

(1)

LEC 25

CHEM 30A

Dec 9th

HALOALKANES → ENERGETICS OF RADICAL RXNS (not covered)

① PREPARATION

FINAL

② REGIOSELECTIVITYWED 14th DEC**③ MECHANISMS**

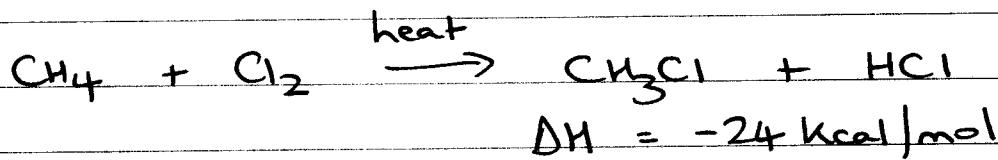
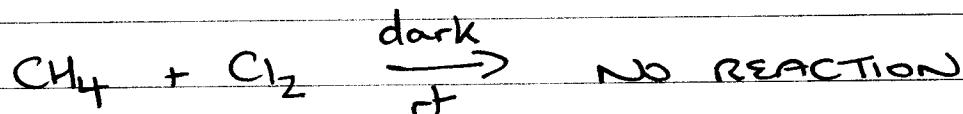
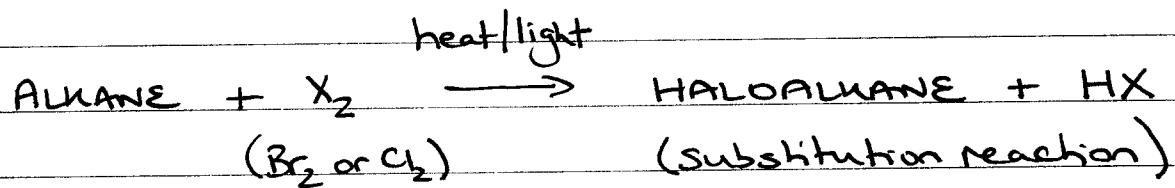
11:30 - 2:30 ACKERMAN

④ RADICAL STRUCTURE

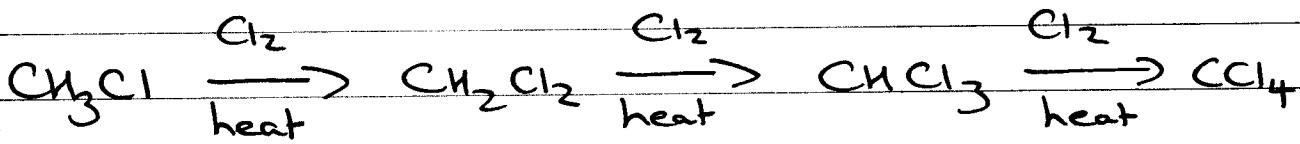
GRAND BALLROOM

⑤ ALYLLIC HALOGENATION

- STAMPS

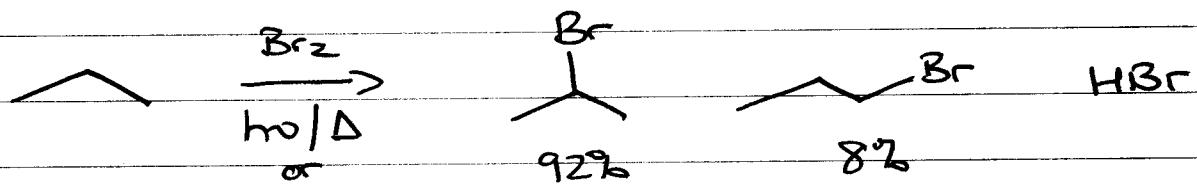
① PREPARATION

reaction continues:



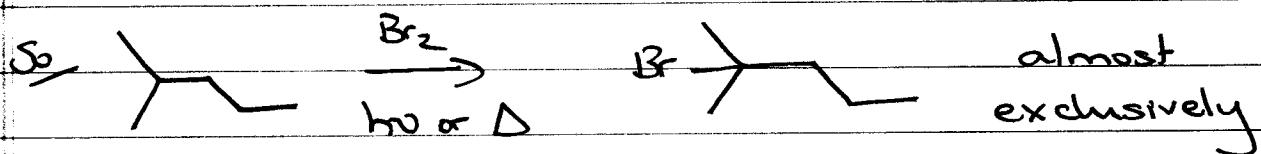
(2)

