

Key Technology Areas

Challenging chemistry

Selected examples from our broad toolkit:

- Metal Hydride Reductions
- Low Temperature Reactions
- High Pressure Reactions
- Hydrogenation
- Phosgene Chemistry
- Cyanide Chemistry
- Hydrazine Chemistry



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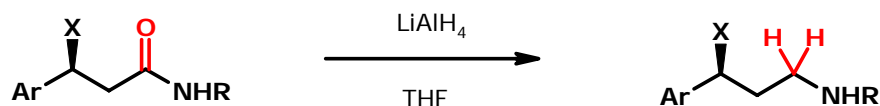
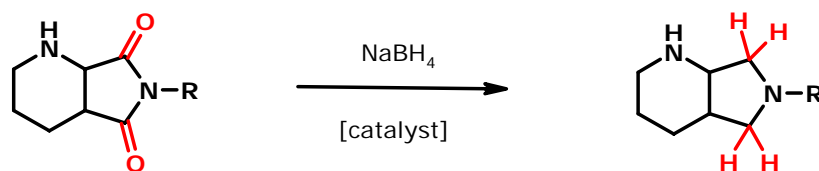
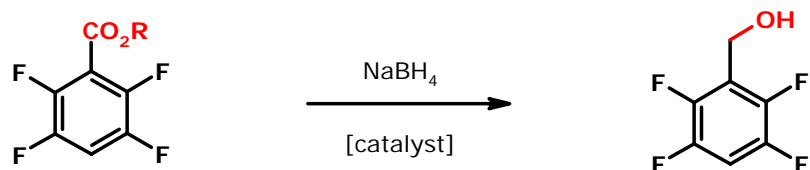
saltigo
customized competence

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Metal Hydride Reductions

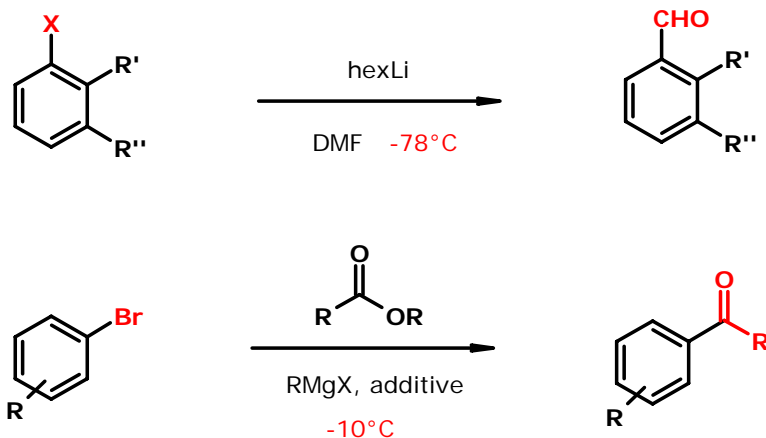
Metal hydride reductions with Diborane and Lithium Aluminium Hydride



- Diborane as reducing agent is generated *in situ* from sodium borohydride and an activator like $\text{BF}_3 \cdot \text{Et}_2\text{O}$, sulfuric acid or dimethyl sulfate

Low Temperature Reactions

Scale-up of low temperature reactions at Saltigo

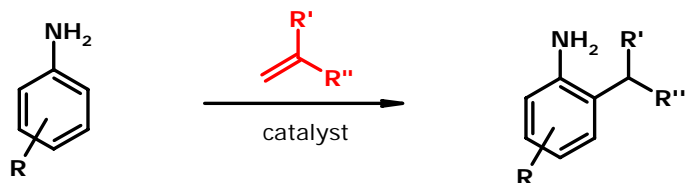
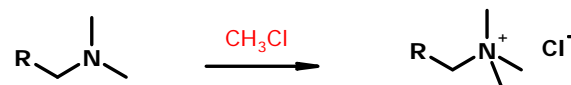
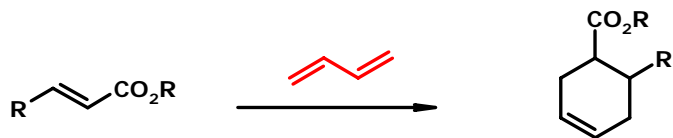
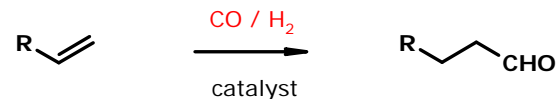
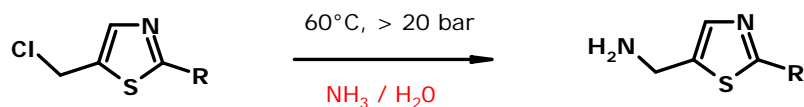


Cryogenic equipment available for

- reactions down to -100°C in up to 12 m^3 scale
- lithiation reactions, quench of Grignard reagents etc.

