



# **SINOCOMPOUND**

Accelerate to the next phase

## **Commercializing the Difficult** *Organometallics Compounds*

Booth #617  
February 2025

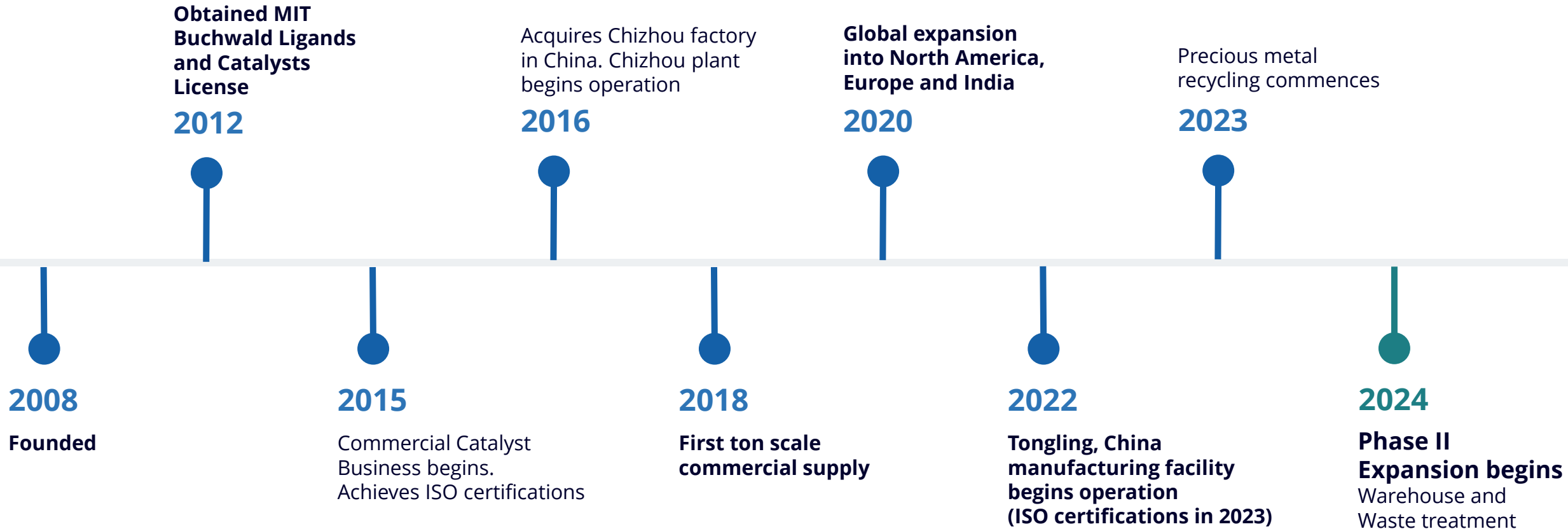




# OUR MISSION |

To help our customers identify, secure, and commercialize the **optimal catalyst technology** with confidence at every stage and scale from R&D to full-scale production.

# COMPANY HISTORY



# ABOUT SINOCOMPOUND

## Organometallic Complexes and Homogeneous Catalysts

- Founded in 2008, 245 Employees

## Global provider

- Fine Chemicals, Electronics and Petrochemicals industries

## Proven process to Commercialize

- Expertise in organometallic synthesis
- R&D, Scale-up, and Manufacturing
- Robust EHS and quality systems

## Established partnerships

- Academia and Industry





# LOCATIONS

Where we are 📍

**Headquarters:** Zhangjiagang, China

**R&D Facilities:** Suzhou & Zhangjiagang (10,000m<sup>2</sup>)

**Manufacturing Site:** Tongling (Expansion 2026)

**Global Footprint:** NA, EU, UK, India & China

Where our customers are 📍



# STATE-OF-THE-ART FACILITIES

## Zhangjiagang R&D

- 10,000m<sup>2</sup>
- Synthesis Labs
- Analytical Labs
- 50+ fume hoods
- 20+ 100L reactors
- 8 glove boxes
- LC, GC, ICP-MS, UV-Vis, external NMR



## Tongling Plant, Anhui Province

- Commissioned Q3 2022
- Investment : \$30m
- 65,000m<sup>2</sup>
- 63 Reactors: 100L – 3,000L
- Annual Capacity: 50 tons catalyst/ligands
- ISO9001  
ISO14001  
ISO45001

