DEAROMATIZATION OF PHENOLS: ELECTROPHILIC SUBSTITUTION VERSUS ADDITION AND ETHER FORMATION

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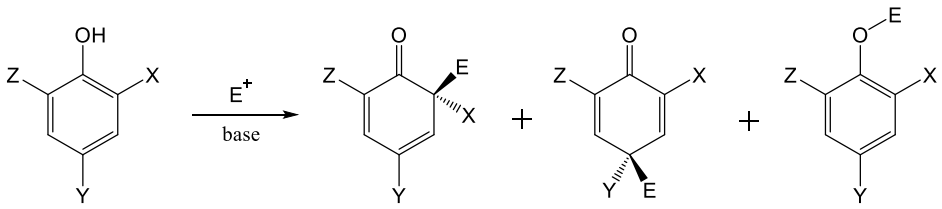
The dearomatization of aromatic compounds is a powerful approach for synthesis of complex molecules from simple and easily available starting materials. Of particular interest is the dearomatization of phenols to cyclohexadienone derivatives that are popular structure motifs in natural molecules. However, there is only limited amount of dearomatization of phenol derivatives under non-oxidative conditions. [1-2] Even less limited amount of studies involves usage of alkyl electrophiles.

In this study, differently substituted phenols were used in electrophilic alkylation reaction for investigation how different substituents effect on priority of addition/substitution position. Also, different conditions were tested to achieve better selectivity and higher yields of addition products.



Scheme 1. Electrofilic addition to substituted phenolsand ether formation

References

1. R. J. Phipps, F. D. Toste, 2013, *J. Am. Chem. Soc.*, 135, 1268–71
2. S. Rousseaux, J. García-Fortanet, M. Angel Del Aguila Sanchez, S. L. Buchwald, 2011, *J. Am. Chem. Soc.*, 133, 9282–5

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