(2) REGIOSELECTIVITY

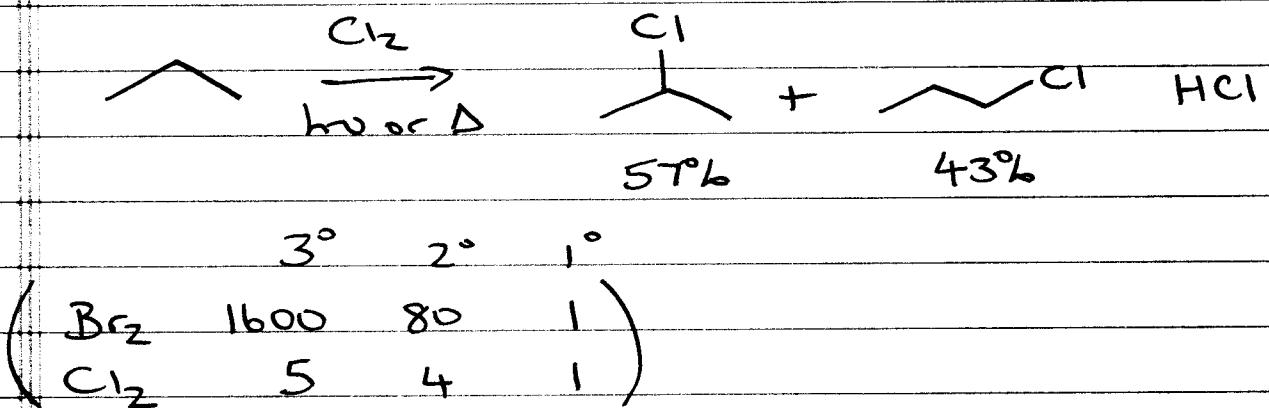


statistics 25 : 75

2° favored over 1° (also 3° favored over 2°)

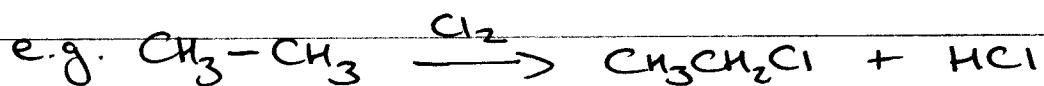


REGIOSELECTIVITY less for Cl_2

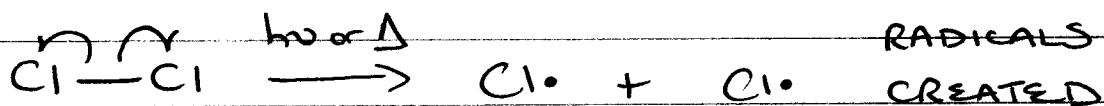


(3) MECHANISMS

3 steps: INITIATION / PROPAGATION / TERMINATION

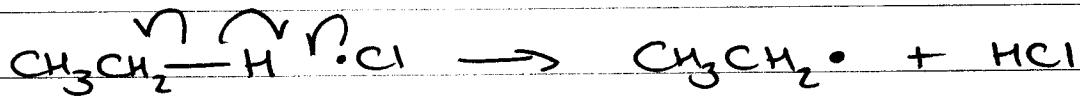


(1) CHAIN INITIATION



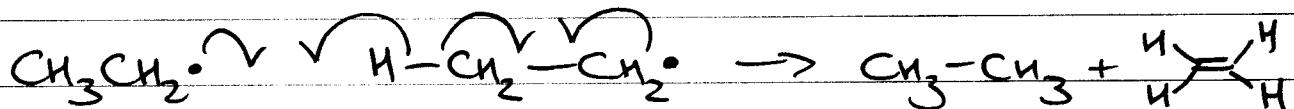
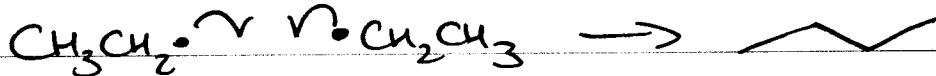
(3)

(ii) CHAIN PROPAGATION



PROPAGATES RADICALS

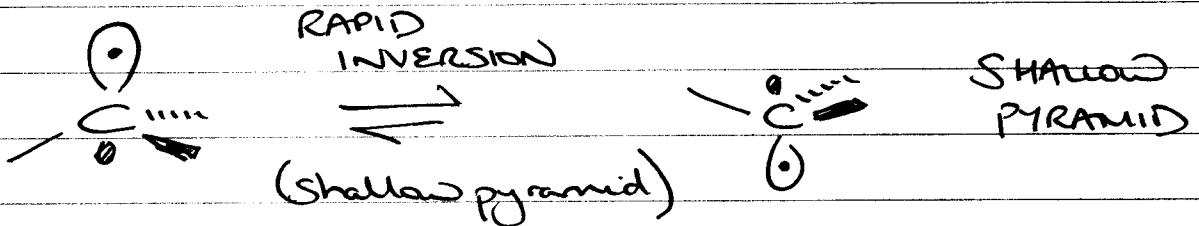
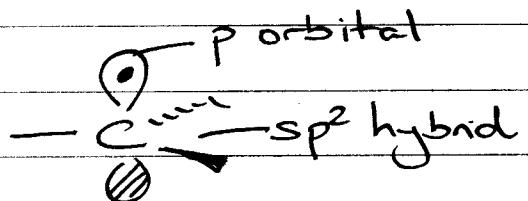
(iii) CHAIN TERMINATION



