

ORGANIC CHEMISTRY 1 LECTURE GUIDE 2019

BY RHETT C. SMITH

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By Rhett C. Smith, Ph.D.

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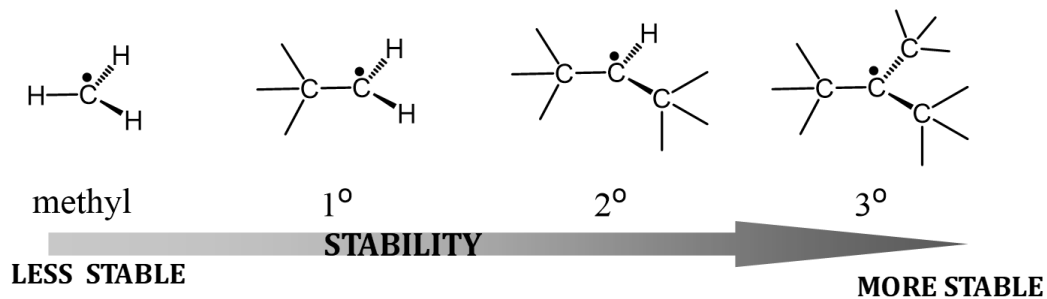
Organic Chemistry 1 Reactions and Practice Problems 2019

by Rhett C. Smith

Organic Chemistry 1 Primer 2019,

by Rhett C. Smith, Andrew G. Tennyson, and Tania Houjeiry

(A) Observation



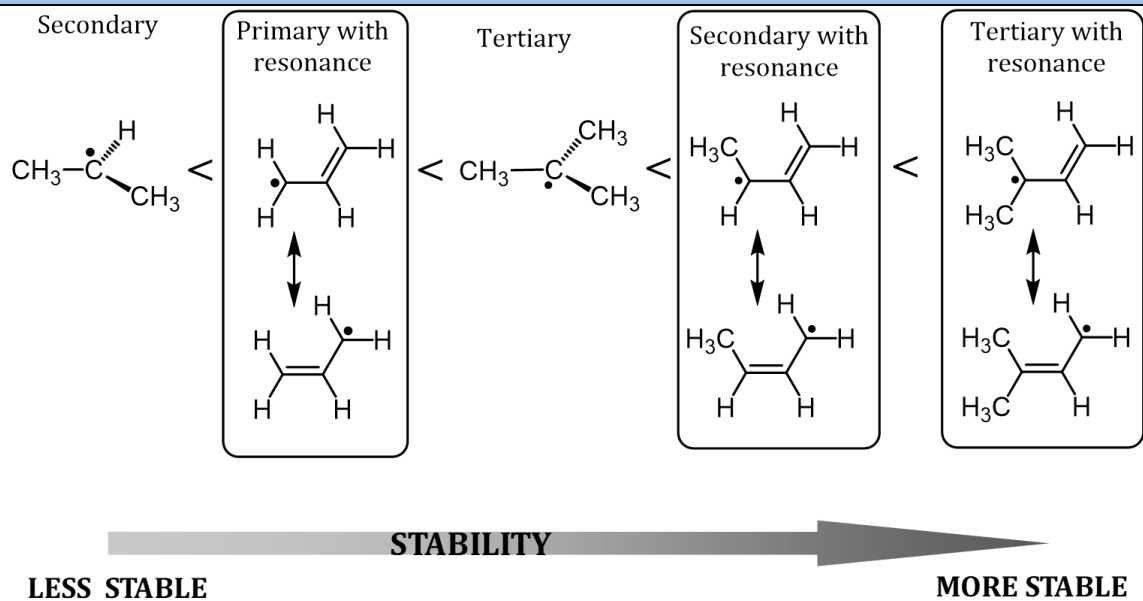
(B) Explanation

Empty box for explanation.

