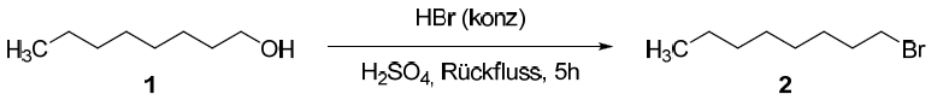
erklären Sie mechanistisch:

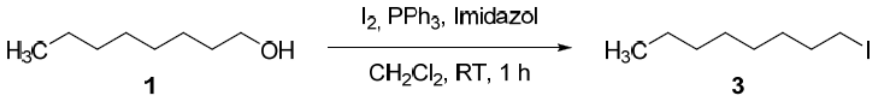
Thema 1: Substitution am gesättigten C-Atom

Übersicht

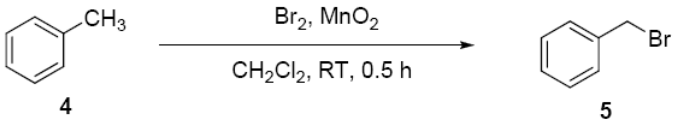
Versuch 1.1: Synthese von 1-Bromoctan (2)



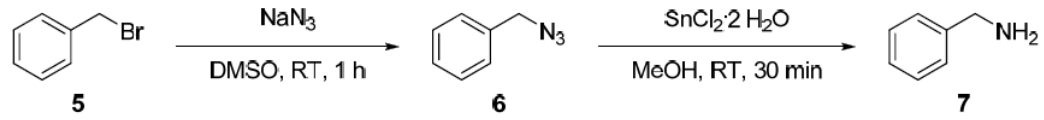
Versuch 1.2: Synthese von 1-Iodoctan (3)



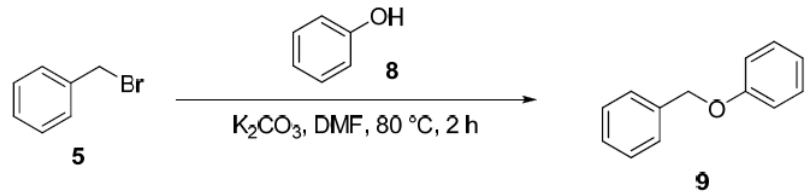
Versuch 1.3: Synthese von Benzylbromid (5)



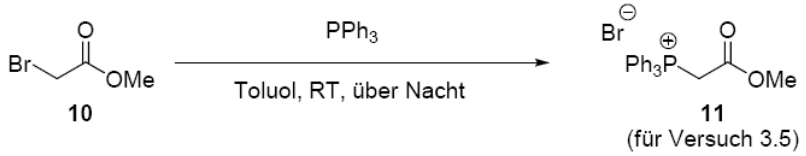
Versuch 1.4: Synthese von Benzylamin (7)



Versuch 1.5: Synthese von Benzylphenylether (9)



Versuch 1.6: Synthese von (Methoxycarbonylmethyl)-triphenylphosphonium-bromid (11)



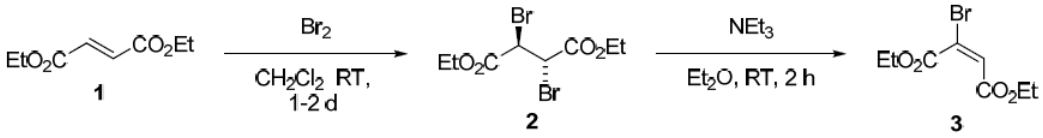
(für Versuch 3.5)

erklären Sie mechanistisch:

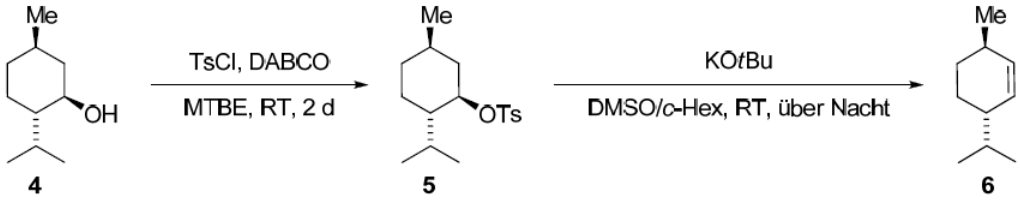
Thema 2: Eliminierungen und Additionen an CC-Doppelbindungen

Übersicht

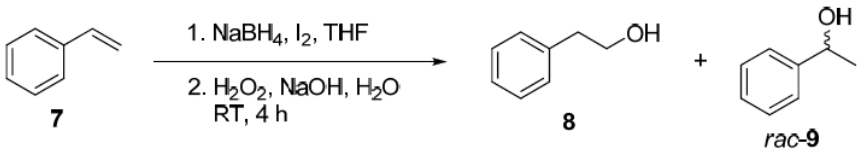
Versuch 2.1: Synthese von *E*-2-Brombutendisäuredisäurediethylester (3)



