

Question 17 (3 marks)

Explain why alkanes and their corresponding alkenes have similar physical properties, but very different chemical properties.

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They have similar physical properties as they have similar molecular weights, therefore dispersion forces are of similar strength, resulting in a similar boiling point. Alkanes & alkenes are both non-polar, therefore are not soluble in water. They have different chemical properties because alkenes are more reactive due to a double bond, therefore they are unsaturated & can undergo addition reactions. In contrast alkanes have single bonds and are saturated, therefore ~~only~~ they undergo substitution reactions.