High Pressure Reactions

Reactions under high pressure conditions require special technology and knowledge



High pressure chemistry at Saltigo

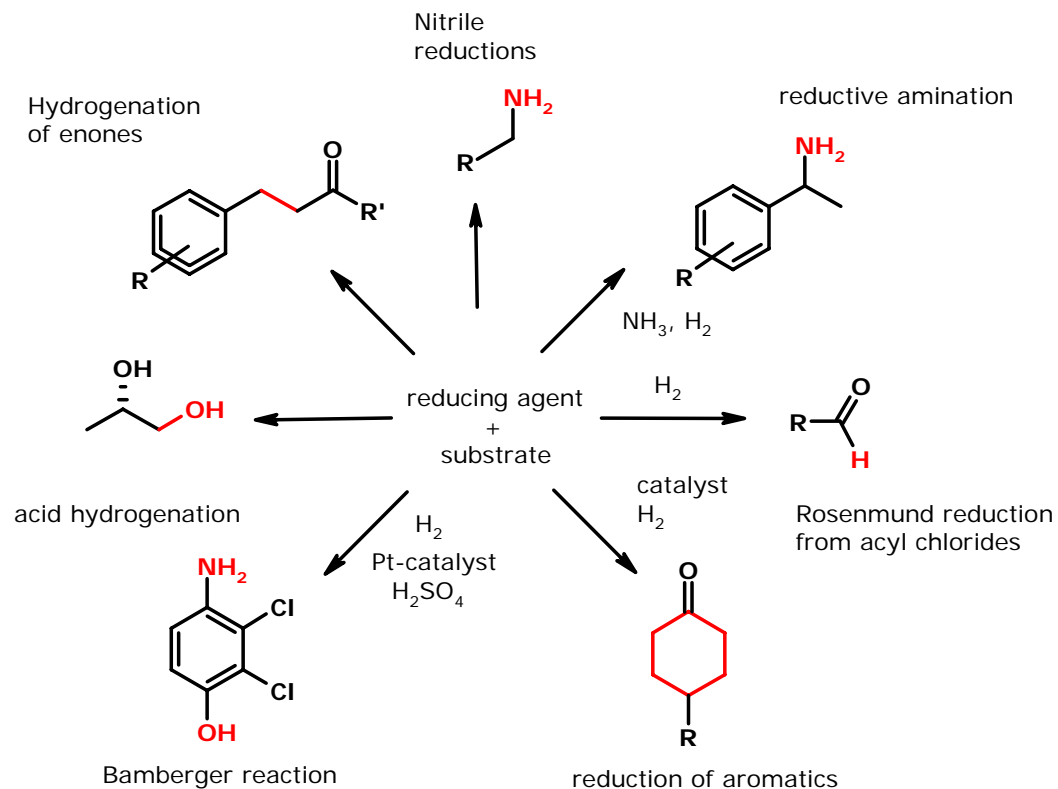
- gas reactions e.g. using alkenes
- CO chemistry
- Hydroformylation
- reactions with / in liquid ammonia
- Diels-Alder reactions
- others

Hydrogenation

Various homogeneous and heterogeneous hydrogenation methods at technical scale

Saltigo offers

- professional development
- laboratory for catalyst preparation
- parallel screening
- various scales available (lab, pilot, commercial)
- up to >200 bar, >200°C

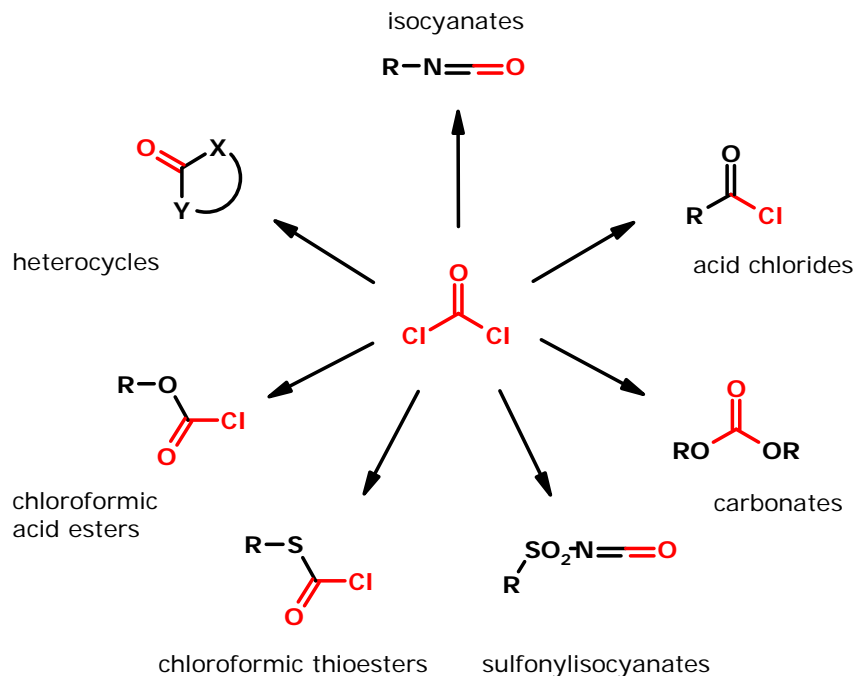


Phosgene Chemistry

Versatile building block for further advanced chemistry

Saltigo offers

- custom synthesis from gram to kilogram scale
- scale-up to multi ton level
- process research and development in dedicated phosgene laboratory



