

Test 3 Postponed until May 3

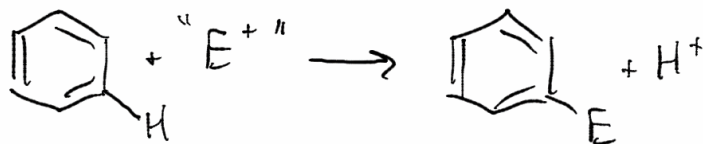
Rework Test 2 by Wednesday, April 24

Please get me any review sheets that you haven't handed in so I can give you the points for the review

Jumping to 18.11 on Wednesday

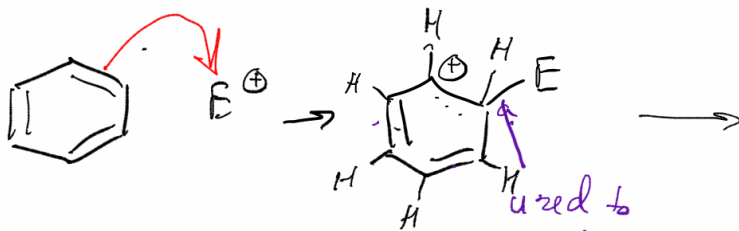
How Benzene Reacts: Electrophilic aromatic substitution

Sections 8.21 & 18.2



6 e⁻'s in extended π system

Mechanism



e⁻ rich or e⁻ deficient?

⊕

2 for 6

used to be the π bond

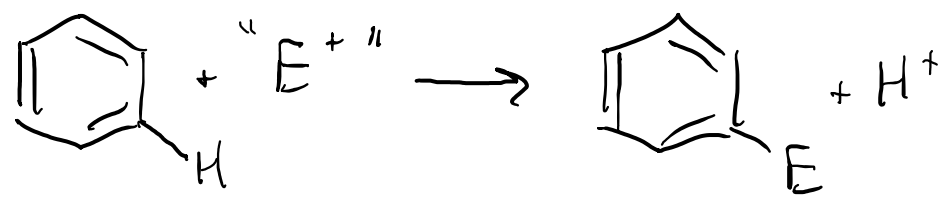
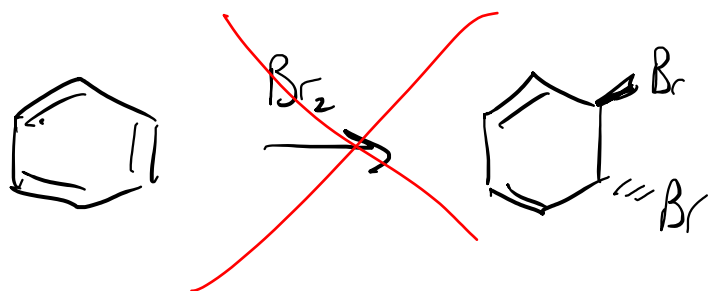
nucleophilic ✓

but because the system is aromatic typical electrophiles don't react (H⁺ from H₂SO₄, HCl, HBr, Br₂, Cl₂)