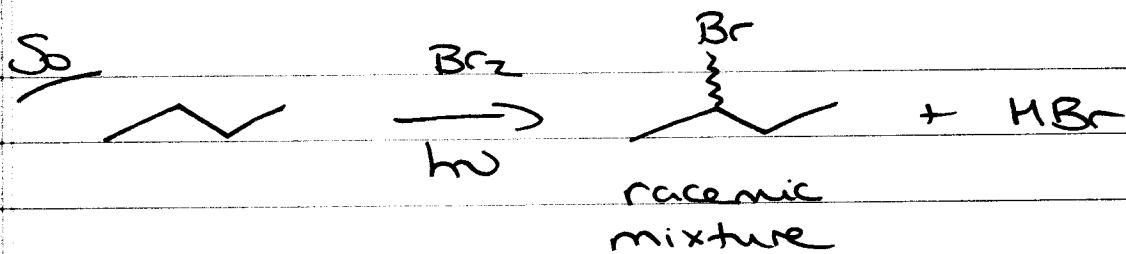
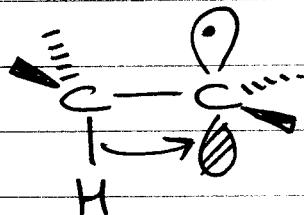
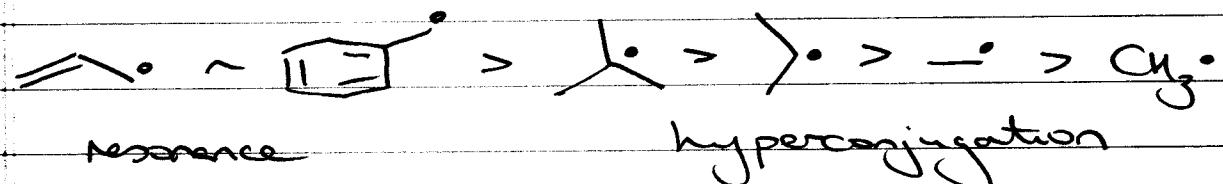
CONSUMES RADICALS

CHAIN PROPAGATION happens many times before termination \rightarrow number of cycles is called the CHAIN LENGTH.

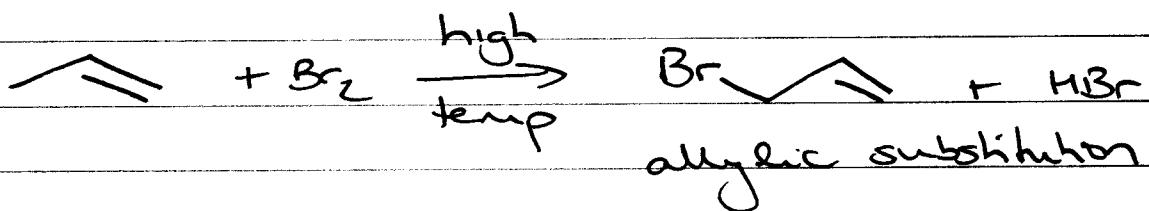
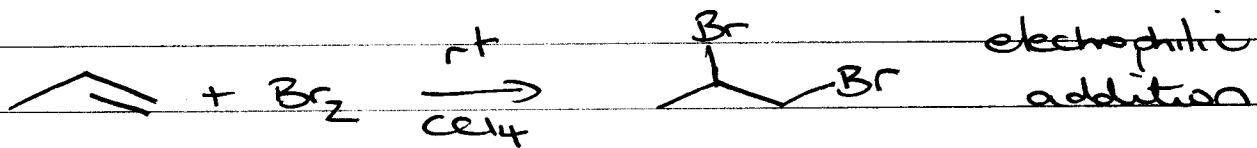
(4) RADICAL STRUCTURE



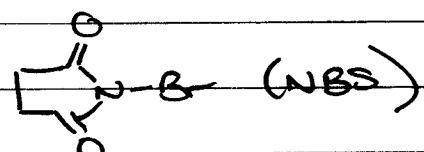
(4)

STABILITY (same trend as C⁺)

(5) ALKYL HALOGENATION



more convenient reagent



reaction can be done at RT

