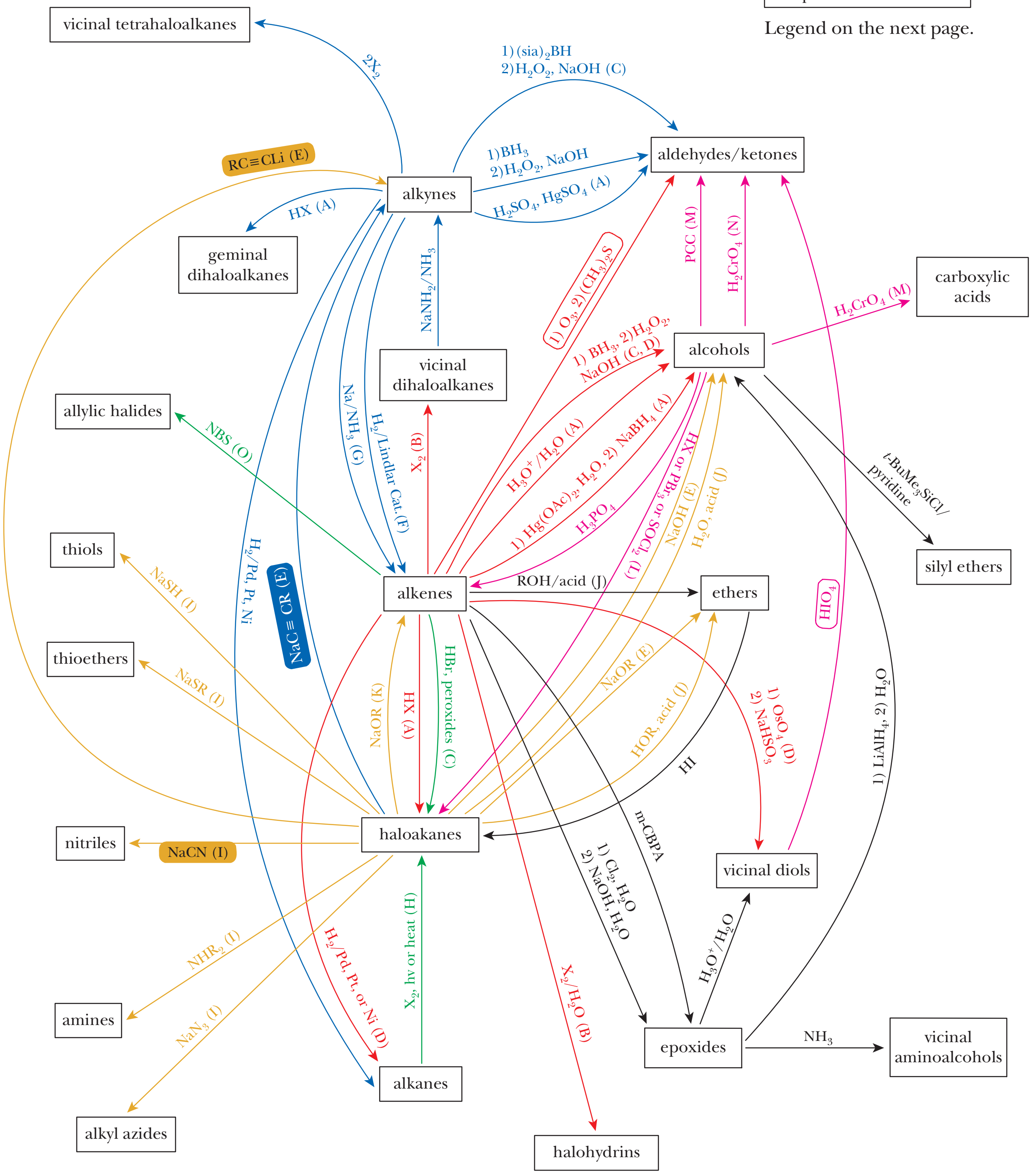
Roadmap for Reactions from Chapters 6–11

Carbon-carbon bond forming reactions are indicated by reagents written with solid backgrounds. Reactions that cleave carbon-carbon bonds are indicated by reagents that are circled.

Chapter 6 is in red
Chapter 7 is in blue
Chapter 8 is in light green
Chapter 9 is in gold
Chapter 10 is in magenta
Chapter 11 is in black

Legend on the next page.



