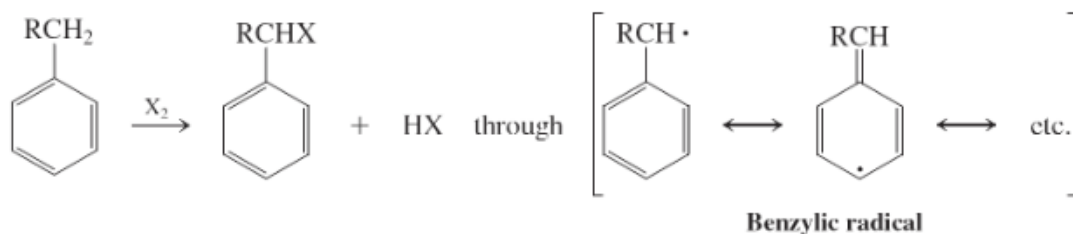


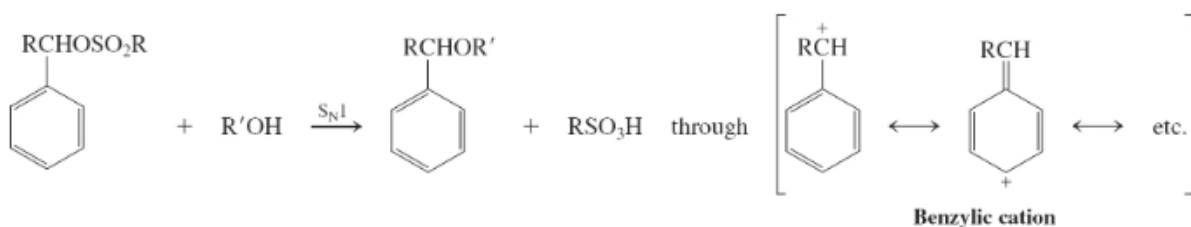
New Reactions

Benzylic Resonance

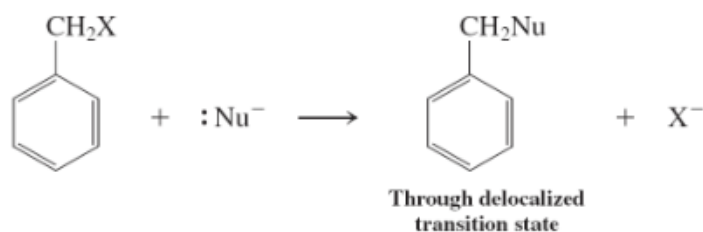
1. Radical Halogenation ([Section 22-1](#))



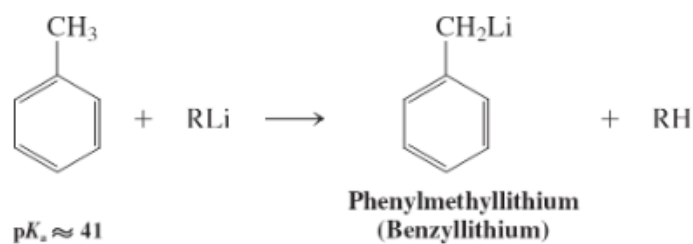
2. Solvolysis ([Section 22-1](#))