# TONGLING PLANT PHASE I



## Reactor Capacity – 50 metric tonnes

- 40 x 100-500L reactors
- 23 x 1000-3000L reactors

## Reactor Materials of Construction & Capacities

- Stainless steel enameled with glass: 100L to 3000L
- Stainless steel lined with PTFE: 1000L
- Stainless steel: 100L, 500L, 1000L, 3000L

## Cryogenic Capabilities

- -80 ° C to 160 ° C



銅陵欣諾科新材料有限  
SINOCCO



# EXPANSION

铜陵欣诺新材料有限公司  
SINOCOMPOUND TONGLING





# TONGLING PLANT PHASE II

Hazardous Waste Furnace

Warehouse

2024 Completion



# TONGLING PLANT PHASE II



Warehouse

Harzardous  
Waste Furnace

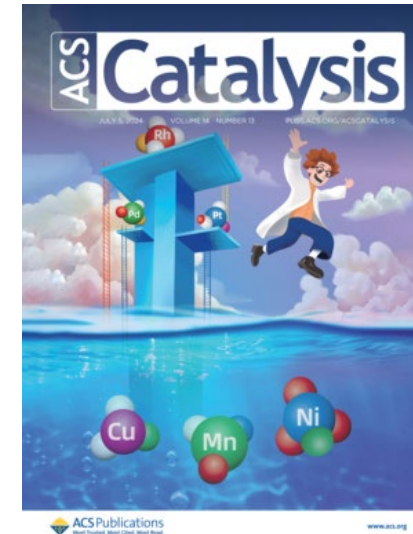
Organometallic  
Manufacturing



- Current Phase: Planning and Permits Application
- Next Phase:
  - Design: Q1-Q2 2025
  - Construction and installation begins Q3-Q4 2025
- Completion by Q4 2026
- Capacity increase from 50MT to 100MT

# CATALYST MARKET

- **90%** of all commercially produced chemicals involve catalysis<sup>1</sup>
- **70%** of Small Molecules involve Palladium catalysis<sup>2</sup>
- **60%** of FDA drugs approved in 2022 are Small Molecules<sup>3</sup>
- **Technology trend** in Non-platinum group catalysis<sup>4</sup>



<sup>1</sup><https://onlinelibrary.wiley.com/doi/10.1002/anie.201509164>, 2015

<sup>2</sup><https://www.technologynetworks.com/drug-discovery/news/novel-green-chemistry-method-improves-pharmaceutical-manufacturing-efficiency-297522>, 2018

<sup>3</sup><https://www.ccdc.cam.ac.uk/discover/blog/fda-novel-drug-approvals-2022>, 2022

<sup>4</sup>H. Zhao et al., ACS Catal. 2024, 14, 13, 9708–9733.

# THE MANY BENEFITS OF CATALYSIS

- Facilitates new routes
- More efficient processes
- Shorter timelines
- Green Chemistry
- Drives cost reduction



# DON'T LIMIT YOUR CATALYST SEARCH

## Evolution of Catalysts

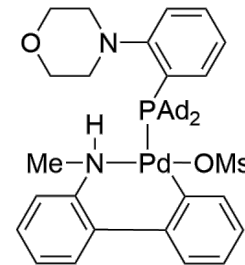
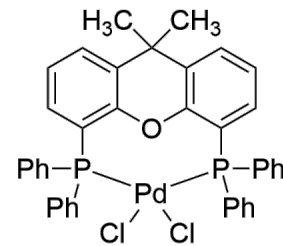


$\text{Pd}(\text{OAc})_2$   
 $\text{PPh}_3$

$\text{PdCl}_2(\text{XantPhos})$

$\text{Pd}$  MorDalPhos G4

???

