

Question 17 (3 marks)

Explain why alkanes and their corresponding alkenes have similar physical properties, but very different chemical properties. 3

Alkanes have similar molecular weights to their corresponding alkenes. This results in similar boiling points and melting points, as the dispersion forces between the molecules are relatively similar. However, because of the double bonds in alkenes, their chemical properties vary greatly. Because alkenes are unsaturated, they are more reactive, as the double bond can be easily broken (more easily than an alkane can be reacted with substances).