3. S_N2 Reactions of (Halomethyl)benzenes ([Section 22-1](#))

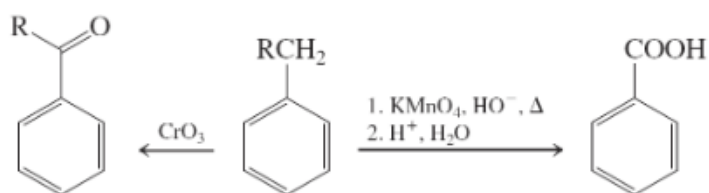


4. Benzylic Deprotonation ([Section 22-1](#))

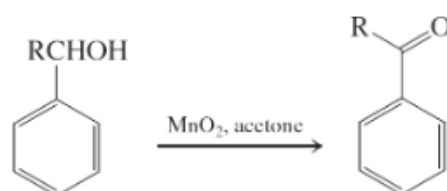


Oxidation and Reduction

5. Oxidation ([Section 22-2](#))

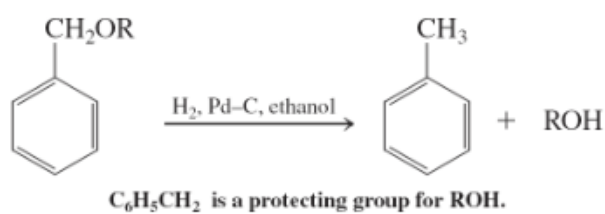


Benzylic alcohols

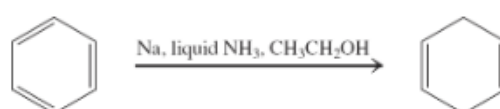


6. Reduction ([Section 22-2](#))

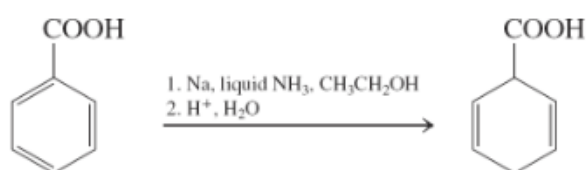
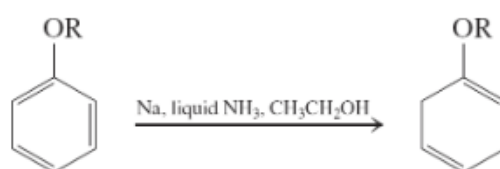
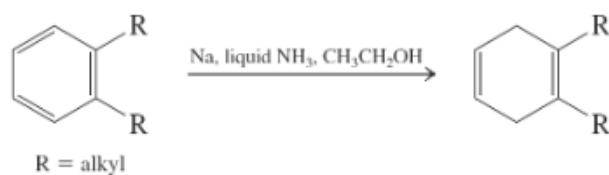
Hydrogenolysis



One-Electron (Birch) Reduction

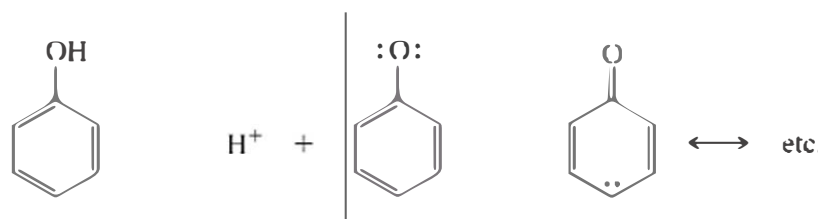


Regioselectivity:



Phenols and Ipsso Substitution

7. Acidity (Section 22-3)

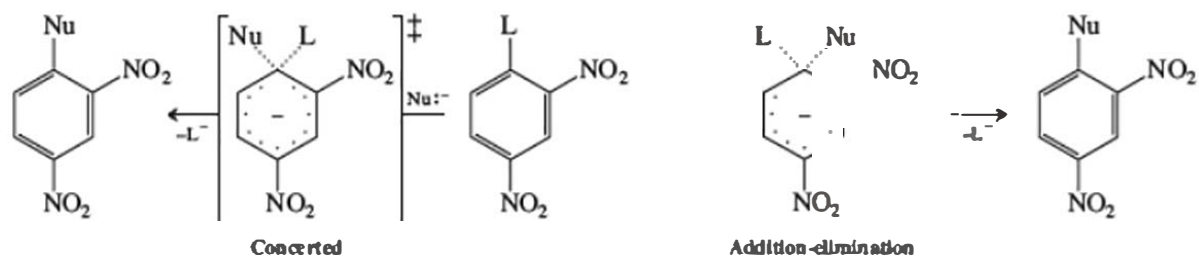


$pK_a \approx 10$

Much stronger acid than simple alkanols.

