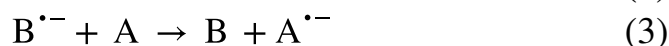


electron-transfer catalysis

The term indicates a sequence of reactions such as shown in equations (1)–(3), leading from A to B :



An analogous sequence involving radical cations ($A^{\bullet+}$, $B^{\bullet+}$) is also observed. The most notable example of electron-transfer catalysis is the $S_{RN}1$ (or $T + D_N + A_N$) reaction of aromatic halides. The term has its origin in a suggested analogy to acid-base catalysis, with the electron instead of the proton. However, there is a difference between the two catalytic mechanisms, since the electron is not a true catalyst, but rather behaves as the initiator of a chain reaction. 'Electron-transfer induced chain reaction' is a more appropriate term for the situation described by equations (1)–(3).

Source:

PAC, 1994, 66, 1077 (*Glossary of terms used in physical organic chemistry (IUPAC Recommendations 1994)*) on page 1110