

Question #48960, Chemistry, Inorganic Chemistry

Write the formula for dipole moment and give its unit.

Answer:

The simplest system of charges, having a certain (which does not depend on the choice of the origin) is nonzero dipole moment - a dipole (two point particles with the same largest dissimilar charges). Electric dipole moment of such a system is the product of the modulus of the positive charge on the distance between the charges and directed from the positive to negative charge:

$$\mathbf{p} = q\mathbf{l},$$

q-the amount of positive charge, l-vector between charges.

For a system of N particles electric dipole moment is

$$\mathbf{p} = \sum_{i=1}^N q_i \mathbf{r}_i,$$

Unit:

[C·m] or debye [D]

1 D = $3,33564095 \cdot 10^{-30}$ C·m

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