Phenoxide ion

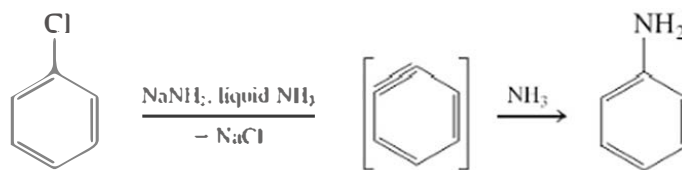
8. Nucleophilic Aromatic Substitution (Section 22-4)



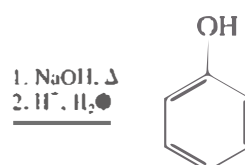
Concerted

Addition-elimination

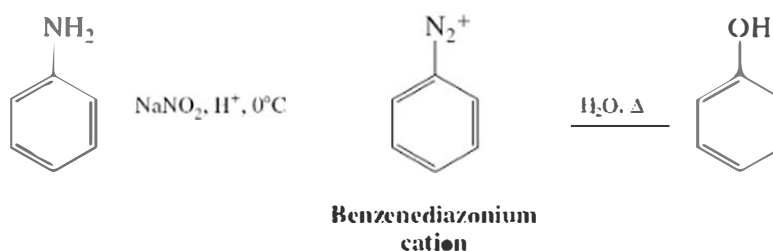
9. Aromatic Substitution Through Benzyne Intermediates (Section 22-4)



Nucleophile attacks at both ipso and ortho positions.



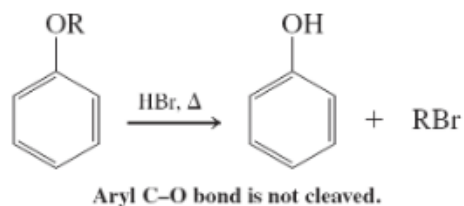
10. Arenediazonium Salt Hydrolysis (Section 22-4)



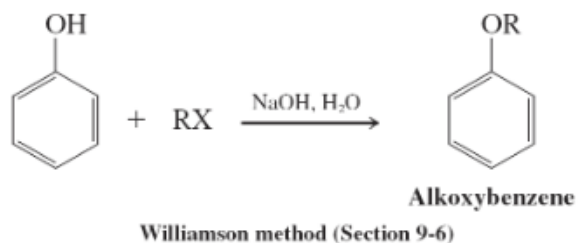
Benzenediazonium cation

Reactions of Phenols and Alkoxybenzenes

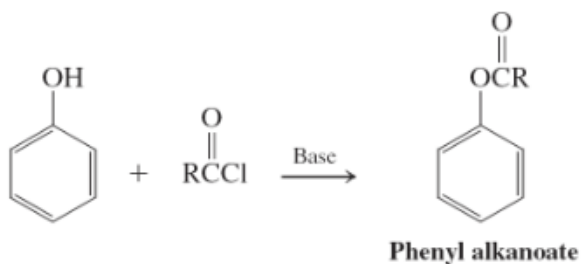
12. Ether Cleavage ([Section 22-5](#))



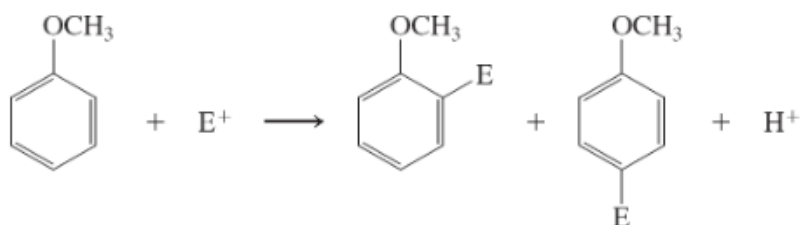
13. Ether Formation ([Section 22-5](#))



