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Spin liquid and superconductivity in two-dimensional organic charge transfer salts

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We introduce and analyze a variational wave function for quasi two-dimensional organic salts containing strong local and nonlocal correlation effects. We find an unconventional superconducting ground state for intermediate charge carrier interaction, sandwiched between a conventional metal at weak coupling and a spin liquid at larger coupling. Most remarkably, the excitation spectrum is dramatically renormalized and is found to be the driving force for the formation of the unusual superconducting state.