

ionic bond

The bond between atoms with sharply different electronegativities. In strict terms, an ionic bond refers to the electrostatic attraction experienced between the electric charges of a cation and an anion, in contrast with a purely covalent bond. In practice, it is preferable to consider the amount of ionic character of a bond rather than referring to purely ionic or purely covalent bonds. The relationship was proposed (L. Pauling) for the estimation of ionic character of a bond between atoms A and B:

$$\text{Amount of ionic character} = 1 - e^{-1/4} (\chi_A - \chi_B)$$

where χ_A and χ_B are the Pauling electronegativities of atoms A and B. This type of bonding is realized mostly in solids.

Source:

PAC, 1999, 71, 1919 (*Glossary of terms used in theoretical organic chemistry*) on page 1947