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Self-consistent calculations of the local density of states of FeAs superconductor/ferromagnet bilayers NAYOUNG LEE, HAN-YONG CHOI, SungKyunKwan University — We study the local density of states (LDOS) of the superconductor/ferromagnet (S/F) bilayers using the self-consistent Bogoliubov-de Gennes equation, where the S is modeled in terms of the $s\pi$ pairing state. The $s\pi$ pairing is an s-wave pairing state with an internal π phase between the two condensates of a two band superconductor which seems relevant for the FeAs superconductors. We calculate the pairing and magnetic order parameters self-consistently to obtain LDOS as a function of the energy and position of S/F bilayers. The results will be discussed in terms of the interplay between the internal and external π phases.

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