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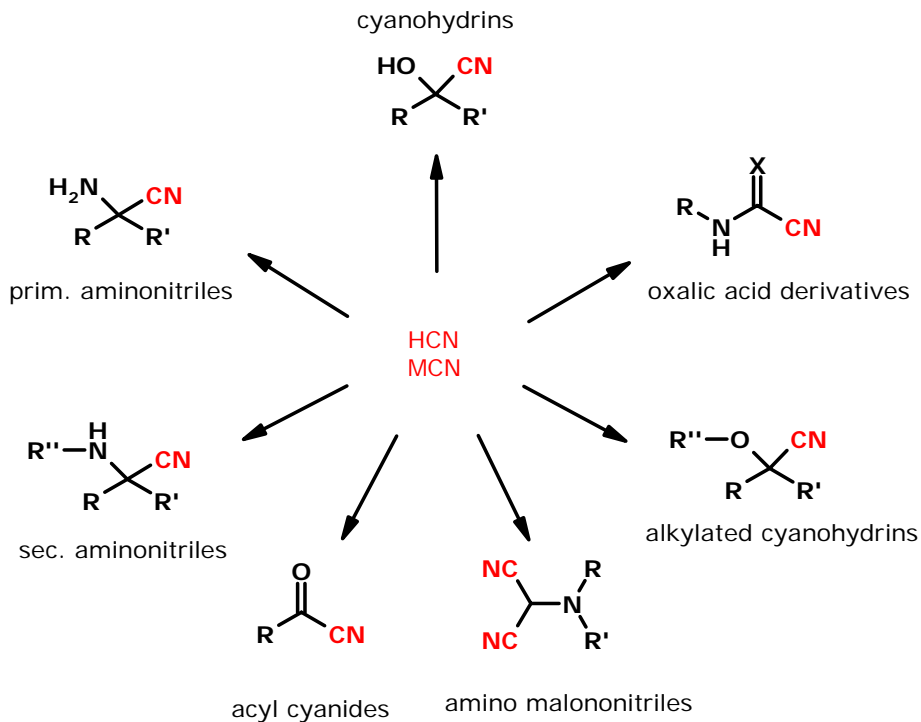
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Cyanide Chemistry

Versatile building block for further advanced chemistry

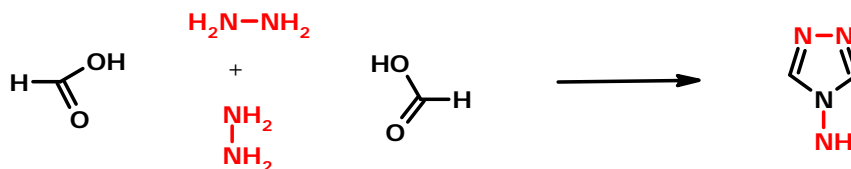
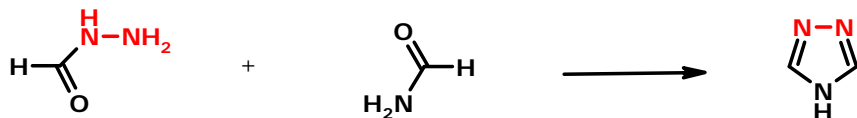
Saltigo offers

- custom synthesis from gram to kilogram scale
- scale-up to multi ton level
- innovative processes



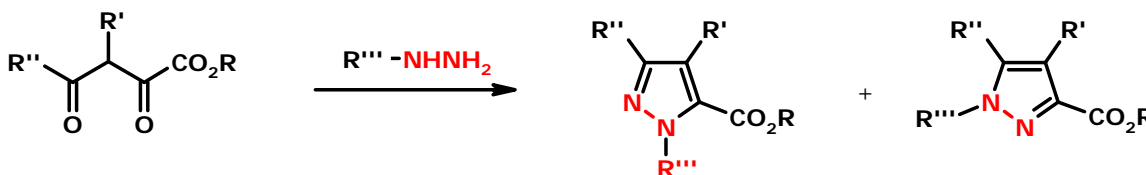
Hydrazine Chemistry

The chemistry of hydrazines offers access to a variety of heterocycles



Saltigo's experience

- definition of appropriate reaction conditions to manipulate selectivity



selectivity depending on reaction conditions: ~20 : 1 or ~1 : 10