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low-spin state

When the separation between the highest occupied and the lowest unoccupied molecular orbitals is not large, two alternative electronic states may be considered. The state with two electrons paired up in the HOMO is called a low-spin state. The low-spin state is the ground state when the one-electron energy needed to promote an electron to the LUMO is larger than the Coulomb and exchange repulsion energies required to pair up two electrons in the HOMO.

Source:
PAC, 1999, *71*, 1919 *(Glossary of terms used in theoretical organic chemistry)* on page 1950

