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Scanning Tunneling Microscopy/Spectroscopy on Optimally Ni doped Single Crystal $BaFe_2As_2$ JIHUA MA, Department of Physics and Texas Center for Superconductivity, University of Houston/Department of Physics, Boston College, ANG LI, JARED O'NEAL, Department of Physics and Texas Center for Superconductivity, University of Houston, FANG ZHOU, ZHONGXIAN ZHAO, Beijing National Laboratory for Condensed Matter Physics, Institute of Physics, Chinese Academy of Sciences, SHUHENG PAN, Department of Physics and Texas Center for Superconductivity, University of Houston, DEPARTMENT OF PHYSICS AND TEXAS CENTER FOR SUPERCONDUCTIVITY, UNIVERSITY OF HOUSTON COLLABORATION, DEPARTMENT OF PHYSICS, BOSTON COLLEGE COLLABORATION, BEIJING NATIONAL LABORATORY FOR CONDENSED MATTER PHYSICS, INSTITUTE OF PHYSICS, CAS COLLABORATION — Doping the iron pnictide parent compound brings the material into superconducting state. It is intriguing that different dopants can result in different maximum Tc's. In this talk we will present the scanning tunneling microscopy and spectroscopy data on (001) surface of the optimally doped single crystal $BaFe_{1.9}Ni_{0.1}As_2$ (Tc $\sim$ 20 K) and compare them to the results from the optimally Co doped $BaFe_2As_2$.

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