Also, because the system is aromatic, electrophiles don't do addition reacts

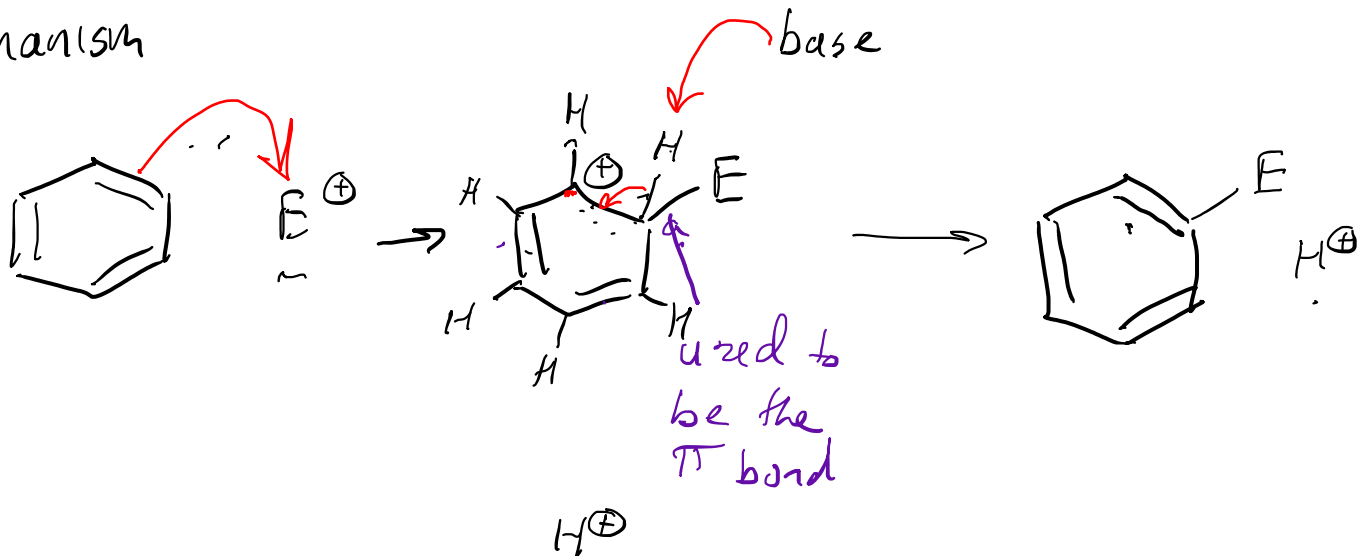
How Benzene Reacts: Electrophilic aromatic substitution