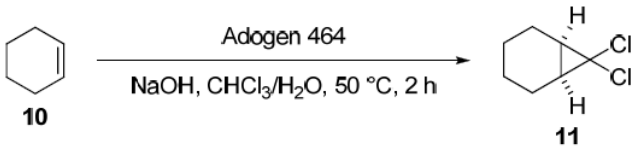
Versuch 2.2: Synthese von (*1R*,*4S*)-1-Methyl-4-iso-propyl-2-cyclohexen (6)



Versuch 2.3: Synthese von 2-Phenyl-1-ethanol (14) und 1-Phenyl-1-ethanol (*rac*-9)



Versuch 2.4: Synthese von 7,7-Dichlorbicyclo[4.1.0]heptan (11)

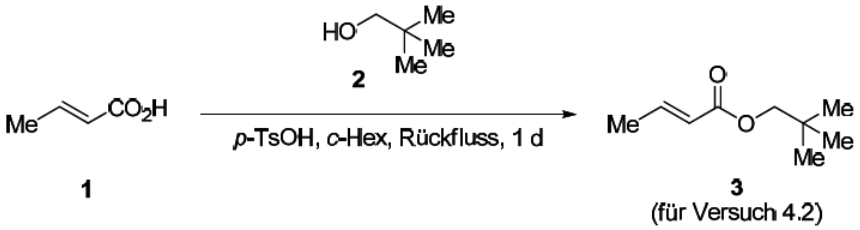


erklären Sie mechanistisch:

Thema 3: Reaktionen von Carbonyl- und Carboxylfunktionen

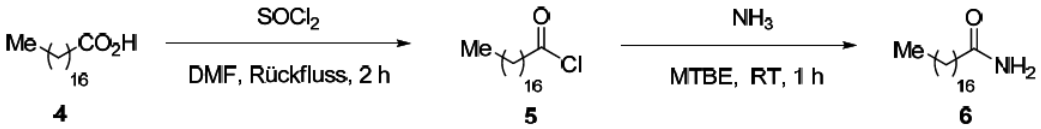
Übersicht

Versuch 3.1: Synthese von *E*-2-Propensäure-(2,2-dimethylpropyl)-ester (3)



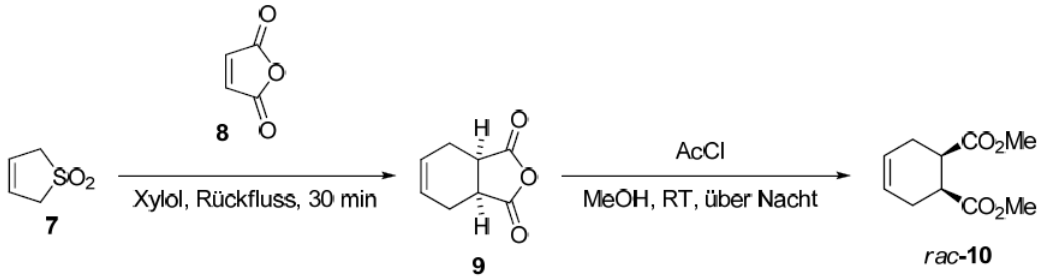
1 3 (für Versuch 4.2)

Versuch 3.2: Synthese von Octadecansäureamid (6)

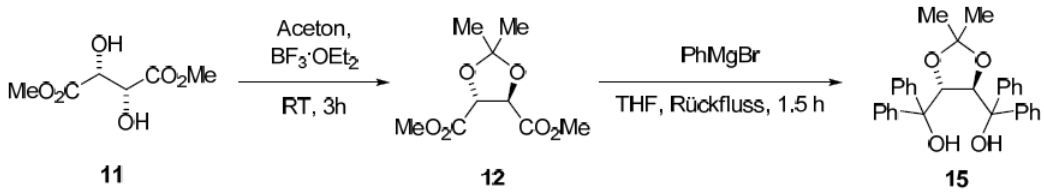


4 5 6

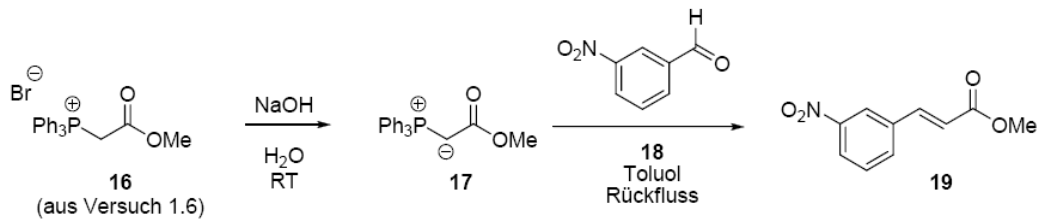
Versuch 3.3: Synthese von (*1S*,*2R*)-4-Cyclohexen-1,2-dicarbonsäure-1-methylester (10)



