

Alkanes and their properties research paper examples

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What is an alkane? Any hydrocarbon which has only single bonds is an alkane and because these

hydrocarbons have a hydrogen in all possible locations they are called saturated and thus they have this general formula, C_nH_{2n+2} .

But an alkyne is an unsaturated hydrocarbon which has at least one carbon-carbon triple bond

without any other functional groups thus they have given general formula of C_nH_{2n-2} .

Cis-trans isomerism is a type of stereoisomerism in which the position of the functional groups

differs, also known as geometric isomerism. The different is the orientation of the functional

groups as we know in cis isomerism the both functional groups are on the same side though in

trans isomerism they are located on the opposite side.

In retinal section of the eye the visual pigment are located which contain rhodopsin which has a

reddish color in darkness but as it's exposed to light the color fades. The rhodopsin molecules

contain opsin and 11-cis-retinal which is a derivative of vitamin A. In darkness opsin and 11-cis-

retinal are matched nicely but as rhodopsin is exposed to light the 11-cis-retinal changes into all-

trans-retinal and then it doesn't match rhodopsin anymore so they separate. These changes are transmitted to the nerves in the eye and then to the brain. Thus stereoisomerism plays an important role in vision. All-trans-retinal is catalyzed back to 11-cis-retinal by an enzyme so the process can be done once again as it's exposed to light.

Haloalkanes are a group of chemical compounds, derived from alkanes which contain one or

More halogens. They are also known as alkyl halides or halogenoalkanes. Haloalkanes are a subset of halocarbons' general class.

Halothane is a haloalkane which is used as a general anesthetic. Halothan is a liquid but it is

vaporized and used as an inhalation anesthetic. It's formula is 2-bromo-2-chloro-1, 1, 1-trifluoro-ethane. $C_2HBrClF_3$.

Basically it undergoes extensive oxidation and reduction metabolism. The metabolic product of

halothane is Trifluoroacetic acid, Bromide, Chloride, Fluoride. We should note that the precise mechanism of action is not known clearly yet.

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