

hypervalency

The ability of an atom in a molecular entity to expand its valence shell beyond the limits of the Lewis octet rule. Hypervalent compounds are common for the second and subsequent row elements in groups 15–18 of the periodic table. A description of the hypervalent bonding implies a transfer of the electrons from the central (hypervalent) atom to the nonbonding molecular orbitals which it forms with (usually more electronegative) ligands. A typical example of the hypervalent bond is a linear three-centre, four-electron bond, e.g. that of $F_{ap}-P-F_{ap}$ fragment of PF_5 .

Source:

PAC, 1999, 71, 1919 (*Glossary of terms used in theoretical organic chemistry*) on page 1946