Versuch 3.4: Synthese von (*4R*,*5R*)-2.2-Dimethyl-α,α,α´,α´-tetraphenyl-1,3-dioxolan-4,5-di-methanol (15)



Versuch 3.5: Synthese von *E*-3-(3-Nitrophenyl)-2-propensäuremethylester (19)

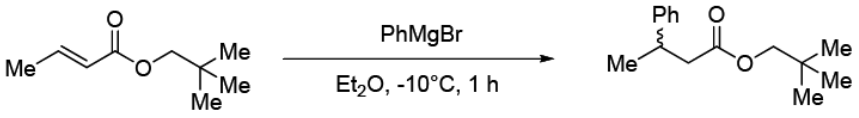


erklären Sie mechanistisch:

Thema 4: Reaktionen polarer CC-Doppelbindungen mit Elektrophilen und Nukleophilen

Übersicht

Versuch 4.1: Synthese von *rac*-(2,2-Dimethylpropyl)-3-phenylbutanoat (*rac*-2)



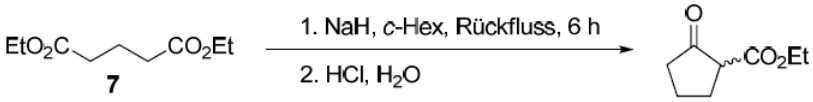
1
(aus Versuch 3.1)

rac-**2**

Versuch 4.2: Synthese von *E,E*-1,5-Diphenylpent-1,4-en-3-on (6)

5 **6**

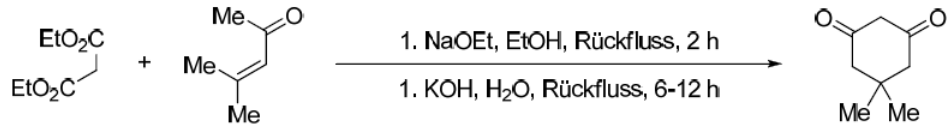
Versuch 4.3: Synthese von *rac*-Cyclopentanon-2-carbonsäureethylester (*rac*-8)



7

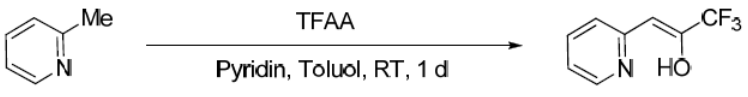
rac-**8**

Versuch 4.4: Synthese von 5,5-Dimethyl-1,3-cyclohexandion (11)



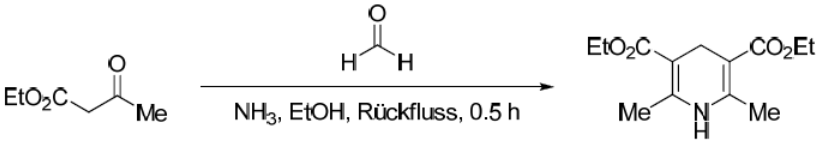
9 **10** **11**

Versuch 4.5: Synthese von *Z*-1,1,1-Trifluor-3-pyrid-2-yl-2-propen-2-ol (15)



14 **15**

Versuch 4.6: Synthese von 2,6-Dimethyl-pyridin-3,5-dicarbonsäurediethylester (18)



17

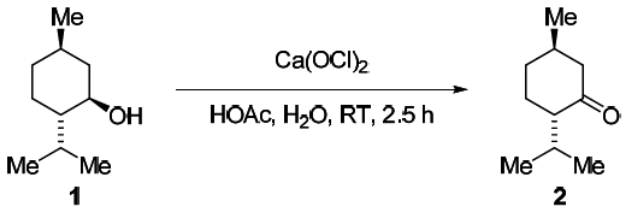
18
(für Versuch 5.3)

erklären Sie mechanistisch:

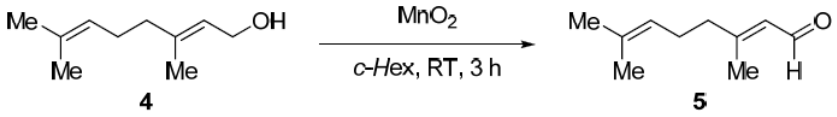
Thema 5: Oxidations- und Reduktionsreaktionen

