Synthesis and Reactions of Esters

(Mostly Review)

Synthesis and Reactions of Amides

(Some Review)

Synthesis and Reactions of Nitriles

$$R-X$$

$$(X = halide, OTs)$$

$$\downarrow NaCN$$

$$R-C \equiv N$$

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$$\downarrow NaCN$$

$$R'-MgBr$$

$$or$$

$$R'-Li$$

$$2. H_3O^+$$

$$R'-Li$$

$$3. H_3O^+$$

$$8. H_3O^+$$

$$1. LiAlH_4$$

$$1. Li$$