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Effects of triplet pairing amplitudes in hybrid junctions of superconductor, ferromagnet, and normal metal. NA YOUNG LEE, HAN-YONG CHOI, HYEONJIN DOH — We calculate the critical temperature Tc and pairing amplitude of the hybrid junctions of superconductor (S), ferromagnet (F), and normal metal (N) by solving the Usadel equation in the dirty limit. S is a conventional singlet s-wave supercondcutor like Nb. The interface between S and N is modeled in terms of the interface resistance without the spin flips, while the interface between F and S or F and N is modeled by both the interface resistance and spin flip scatterings, parameterized by, respectively, γ_b and γ_m. The spin flip scatterings induce the triplet pairing components from the singlet component. The Tc of the junction is determined by the critical order parameter, ie., the singlet pairing component. The γ_b or γ_m changes the Tc of the junctions indirectly by altering the singlet component by modifying the boundary conditions at the interfaces. We calculate the Tc and pairing amplitudes of S/N/F and F/S/F trilayers including γ_b and γ_m and investigate the effects of the triplet pairing components on the Tc and pairing amplitudes of the trilayers.

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