



ACROSS

- 3 An important group of oxidizing agents, the _____s are salts of chromic acid.
- 8 Prepared by the reaction of sodium hydride on trimethylborate, sodium _____ is a reducing agent often used to reduce aldehydes and ketones into alcohols.
- 9 The reverse of oxidative addition is _____ elimination.
- 10 _____ is the name given to the negative ion of hydrogen. Although this ion does not exist except in extraordinary conditions, the term is widely applied to describe compounds of hydrogen with other elements.
- 11 _____' reagent is usually ammoniacal silver nitrate, an oxidizing agent, which is itself reduced to silver metal. It is used as a test for aldehydes.
- 12 _____ is the cleavage of an alkene or alkyne with ozone to form compounds in which the multiple carbon-carbon bond has been replaced by a double bond to oxygen.
- 13 Used for the hydrogenation of alkynes to alkenes, _____ catalyst is a heterogeneous catalyst that consists of palladium deposited on calcium carbonate and treated with various forms of lead.
- 14 Potassium _____ contains manganese bonded to four oxygens. Often employed for laboratory redox, it is a strong oxidizer with manganese in the +7 oxidation state.

DOWN

- 1 Employing borane in tetrahydrofuran in the first step, the _____-oxidation reaction is a two-step organic chemical reaction that converts an alkene into a neutral alcohol by the net addition of water across the double bond.
- 2 Lithium aluminium _____ is a powerful reducing agent used in organic chemistry.
- 4 _____ is a catalytic chemical reaction whereby a molecule of hydrogen is added over a carbon-heteroatom single bond, effectively causing a lysis of the bond.
- 5 _____ is a class of chemical reactions which result in an addition of hydrogen molecule usually to unsaturated organic compounds.
- 6 Oxidative _____ is an important classes of reactions in organometallic chemistry in which a metal complex with vacant coordination sites and a relatively low oxidation state is oxidized by the insertion into a covalent bond.
- 7 _____ or burning is a complex sequence of exothermic chemical reactions between a fuel and an oxidant accompanied by the production of heat or both heat and light in the form of either a glow or flames.
- 12 Manganese _____ is the chemical compound in which manganese is bound to two oxygens. It is often used to oxidize allylic alcohols to the corresponding aldehydes.