

# Competition between Singlet and Triplet Superconductivity in the Extended Hubbard Model with Exchange Interaction on a Square Lattice

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Phase boundary between spin singlet and triplet superconductivity in the extended Hubbard model with exchange interaction on a square lattice is calculated within meanfield approximation for various band filling. Basically, antiferromagnetic exchange interaction  $J$  is advantageous for the singlet pairing, while ferromagnetic  $J$  prefers the triplet pairing. When off-site interaction  $V$  is repulsive, the singlet phase and the triplet phase are separated by normal state in the phase diagram against  $V$  and  $J$ . If  $V$  is effectively attractive, however, the singlet and triplet states can compete against each other. We calculate the phase boundary between singlet and triplet phase for various band filling. It is shown that the triplet phase penetrates rather deeply into antiferromagnetic exchange regime for lower band filling, whereas the singlet phase is confined in a narrow range of ferromagnetic exchange regime.