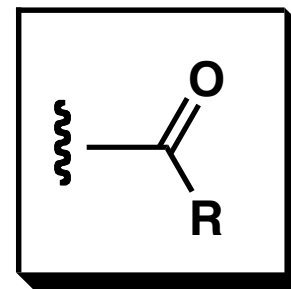
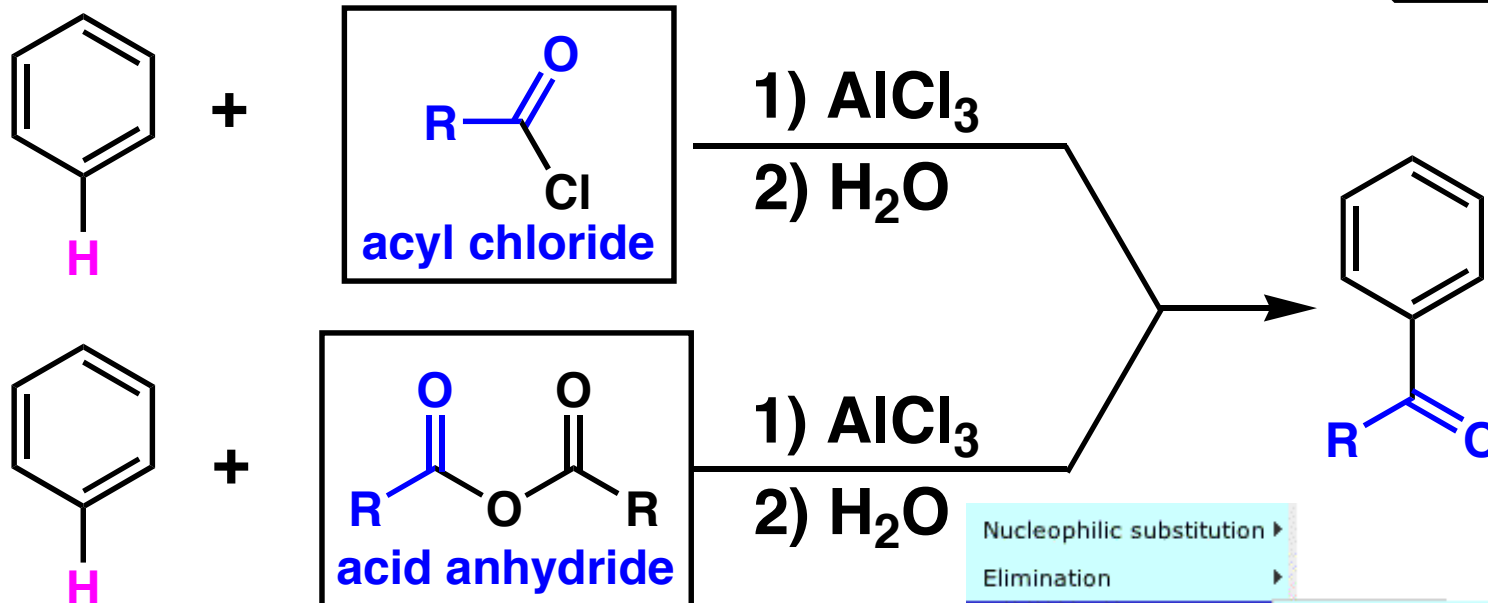
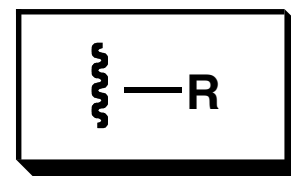


