

mesomeric effect

The effect (on reaction rates, ionization equilibria, etc.) attributed to a substituent due to overlap of its p- or π -orbitals with the p- or π -orbitals of the rest of the *molecular entity*. *Delocalization* is thereby introduced or extended, and electronic charge may flow to or from the substituent. The effect is symbolized by M.

Strictly understood, the mesomeric effect operates in the ground electronic state of the molecule. When the molecule undergoes electronic excitation or its energy is increased on the way to the *transition state* of a *chemical reaction*, the mesomeric effect may be enhanced by the *electromeric effect*, but this term is not much used, and the mesomeric and electromeric effects tend to be subsumed in the term *resonance effect* of a *substituent*.

See also *electronic effect*, *field effect*, *inductive effect*.

1994, 66, 1139