Sections 8.21 & 18.2

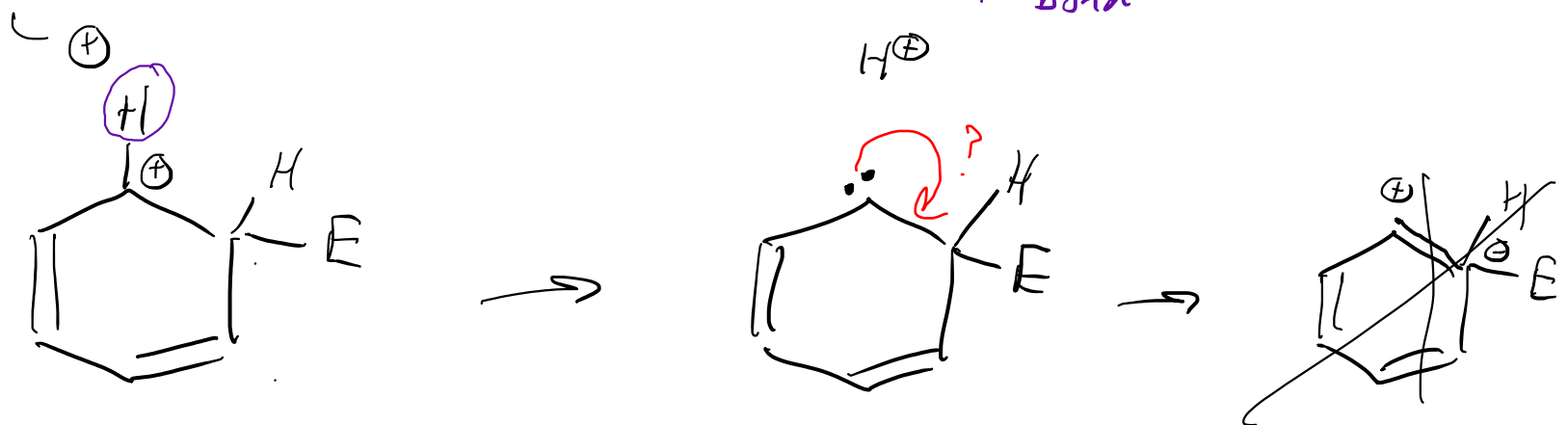


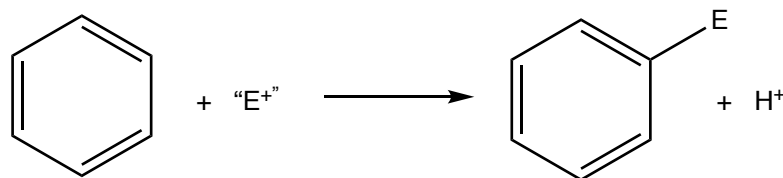
6 e⁻'s in extended π system

Mechanism



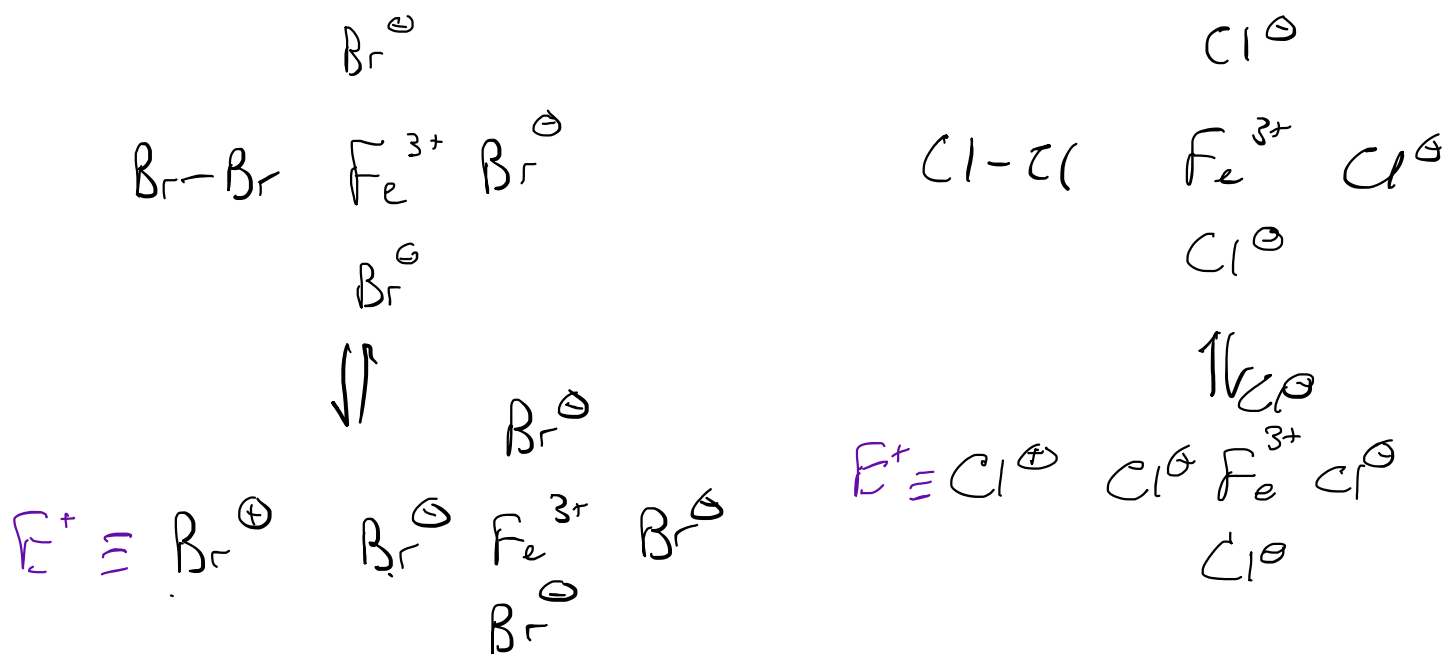
e⁻ rich or e⁻ deficient?





