Fries Rearrangement

Phenyl esters (phenyl acetate, phenyl benzoate etc.) on heating with anhydrous AlCl$_3$ in the presence of CS$_2$ as solvent undergo a rearrangement in which the acyl group (acetyl, benzoyl etc.) group migrates from the phenolic oxygen atom to the ortho and para position of the benzene ring to give a mixture of o and p hydroxy ketones. This reaction is called Fries rearrangement.

**Mechanism :-**

Despite many efforts, a definitive reaction mechanism for the Fries rearrangement has not been determined. Evidence for inter- and intramolecular mechanisms have been obtained by crossover experiments with mixed reactants. Reaction progress is not dependent on solvent or substrate. A widely accepted mechanism involves a carbocation intermediate.