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(A) Regiochemistry: Markovnikov addition to a π bond
(B) Stereochemistry: anti-addition
(C) Regiochemistry: non-Markovnikov addition to a π bond
(D) Stereochemistry: syn-addition
(E) Works well for methyl and 1° haloalkanes
(F) Stereochemistry: gives *cis*-alkenes as products
(G) Stereochemistry: gives *trans*-alkenes as products
(H) Reactivity of C-H bonds follows 3° > 2° > 1°
(I) Works for methyl, 1°, and 2° haloalkanes
(J) Works for 2° and 3° haloalkanes, may see rearrangements
(K) Works for all haloalkanes except methyl, although a bulky (non-nucleophilic) base must be used for 1° haloalkanes. Regiochemistry: follows Zaitzev's rule so the more substituted alkene predominates. Stereochemistry: requirement for the X and H to be eliminated with anti-periplanar geometry.
(L) PBr_3 and SOX_2 works for methyl, 1°, and 2° Haloalkanes. HX can give rearrangements.
(M) For 1° alcohols.
(N) For 2° alcohols.
(O) Regiochemistry: the product with the more substituted alkene predominates.

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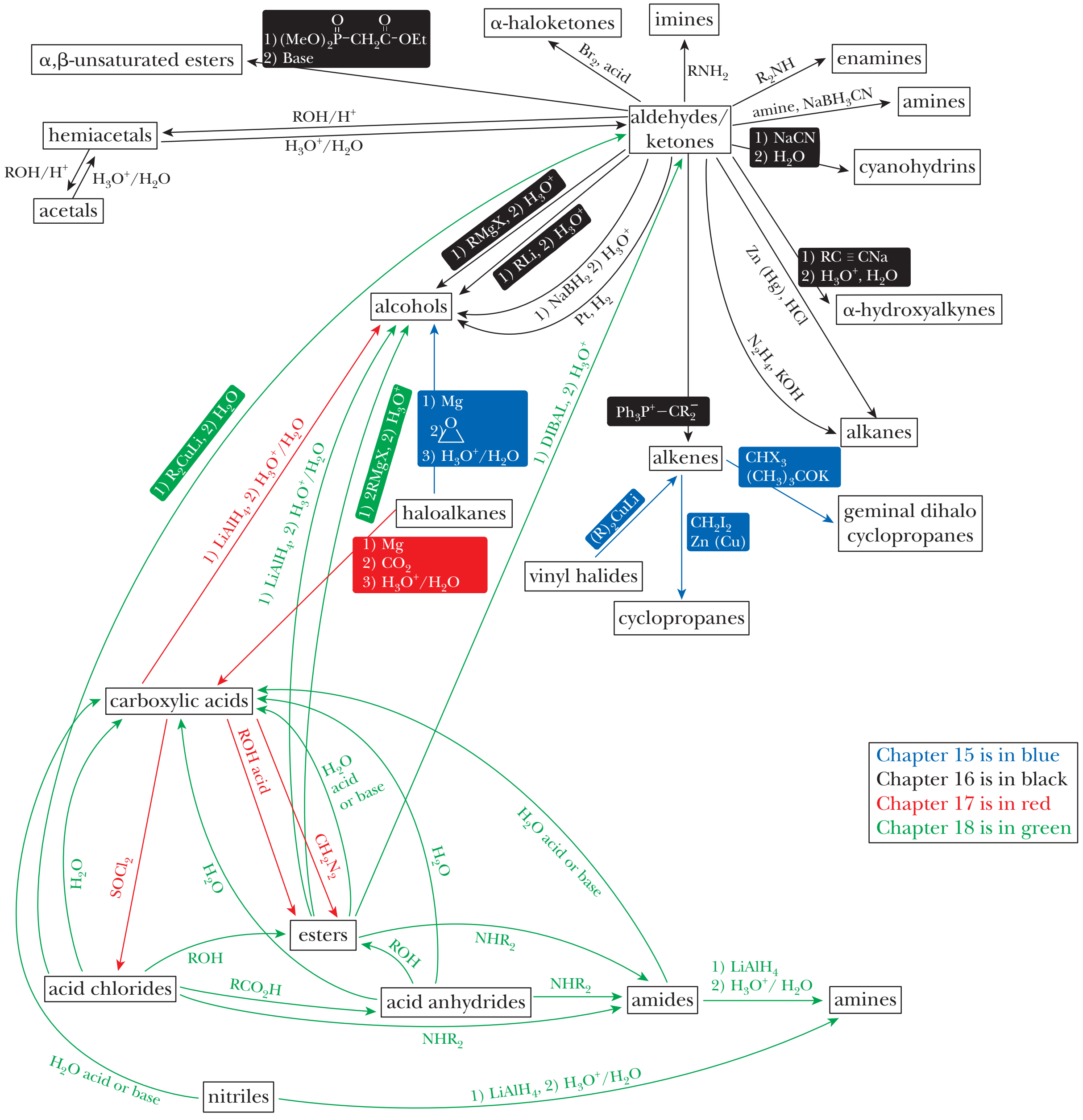
Roadmap for Reactions from Chapters 15–18

Carbon-carbon bond forming reactions are indicated by reagents written in solid backgrounds with white lettering.