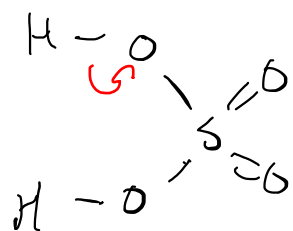
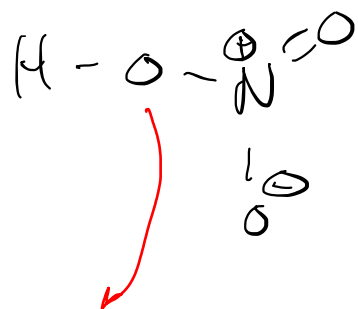
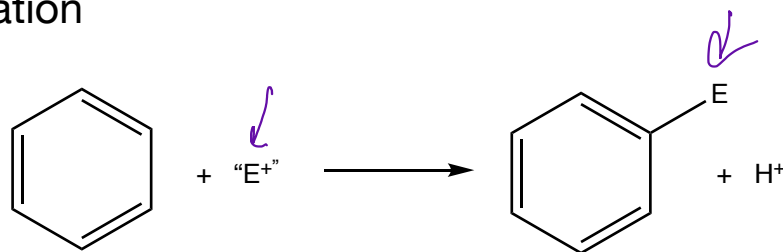
Br₂, Cl₂ electrophile ... two more elements "fighting" over electrons in a single bond. They will react with less more atoms because e⁻'s on less more atoms are easier to attract

Add a Lewis acid to make electrophile more electrophilic

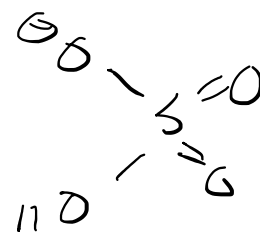
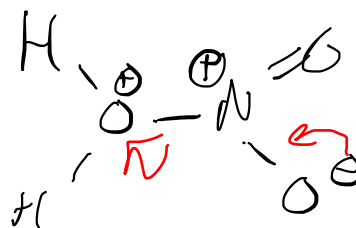
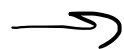


Amping Up Electrophiles: Nitration

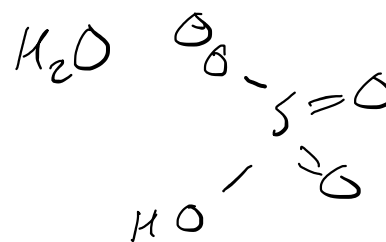
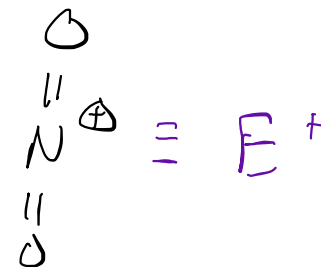
Section 18.4