Notes

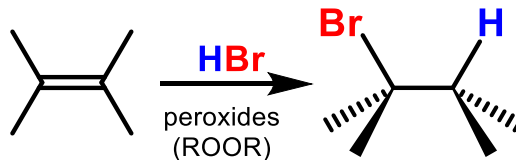
Lecture Topic III.17: Radicals I

Resonance Stabilizes Carbon-Centered Radicals



Notes

Peroxide-initiated hydrobromination is an alternative way to add H and Br



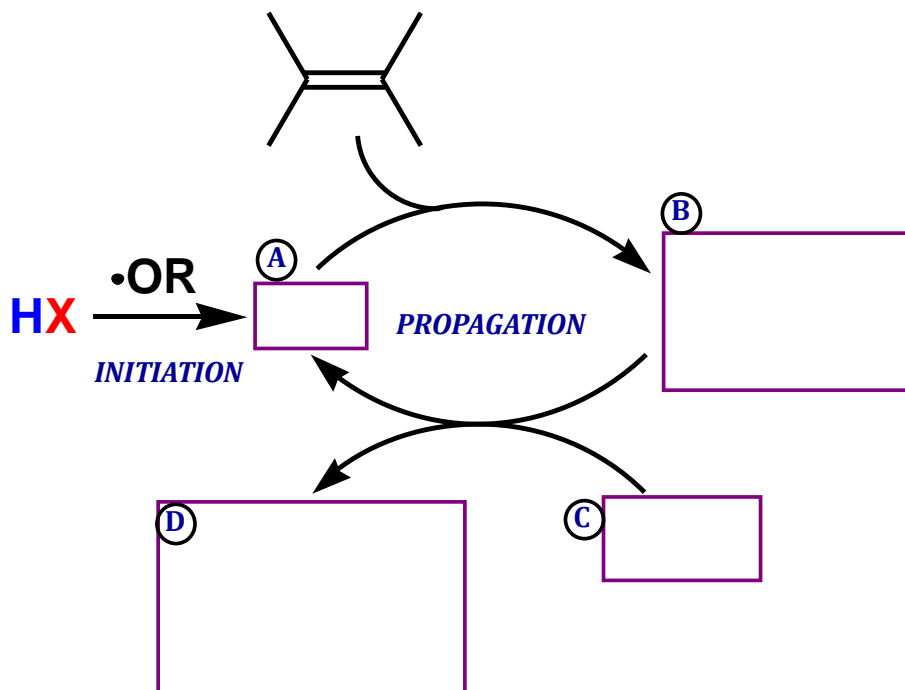
(A) Initiation

(B) Propagation

(C) Net Reaction

Notes

Lecture Topic III.17: Radicals I
A Radical Chain Reaction

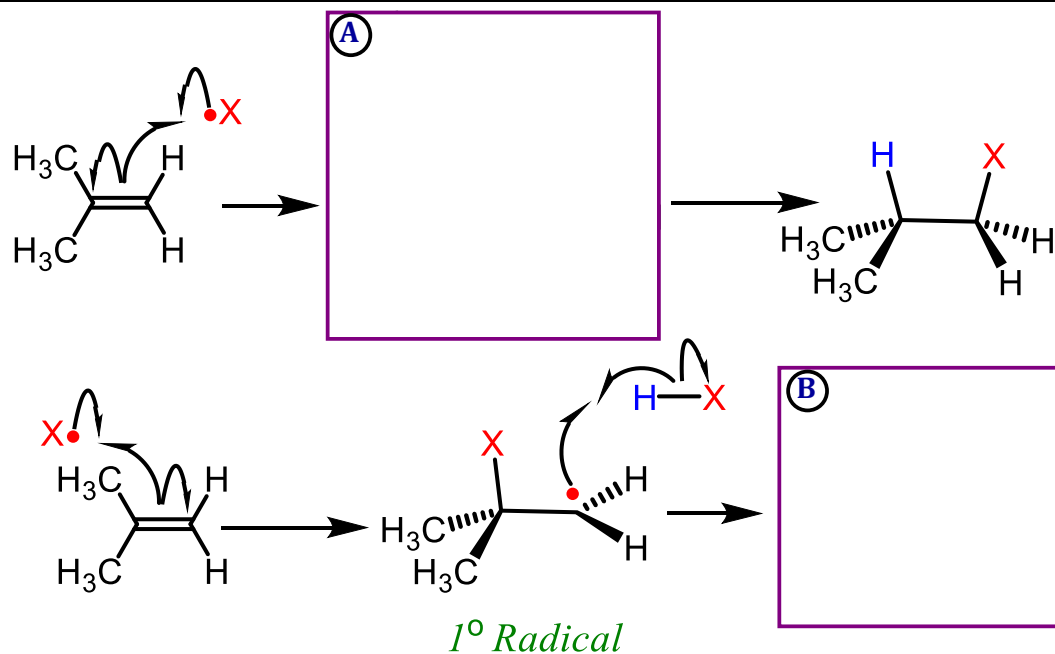


Termination occurs when any two radicals come together:

(E) _____

Notes

Lecture Topic III.17: Radicals I
Peroxide-Mediated Hydrobromination

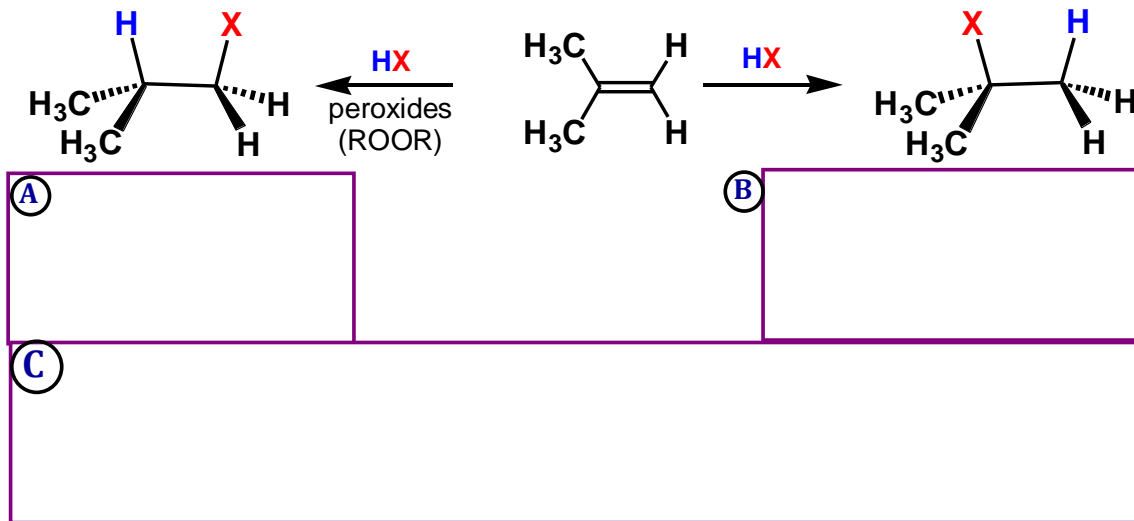


Once again, the major product is that derived from the more stable intermediate, in this case the more substituted radical that picks up the H atom, so we get:

(C)

Notes

Note that the peroxide-mediated (radical intermediate) hydrohalogenation yields the so-called “anti-Markovnikov” product, while the peroxide-free hydrohalogenation (carbocation intermediate) yields the Markovnikov product. This gives a researcher access to whichever product is desired:



Notes