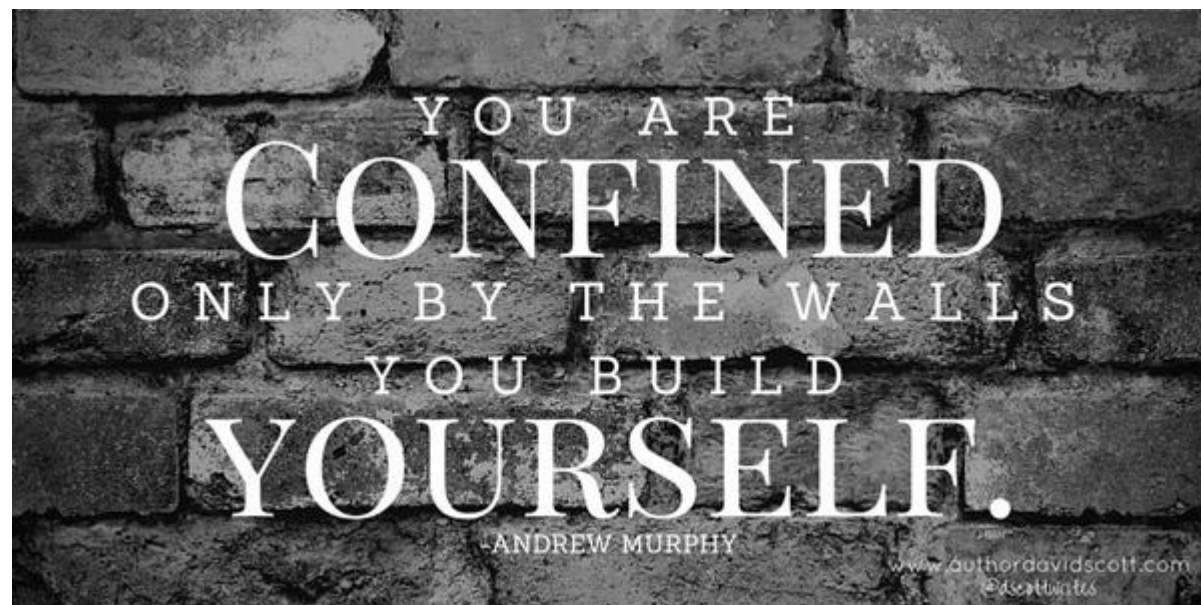


1990

2025

# DON'T LIMIT YOUR CATALYST SEARCH

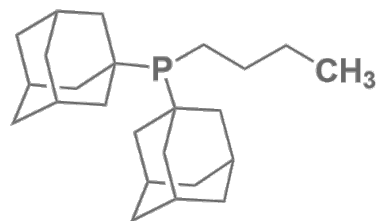
- **Buchwald** Ligands and Precatalysts\*
- **Mark Stradiotto** Research Group\*
- **Keary Engle** Scripps Research Group
- **Dawei Ma** Research Group\*
- PGM and Non-PGM catalysts
- Catalyst Screening



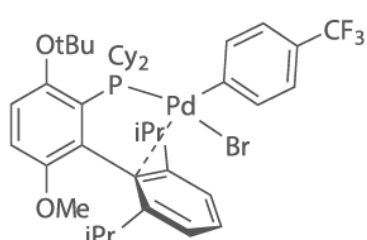


# PRODUCT PORTFOLIO

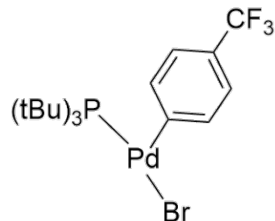
## Cross-coupling catalysts



Ad<sub>2</sub>P(*n*-Bu)

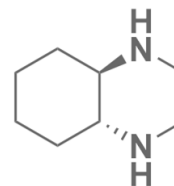


GPhos Pd G6 Br

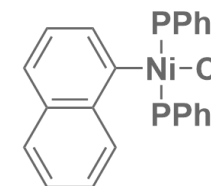


Pd PtBu<sub>3</sub> G6 Br

## Non-platinum group metal catalysts

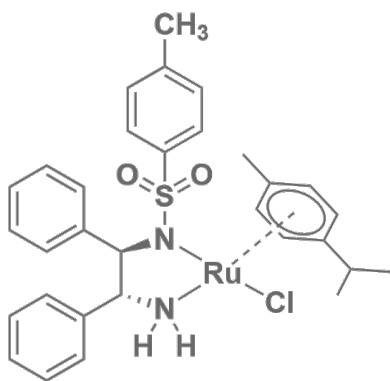


Dimethyl-cyclohexanediamine  
(Cu catalysis)

