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Vortex Lattice Structural Transitions: A generalized (thermal fluctuations and quench disorder) Ginzburg-Landau Approach PEI-JEN LIN, National Chiao Tung University, GOLAN BEL, BARUCH ROSENSTEIN — Base on Guzburg-Landau model, we study the rhombic-to-square transition for tetragonal material in the magnetic fields along c axis with the account of thermal fluctuation and disorder influence. The nonperturbative method are used to approach the melthing line of vortex lattice. The result will compare with the recent neutron scattering data and second peak effect on high T_c SC and Low T_c SC.

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