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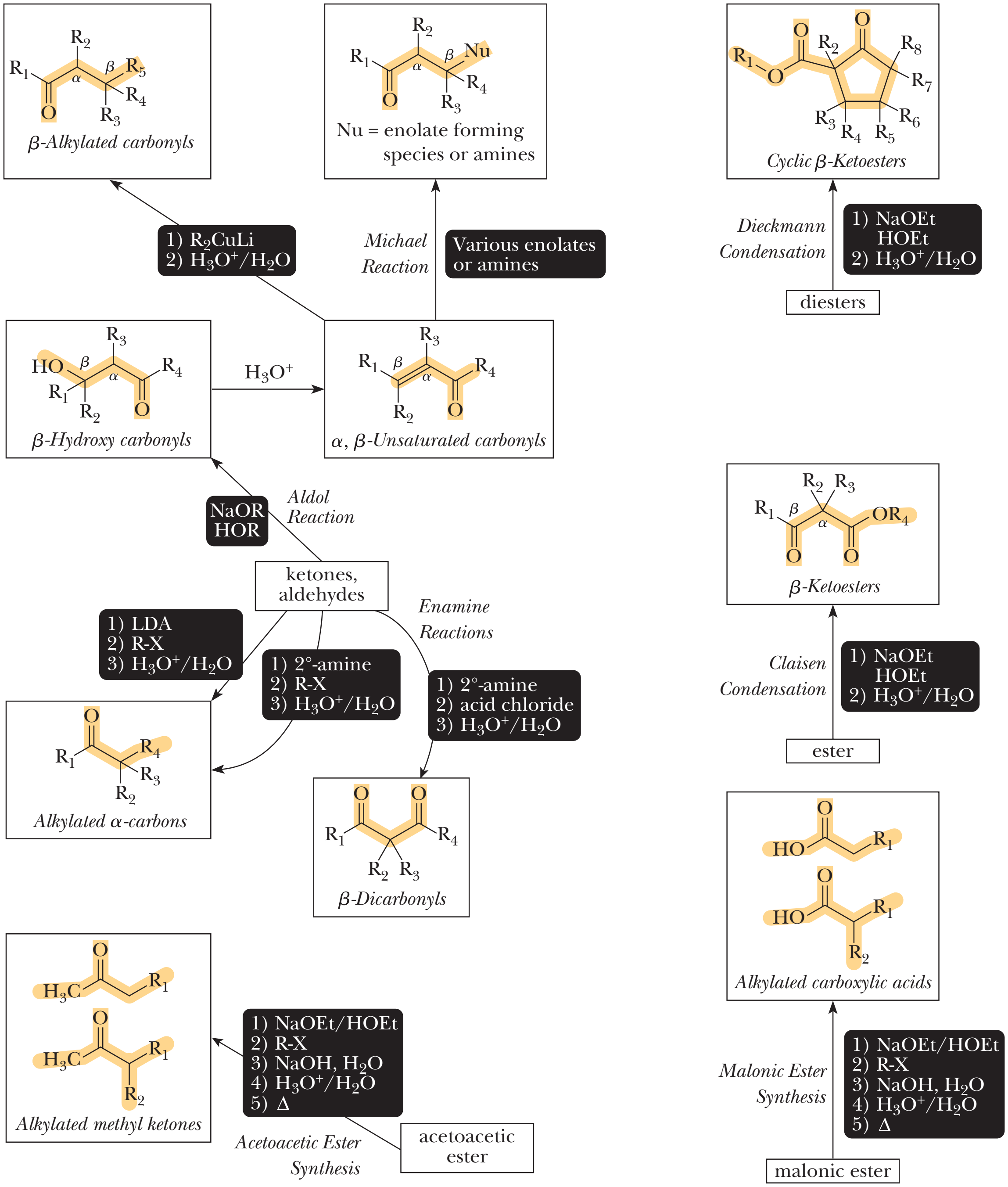
Roadmap for Reactions from Chapter 19

Carbon-carbon bond forming reactions are indicated by reagents written with solid backgrounds and white lettering.



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