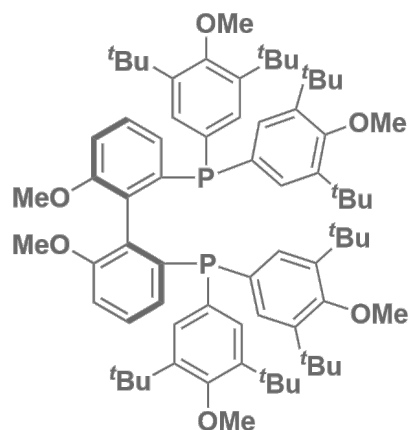


Ni(PPh<sub>3</sub>)<sub>2</sub>(naph)Cl

## Chiral catalysts

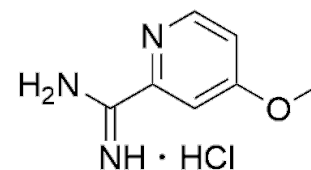


(RuCl[(*R,R*)-Tsdpen](*p*-cymene))

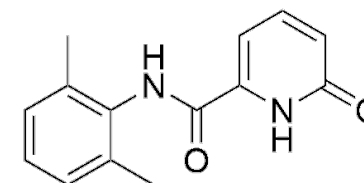


DTBM-MeOBIPHEP

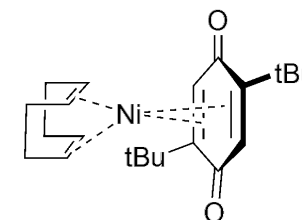
## Latest additions



MeO-PyCam  
(Ni catalysis)



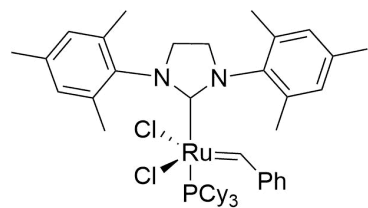
6-hydroxypicolinamide ligands  
(Cu catalysis)



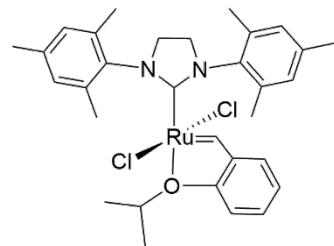
Ni(COD)(tBu-BQ)

# PRODUCT PORTFOLIO

## Grubbs Series

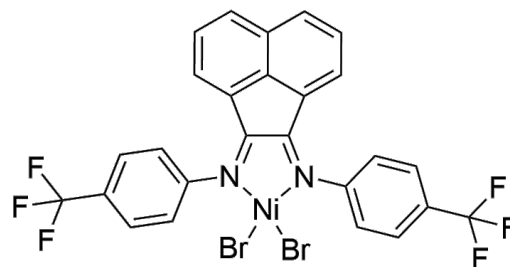


Grubbs II

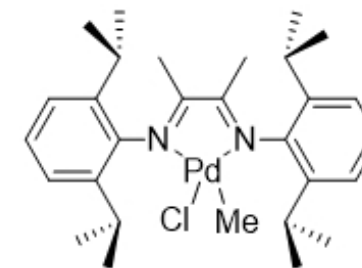


Hoveyda-Grubbs II

## Non-metallocenes

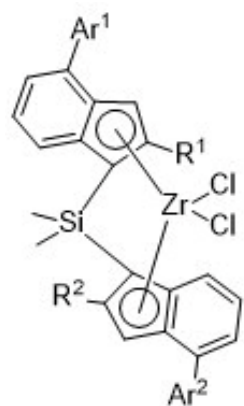


(Ar-N=C(An)-C(An)=N-Ar)NiBr<sub>2</sub>  
(Ar = p-trifluoromethyl phenyl)



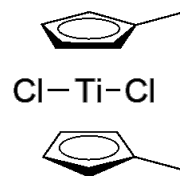
(Ar-N=C(Me)-C(Me)=N-Ar)Pd(Me)(Cl)  
(Ar = 2,6-diisopropyl phenyl)

## Bridged

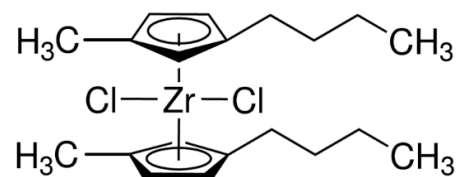


R<sup>1</sup> = H, Me, *i*Pr, etc.  
Ar = Ph, 4-*t*BuPh, etc.