Friedel-Crafts Acylation

An **acyl** group has the structure



An **alkyl** group has the structure



Nucleophilic substitution ▶

Elimination ▶

Electrophilic aromatic substitution ▶

Enols and Enolates as nucleophiles

Pericyclic reactions

Nitration of benzene

Friedel-Crafts alkylation

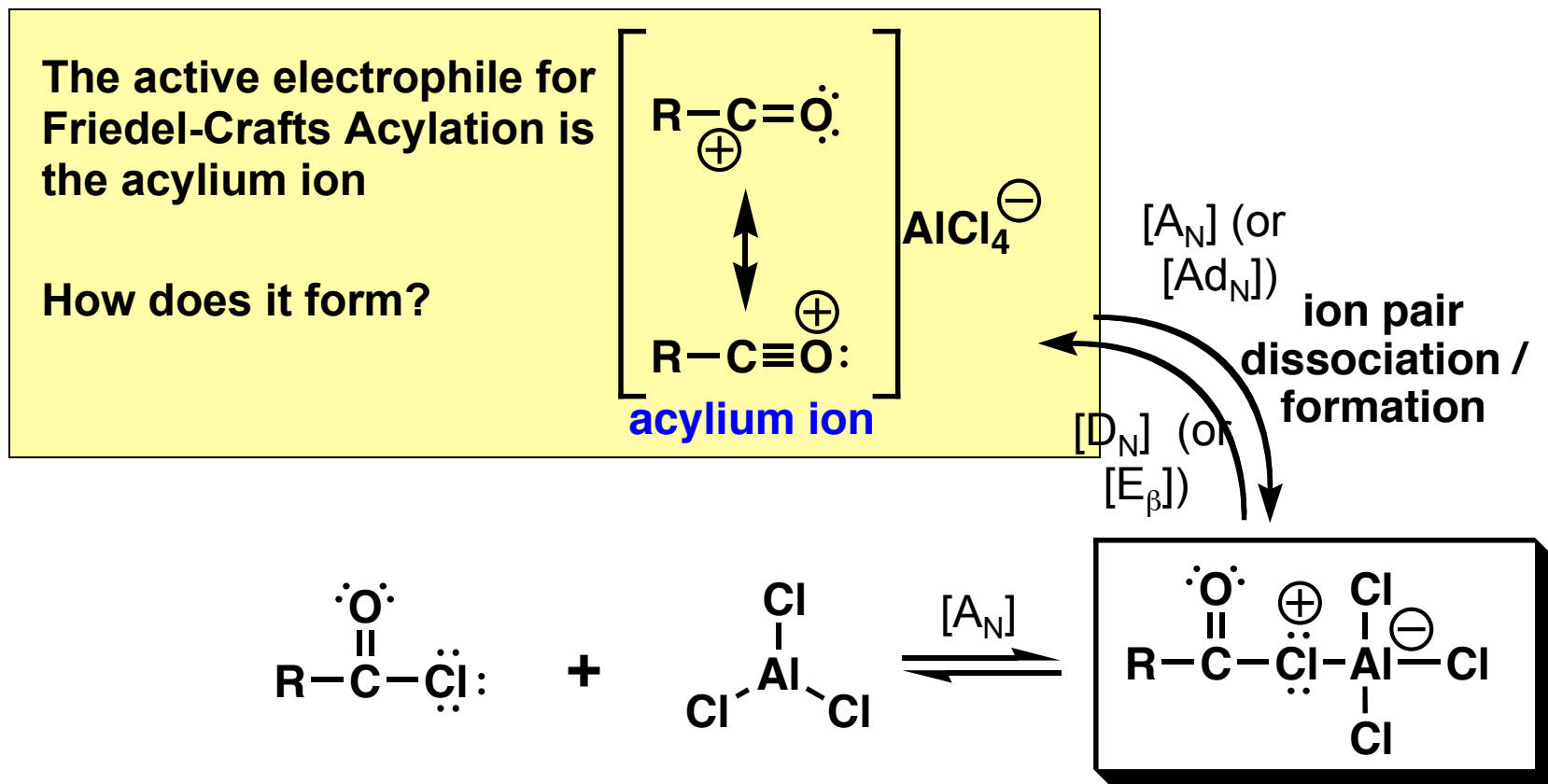
Friedel-Crafts acylation

Sulfonation of benzene

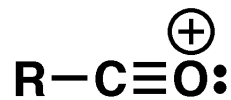
<http://www.chemtube3d.com/>



The Acylium Ion is the Electrophile in Friedel-Crafts Acylation Reactions

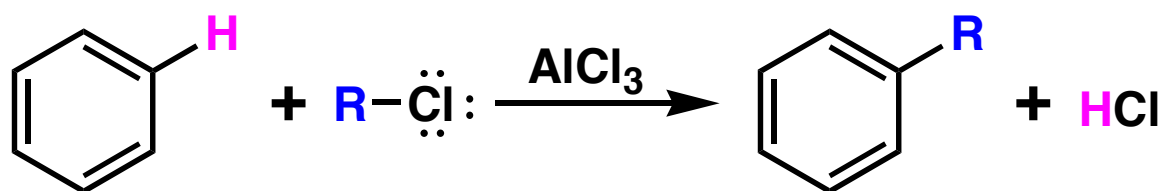


For the acylium ion, which resonance contributor is more important? Why?



