



ACROSS

- 1 _____ electrons are electrons in a molecule that are not associated with a single atom or to a covalent bond.
- 4 _____ in supramolecular chemistry refers to a stacked arrangement of aromatic molecules, which interact through aromatic interactions.
- 5 _____'s rule estimates whether a planar ring molecule will have aromatic properties. It was first expressed succinctly as the $4n+2$ rule by von Doering in 1951.
- 6 _____ is an organic aromatic chemical compound whose molecules contain six carbons and six hydrogens.
- 7 _____s are hydrocarbons which contain two double bonds.
- 9 _____ is a chemical property in which a conjugated ring of unsaturated bonds, lone pairs, or empty orbitals exhibit a stabilization stronger than would be expected by the stabilization of conjugation alone.
- 12 _____ is a crystalline, aromatic, white, solid hydrocarbon, best known as the primary ingredient of mothballs.
- 13 A chemically _____ system is a system of atoms covalently bonded with alternating single and multiple bonds in a molecule of an organic compound.

DOWN

- 2 A set of points in space is _____ if the points all lie in the same geometric plane.
- 3 Often compounds with extended conjugated systems, a _____ is a material that changes the color of light it reflects as the result of selective color absorption.
- 5 _____ compounds are organic compounds that contain a ring structure containing atoms in addition to carbon, such as sulfur, oxygen or nitrogen, as part of the ring.
- 8 _____ bonds are covalent chemical bonds where two lobes of one involved electron orbital overlap two lobes of the other involved electron orbital. Only one of the orbital's nodal planes passes through both of the involved nuclei.
- 10 An aromatic ring _____ is an effect observed in aromatic molecules if a magnetic field is directed perpendicular to the plane of the aromatic system.
- 11 In the context of organic molecules, _____ refers to any functional group or substituent derived from a simple aromatic ring.