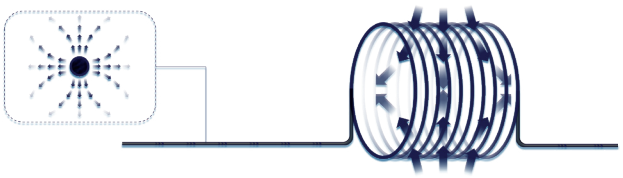
Flow Chemistry for All

WuXi AppTec

New technology platform

Why flow chem?

- Highly efficient mass & heat transfer
- More accurate control of reaction conditions
- Improved process safety
- Access to inaccessible conditions in batch



Key figures

- **120+** chemists & engineers
- **5 sites** with flow chemistry service
- **160,000+** reactions finished by 2025-08
- **93%+** success rate

Service highlights

- Dedicated flow chemistry teams at Shanghai, Tianjin, Wuhan, Chengdu, Nantong sites
- Full experience from parameter optimization to reaction up-scaling
- Supporting both FTE and FFS projects *free of charge*

Reaction types

- **Photochemistry**, λ = 254-455 nm
- **Hydrogenation**, 76 supported catalysts
- **Metalation**, all types of Li, Mg, Zn reagents
- **Diazotization**, coupled to X, OH, N_3, CN, $B(OR)_2$, H, etc.
- **Nitration**
- **Oxidation**, including using O_2 and O_3
- **Reduction**
- **High temperature**, up to 300 °C and 10 MPa
- **Cross-coupling**, with supported catalysts
- **Telescope reactions**
- **and many more**, including CH_2N_2, CO, SF_4, etc.

Safety ↑ **Selectivity** ↑

Yield ↑ **Scalability** ↑

Efficiency ↑ **Reproducibility** ↑

Cycle time ↓ **Cost** ↓

Transform Your Labs with Flow

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v202510

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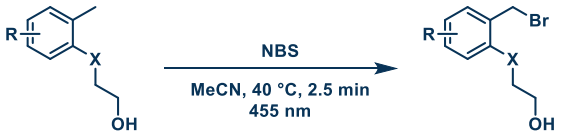
Photochemistry

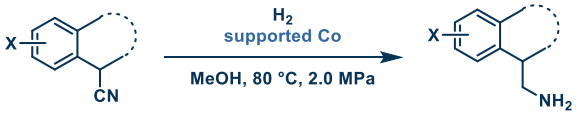


Batch: <10%, NBS, AIBN, CCl_4.

Flow: 75%, 1.1 kg in 90 min.

Hydrogenation

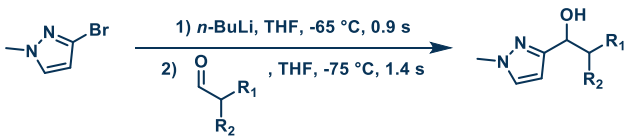
73 supported catalysts



Batch: Various amounts of dehalogenation.

Flow: 86%, no dehalogenation. 80%+ lower in cost.

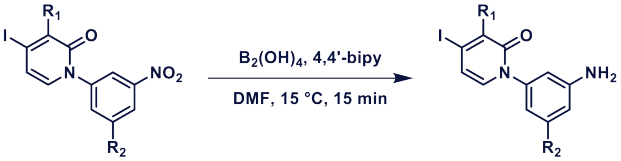
Metalation



Batch: 10%; several side reactions from Li migration.

Flow: 81%, 200 g in 1 h.

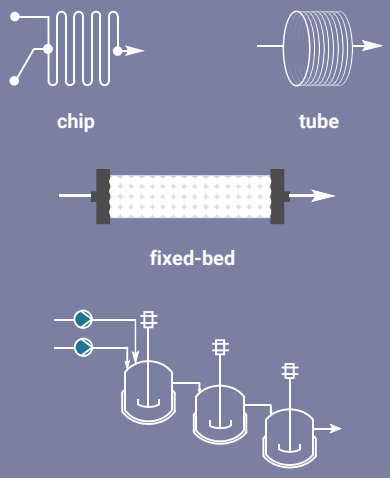
Reduction



Batch: 80%; strong exotherm.

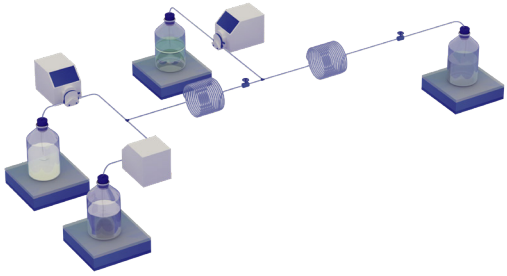
Flow: 96%, 100 g in 90 min. No deiodination.

Reactors



Internal records

- 10 kg in 31 h (non-stop)
- 45 kg of single compound delivered



Disclaimer

This presentation is solely for discussion and informational purposes. It does not constitute an offer to provide the compounds mentioned. Any order placed will be subject to a thorough IP risk assessment. We will only accept orders for synthesis services if it is determined that no third-party intellectual property rights are infringed.

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