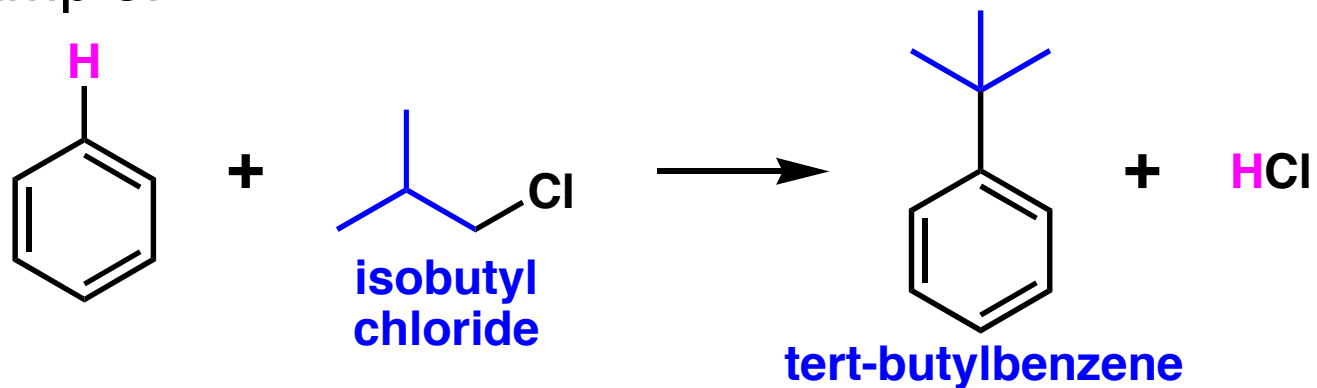
All atoms have octet of electrons

Friedel-Crafts Alkylation

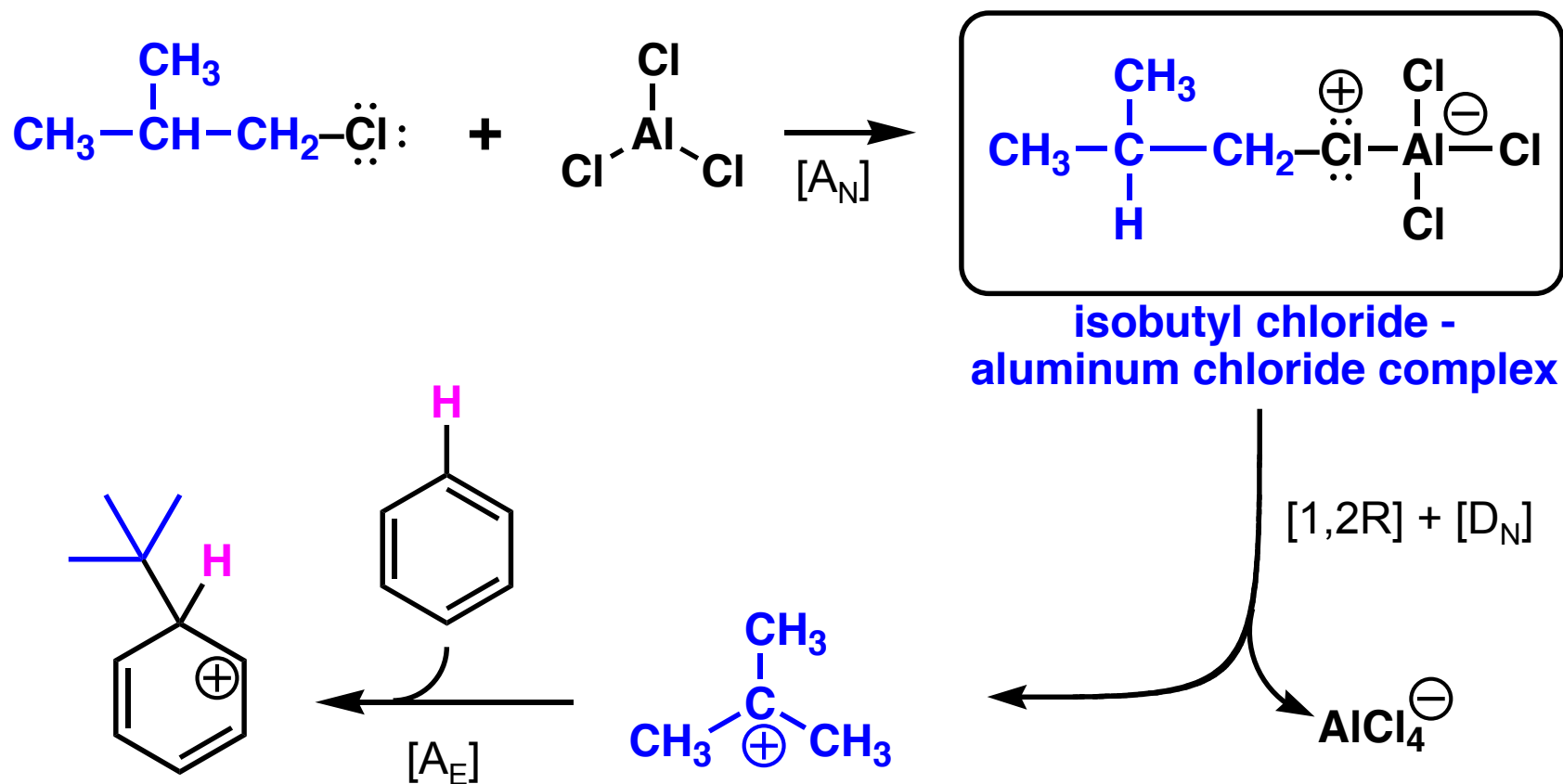


The active electrophilic species is the carbocation R^+

Example:



Mechanism of Friedel-Crafts Alkylation



Nucleophilic substitution ▶	
Elimination ▶	
Electrophilic aromatic substitution ▶	Nitration of benzene
	Friedel-Crafts alkylation
	Friedel-Crafts acylation
Enols and Enolates as nucleophiles	Sulfonation of benzene
Pericyclic reactions	