

Jablonski diagram

Originally, a diagram showing that the fluorescent state of a molecular entity is the lowest excited state from which the transition to the ground state is allowed, whereas the phosphorescent state is a metastable state below the fluorescent state, which is reached by radiationless transition. In the most typical cases the fluorescent state is the lowest singlet excited state and the phosphorescent state the lowest triplet state, the ground state being a singlet. Presently, modified Jablonski diagrams are frequently used and are actually state diagrams in which molecular electronic states, represented by horizontal lines displaced vertically to indicate relative energies, are grouped according to multiplicity into horizontally displaced columns. Excitation and relaxation processes that interconvert states are indicated in the diagram by arrows. Radiative transitions are generally indicated with straight arrows (\rightarrow), while radiationless transitions are generally indicated with wavy arrows \rightsquigarrow .

Source:

PAC, 1996, 68, 2223 (*Glossary of terms used in photochemistry (IUPAC Recommendations 1996)*) on page 2250