**electron density**

If \( P(x, y, z) \, dx \, dy \, dz \) is the probability of finding an electron in the volume element \( dx \, dy \, dz \) at the point of a molecular entity with coordinates \( x, y, z \), then \( P(x, y, z) \) is the electron density at this point. For many purposes (e.g. X-ray scattering, forces on atoms) the system behaves exactly as if the electrons were spread out into a continuously distributed charge. The term has frequently been wrongly applied to negative charge population.

*See also:* charge density

**Source:**

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