add acid
to increase
electrophilicity of
HNO₃

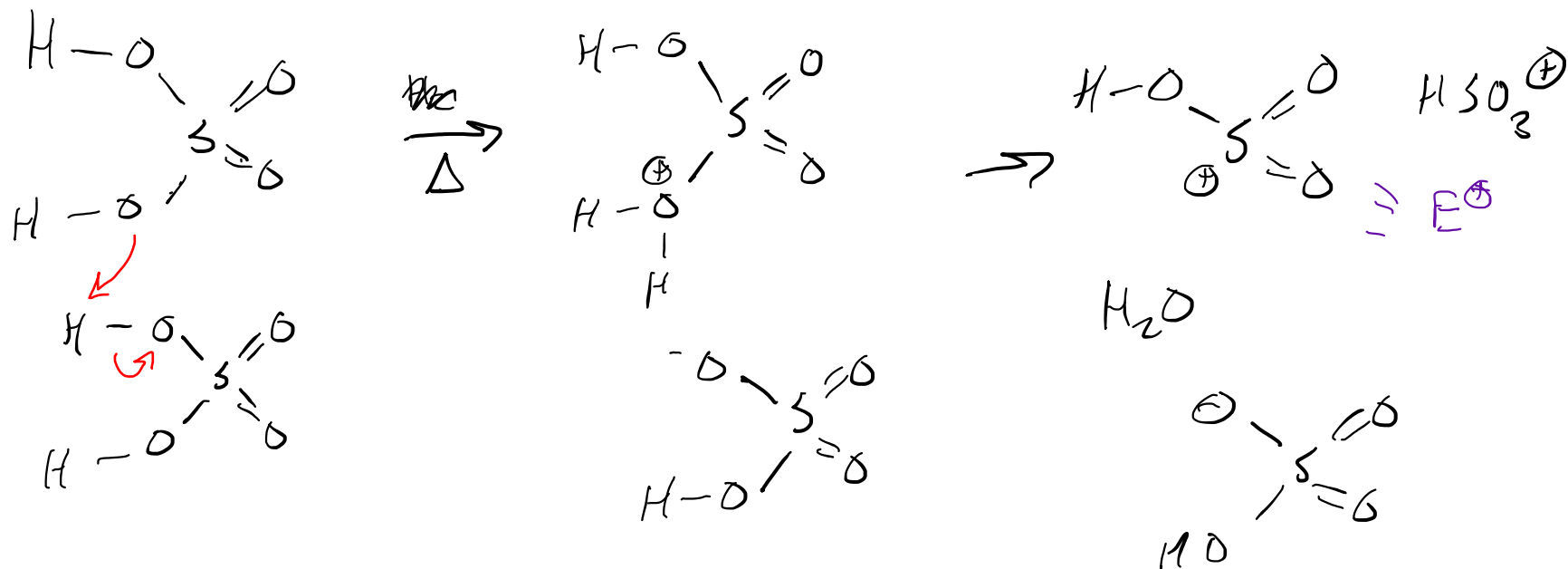
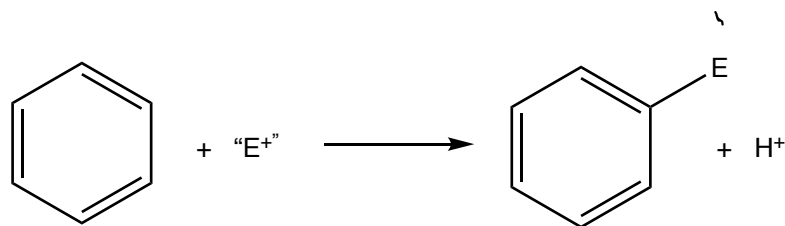


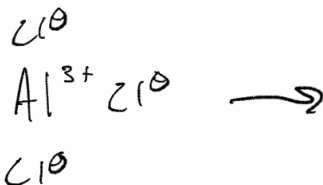
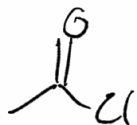
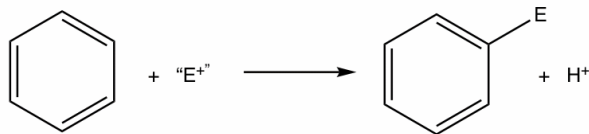
nitronium



