreev reflection spectroscopy measurements were made using the needle-anvil technique and the spectra analyzed using BTK theory. Raman spectroscopy was used to probe excitations in multiple channels. Finally, angle-resolved photoemission spectroscopy was used to provide further information about the band structure and superconducting gap. We will discuss the implications that the combination of these results reveal about the superconducting order parameter in this system.

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