

## **spin-statistical factor (in diffusion-controlled reactions)**

From the possible encounter pairs between states of different spin multiplicity, only those conserving multiplicity in going to products are expected to react.

Note:

This factor determines the efficiency of diffusion-controlled reactions, which have an encounter-controlled rate. Typical examples are quenching of fluorescence of aromatic hydrocarbons by O<sub>2</sub>, quenching of triplet states by O<sub>2</sub>, and triplet–triplet annihilation.

**Source:**

PAC, 2007, 79, 293 (*Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)*) on page 428