

Abstract Submitted
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Disorder effects in a multiband superconductor in the presence of competing order : Implications for underdoped pnictides¹ VIVEK MISHRA, Materials Science Division, Argonne National Laboratory, Lemont, IL 60439. — In unconventional superconductors superconductivity emerges at the onset of a magnetic order, and in many cases with a co-existing region of superconductivity and magnetism in the phase diagram. Here I consider the effect of disorder in a multiband superconductor appropriate for ferro-pnictide superconductors. I consider both interband and intraband scattering for a two band model within a self consistent T-matrix approximation. I calculate the effect of disorder on the critical temperature and on the low energy excitation spectrum in the superconducting state with different possible order parameters.

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