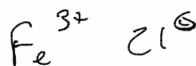
Amping Up Electrophiles: Sulfonation

Section 18.5





electrophile

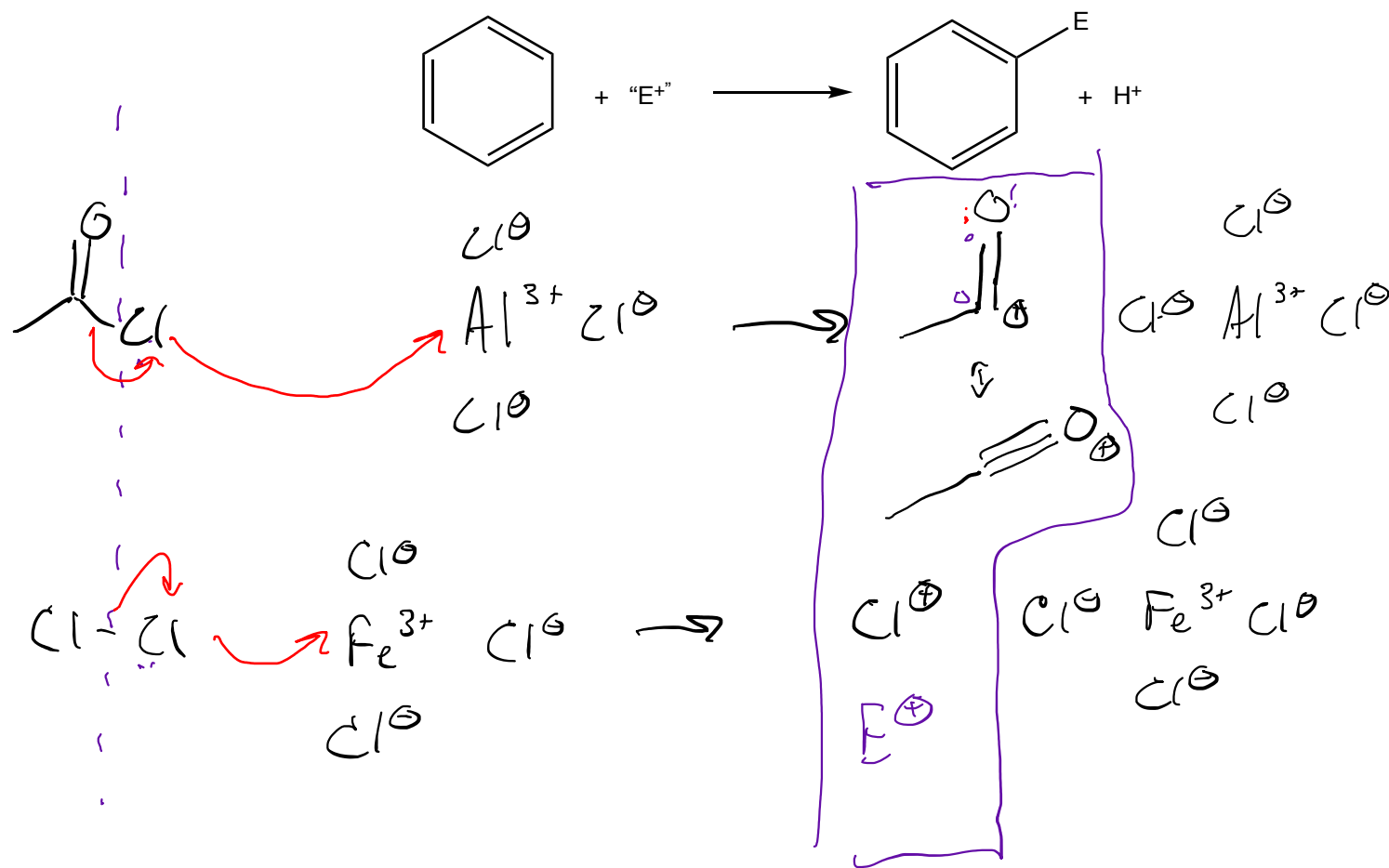


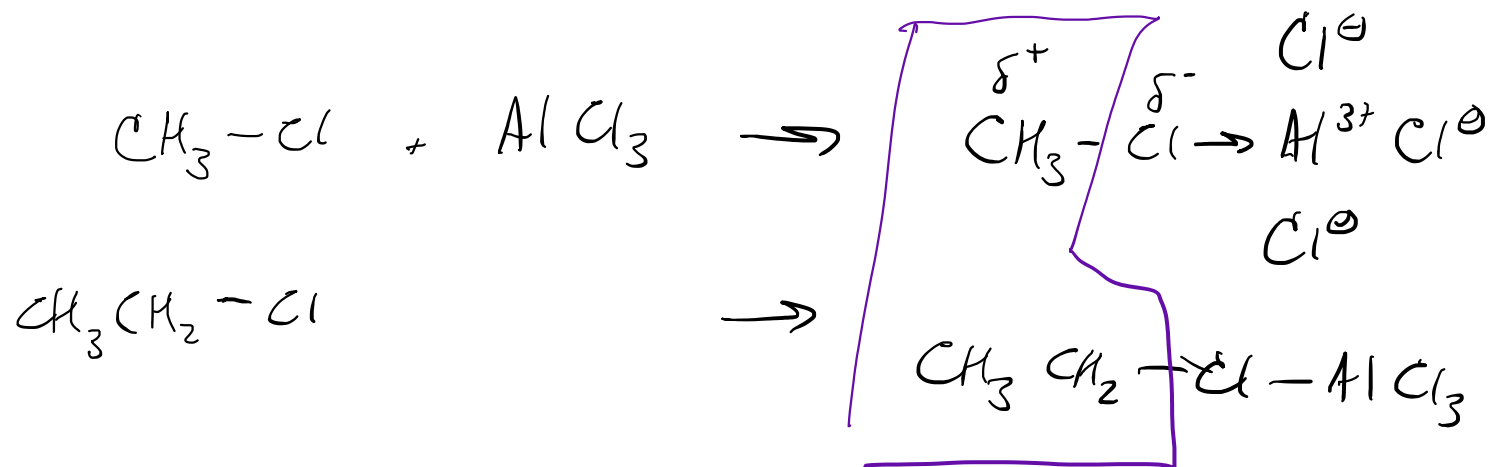
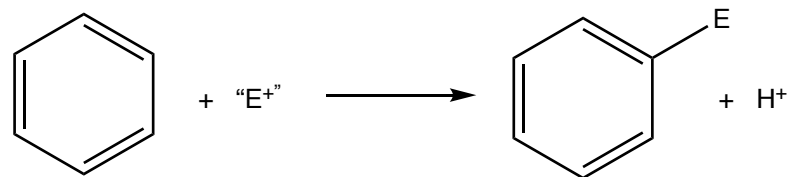
not Lewis acidic enough

