

Abstract Submitted
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Origin of conductance asymmetry in the Andreev reflection spectra between normal metals and Fe-As based superconductors¹ MANAN MEHTA, GOUTAM SHEET, D. DIKIN, Department of Physics and Astronomy, Northwestern University, S. LEE, Department of Materials Science and Engineering, University of Wisconsin-Madison, J. JIANG, National High Magnetic Field Lab, Florida State University, C.W. BARK, Department of Materials Science and Engineering, University of Wisconsin-Madison, J.D. WEISS, E.E. HELLSTROM, D.C. LARBALESTIER, National High Magnetic Field Lab, Florida State University, M.S. RZCHOWSKI, Department of Physics, University of Wisconsin-Madison, C.B. EOM, Department of Materials Science and Engineering, University of Wisconsin-Madison, VENKAT CHANDRASEKHAR, Department of Physics and Astronomy, Northwestern University — Large conductance asymmetry is ubiquitously observed in point-contact Andreev reflection spectra between Fe-As based superconductors and metallic tips. We investigated the origin of this in point contacts between high quality epitaxial thin films of $\text{BaFe}_{1.84}\text{Co}_{0.16}\text{As}_2$ and sharp silver tips. In our experiments a large conductance asymmetry has been consistently observed in all the PCAR spectra. We discuss the possible origin of this conductance asymmetry.

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