



ACROSS

- 2 A _____ is defined as a sufficiently stable electrically neutral group of at least two atoms in a definite arrangement held together by strong chemical bonds.
- 5 Chemical _____ is a concept in chemistry which describes how bonding electrons may or may not be equally shared between atoms.
- 6 A molecular _____ is a region in which an electron may be found in a molecule.
- 9 A _____ pair is a valence electron pair without bonding or sharing with other atoms.
- 14 The _____ rule is a simple chemical rule of thumb that states that atoms tend to combine in such a way that they each have a noble gas configuration in their valence shells.
- 15 Molecular _____ theory is a method for determining molecular structure in which electrons are not assigned to individual bonds between atoms, but are treated as under the influence of the nuclei in the whole molecule.
- 16 Bond _____ is the number of bonds between a pair of atoms.
- 18 _____ structures, also called electron-dot structures or electron-dot diagrams, are diagrams that show the bonding between atoms of a molecule, and the lone pairs of electrons that may exist in the molecule.
- 19 _____ bonding is a form of attraction-to-repulsion stability that forms between atoms when they share electrons.
- 20 _____ electrons are the electrons contained in the outermost electron shell of an atom.

DOWN

- 1 A _____ bond (or electrovalent bond) is a type of chemical bond based on electrostatic forces between two oppositely-charged ions.
- 3 A chemical _____ is a substance consisting of two or more elements chemically-bonded together in a fixed proportion by mass.
- 4 Bond _____ energy is defined as the standard enthalpy change when a bond is cleaved by homolysis at 0K (absolute zero).
- 7 A chemical _____ is the physical process responsible for the attractive interactions between atoms and molecules which confers stability to diatomic and polyatomic chemical compounds.
- 8 _____ bond theory explains the nature of a chemical bond in a molecule in terms of atomic valencies.
- 10 Bond _____ is the enthalpy change involved with breaking up a neutral molecule into substituent neutral elements.
- 11 _____ is a tool used to represent and model certain types of non-classical molecular structures arising when no single conventional model showing electrons shared exclusively by two atoms can actually represent the observed molecule.
- 12 _____ is a measure of the number of chemical bonds formed by the atoms of a given element.
- 13 A _____ charge is a partial charge on an atom in a molecule assigned by assuming that electrons in a chemical bond are shared equally between atoms, regardless of relative electronegativity.
- 17 The bond _____ moment is a measure for the polarity of a chemical bond within a molecule.