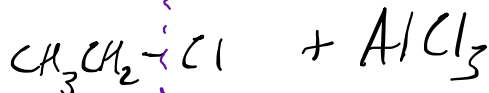
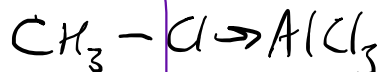
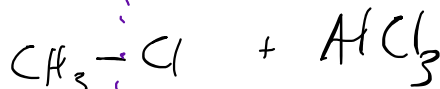
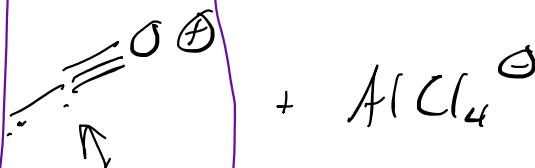
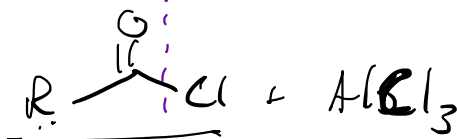
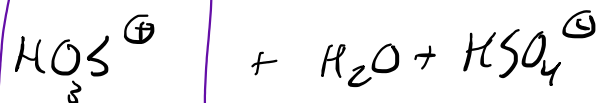
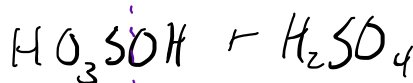
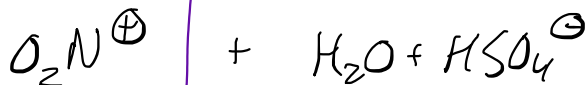
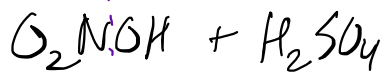
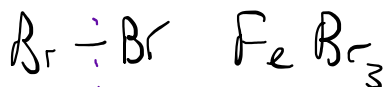
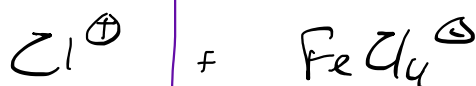
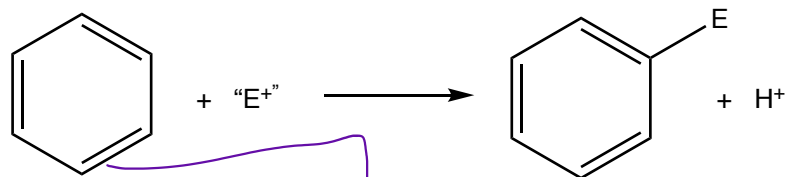
Increase Lewis acidity
either increase charge
of metal

make the metal smaller
so there is a
more concentrated
charge









a coordinate covalent bond

