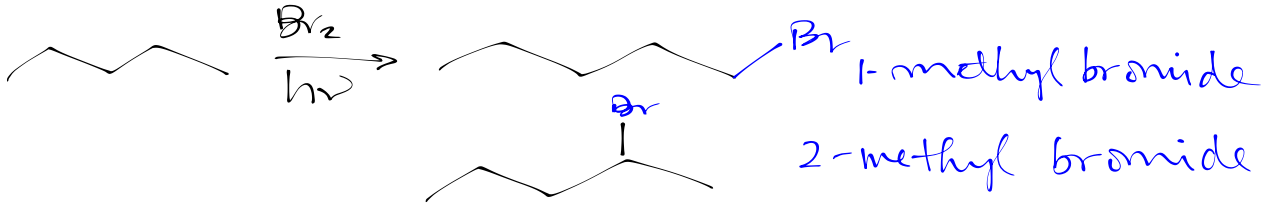
HW 8/30 2.19 2.20 2.21 2.23

2.19 $CH_4 \xrightarrow[h\nu]{Br_2} CH_3Br \xrightarrow[h\nu]{Br_2} CH_2Br_2 \xrightarrow[h\nu]{Br_2} CHBr_3 \longrightarrow CBr_4$

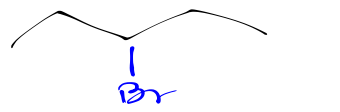
methane — methyl bromide, bromomethane — dibromomethane, methyl dibromide, methylene bromide — tribromomethane, methyl tribromide — Carbon tetrabromide, tetrabromomethane

halogenation is a random process
multiple reaction occurs and is difficult to control

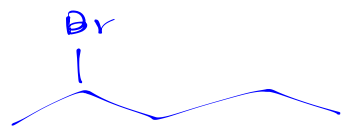
2.20 

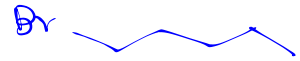
1-methyl bromide

2-methyl bromide

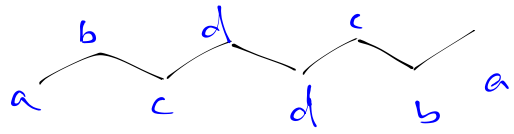


3-methyl bromide

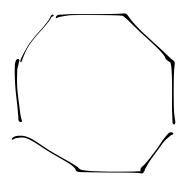




are redundant

2.21 n-octane 

there are 4 unique positions
4 monochlorinated isomers



all positions are equivalent

2.23 $R-H + \cdot Cl \longrightarrow R\cdot + HCl$ 2-17

$R\cdot + Cl-Cl \longrightarrow R-Cl + Cl\cdot$ 2-18

we can add reactions like adding math eq's

$R-H + Cl-Cl \xrightarrow[heat]{h\nu} R-Cl + HCl$ 2-10 p 93