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PROXIMITY EFFECTS SANDWICH CONTAINING NONMAGNETIC  
BOUND STATES

BY

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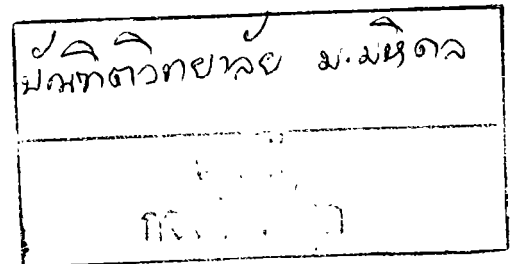
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## Abstract

Based upon the tunnelling model of McMillan for the proximity effect in normal - superconducting sandwich, we study the case when the normal metal film contains non magnetic impurities. The Coulomb repulsion between d electrons of opposite spin is taken into account. The renormalization energy gap functions for normal, superconducting and impurity electrons at temperature close to absolute temperature are calculated. The density of states of each layer are calculated as functions of frequency for a large range of impurity concentration, type of impurities ( $\Gamma_d$ ) and several value of Coulomb repulsion energy in order to see whether there is any formation of bound states in the energy gap region. The results shows that bound states do not form in that region.

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