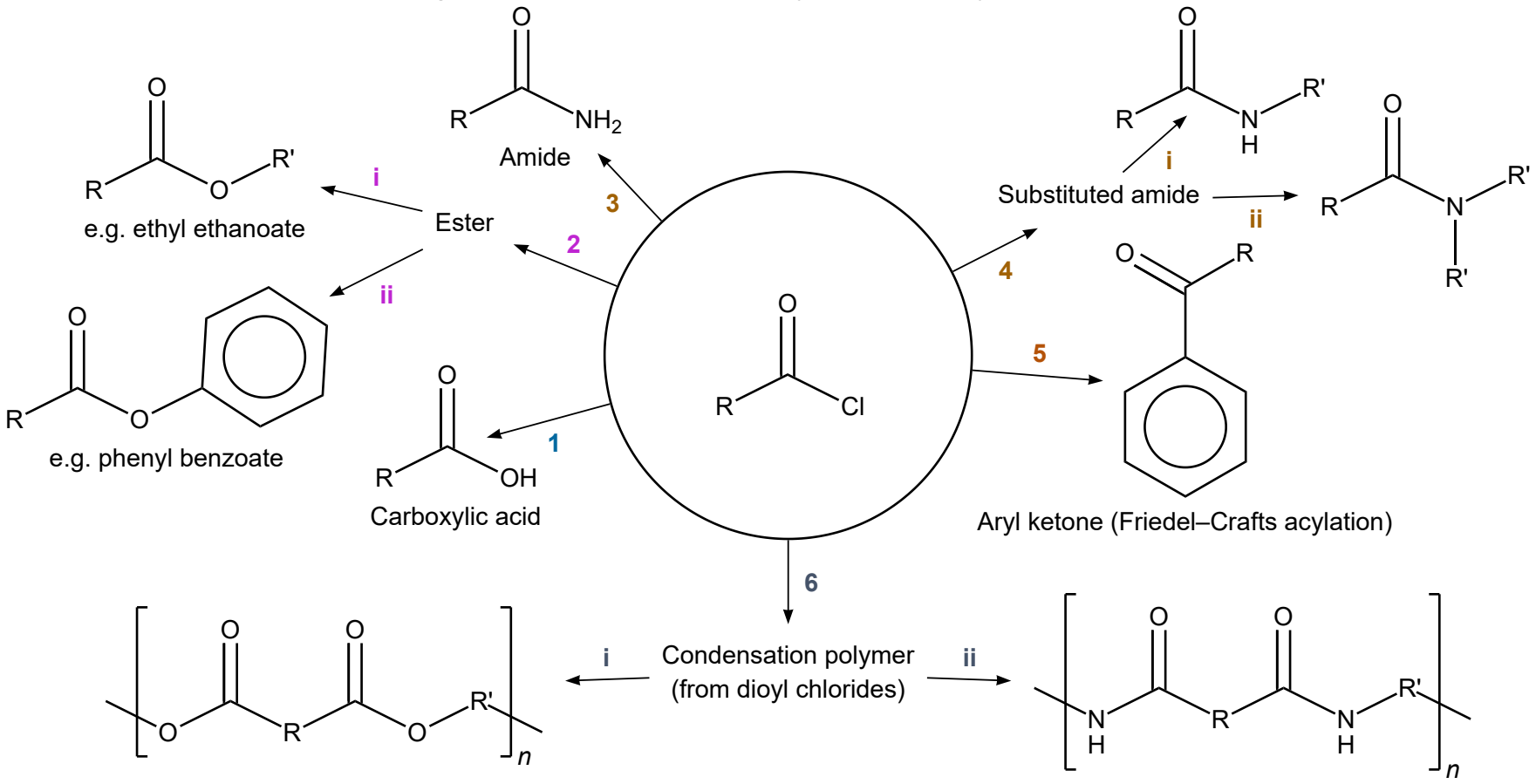
Acyl Chlorides Map

Cambridge International AS & A Level Chemistry · Topic 33 Carboxylic acids and derivatives



1 hydrolysis: water, room temperature; HCl fumes

2 addition-elimination: room temperature
i alcohol, R'OH → alkyl ester
ii phenol → phenyl ester

3 condensation (addition-elimination): ammonia, room temperature

4 condensation (addition-elimination): room temperature
i primary amine, $R'NH_2$ → N-substituted amide
ii secondary amine, R'_2NH → N,N-disubstituted amide

5 substitution (electrophilic): benzene (or methylbenzene), $AlCl_3$ catalyst, heat

6 polymerisation (condensation): room temperature
i diol → polyester
ii diamine → polyamide

Ease of hydrolysis: acyl chlorides > alkyl chlorides > aryl chlorides.
Made from carboxylic acids with PCl_3 (heat), PCl_5 or $SOCl_2$.

hydrolysis · addition-elimination · condensation · substitution · polymerisation

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