Übersicht

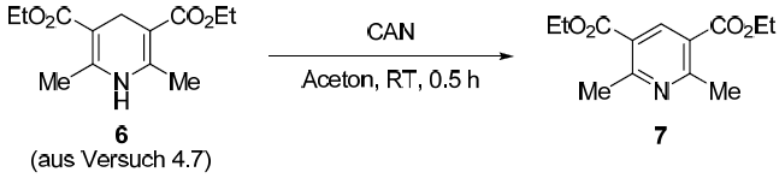
Versuch 5.1: Synthese von (*1R,4S*)-1-Methyl-4-*iso*-propyl-3-cyclohexanon (2)



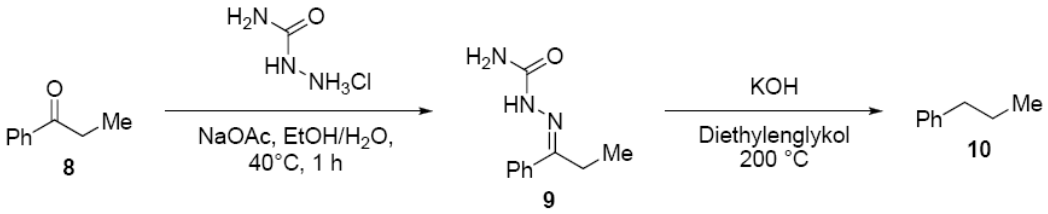
Versuch 5.2: Synthese von Citral (5)



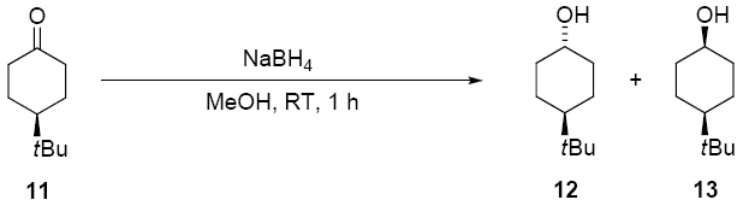
Versuch 5.3: Synthese von 2,6-Dimethylpridin-3,5-dicarbonsäurediethylester (7)



Versuch 5.4: Synthese von Propylbenzol (10)



Versuch 5.5: Synthese von *trans*/cis-4-*tert*-Butyl-cyclohexanol (12/13)

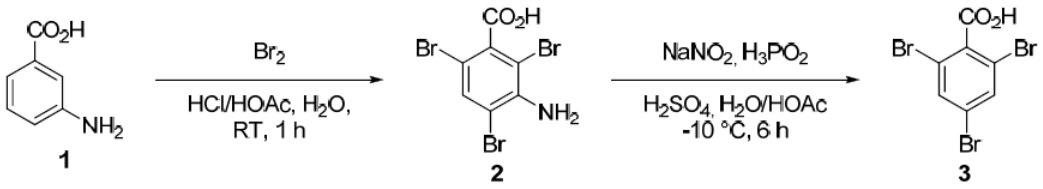


erklären Sie mechanistisch:

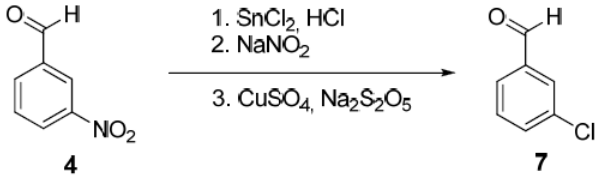
Thema 6: Elektrophile und radikalische aromatische Substitutionen

Übersicht

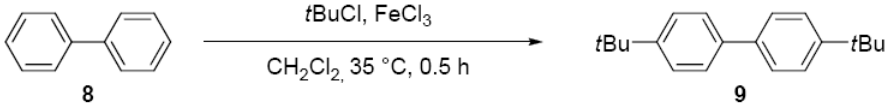
Versuch 6.1: Synthese von 2,4,6-Tribrombenzoesäure (3)



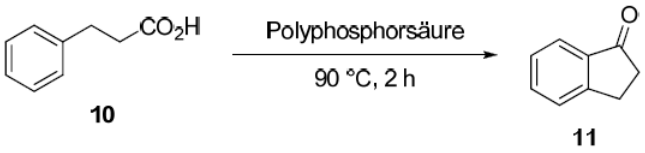
Versuch 6.2: Synthese von *meta*-Chlorbenzaldehyd (7)



Versuch 6.3: Synthese von 4,4´-Di-*tert*-butylbiphenyl (9)



Versuch 6.5: Synthese von 1,2,3,4-Tetrahydronaphthalin-1-on (13a) oder 2,3-Dihydroinden-1-on (11)



Versuch 6.5: Synthese von 2-Formylthiophen (13)