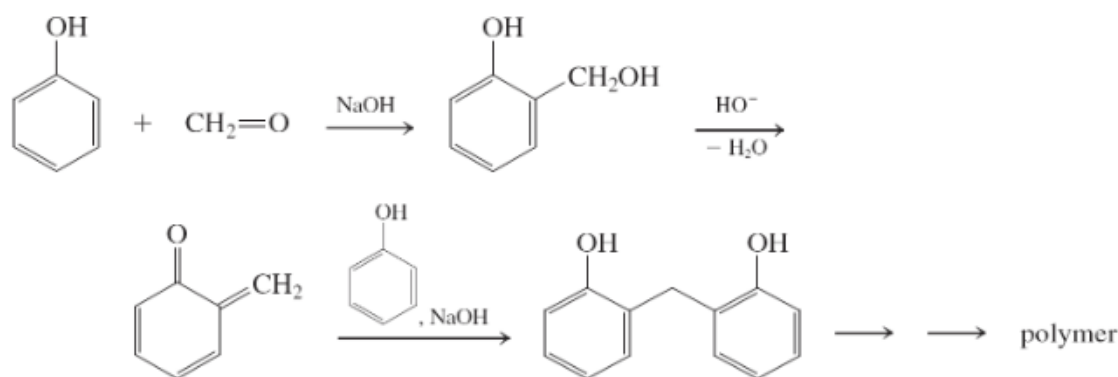
14. Esterification ([Section 22-5](#))



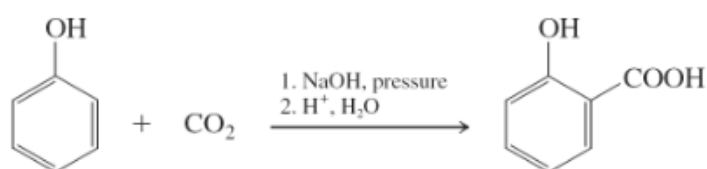
15. Electrophilic Aromatic Substitution ([Section 22-6](#))



16. Phenolic Resins ([Section 22-6](#))

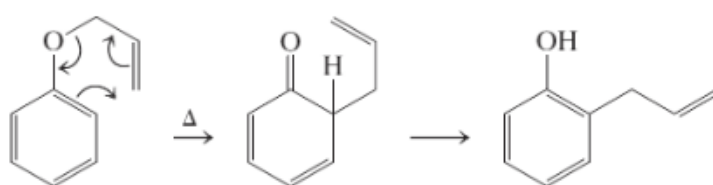


17. Kolbe-Schmitt Reaction ([Section 22-6](#))

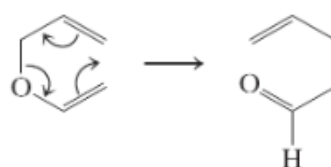


18. Claisen Rearrangement ([Section 22-7](#))

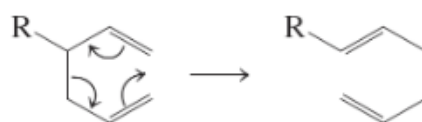
Aromatic Claisen rearrangement



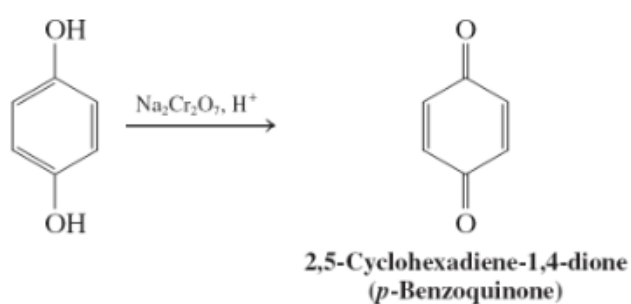
Aliphatic Claisen rearrangement



19. Cope Rearrangement ([Section 22-7](#))



20. Oxidation ([Section 22-8](#))



22. Diels-Alder Cycloadditions to 2,5-Cyclohexadiene-1,4-diones (*p*-Benzoquinones) ([Section 22-8](#))

