

Abstract Submitted
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Magnetic excitation in the Ni-overdoped BaFe₂As₂ CHENGLIN ZHANG, Univ of Tennessee, physics dept, HUIQIAN LUO, MENG WANG, SHILIANG LI, ZHIGUO CHEN, WEI WU, JIANLIN LUO, NANLIN WANG, Institute of Physics, CAS, PENGCHENG DAI, Univ of Tennessee, physics dept — We use neutron scattering to systematically investigate the evolution of spin excitations in Ni-doped BaFe₂As₂. Previous works on underdoped and optimally doped materials have found evidence for spin gap and neutron spin resonance. We use flux method to grow overdoped material approaching to the nonsuperconducting regime. We have carried out inelastic neutron scattering measurements on spin and lattice excitations of the overdoped BaFe_{1.8}Ni_{0.2}As₂ ($T_c \sim 5$ K) and the outcome of these investigations will be report.

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