## Unbridged

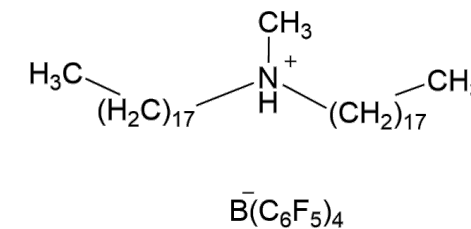


(C<sub>5</sub>H<sub>4</sub>Me)<sub>2</sub>TiCl<sub>2</sub>



Bis(1-butyl-3-methylcyclopentadienyl)zirconium  
dichloride

## Co-Catalyst



Bis(octadecyl)methylammonium  
tetrakis(pentafluorophenyl)borate

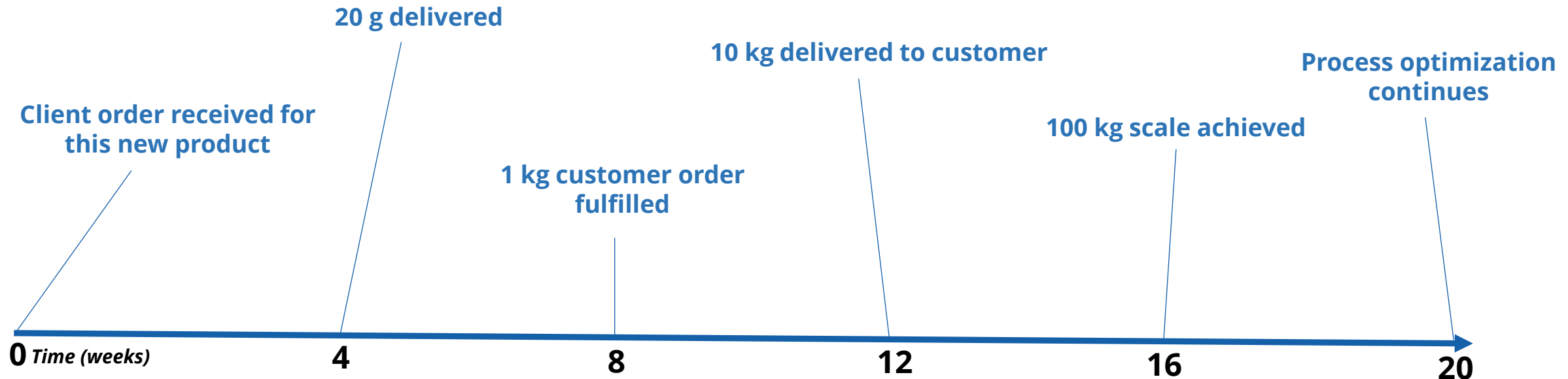
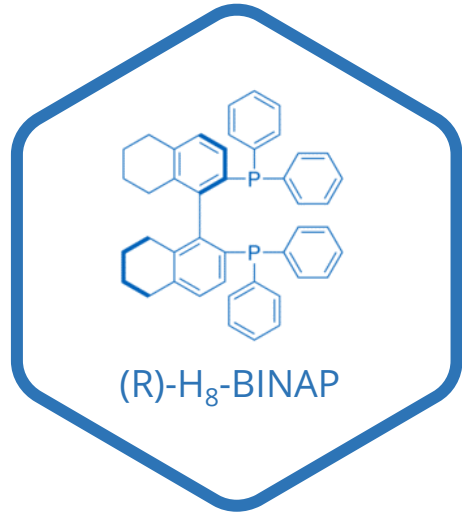
# DRIVE YOUR PROCESS COST DOWN

**Don't dismiss technology that's currently not commercially available**



- Reduce catalyst selection time
- Commercialize optimal catalyst
- Accelerate to the next phase

# TIMELINES TO COMMERCIALIZATION



# SELECTING THE RIGHT PARTNER

- Advanced technology focus
- Collaboration/Partnering
- Rigorous IP due diligence
- Innovative manufacturing solutions
- **Commercializing the difficult**

*Speed   Quality   Flexibility*

**OPTIMAL  
CATALYST**



■ ■ ■ Show pages JUL/AUG 2024

# SPECIALITY CHEMICALS

SPECICHEMONLINE.COM

## MAGAZINE

The cover features a portrait of Dr. Carin Seechurn, Associate Director of Sinocompound, in front of a chalkboard with various chemical structures. The structures include a palladium complex with a Cy<sub>2</sub>P ligand, a brominated benzene ring with a CF<sub>3</sub> group, a phenyl ring with a Pr group, and a phosphorus-containing heterocyclic structure.

### Commercialising the Difficult

Homogeneous catalysts & ligands

**Dr Carin Seechurn**  
Sinocompound, Associate Director  
Technology Solutions

**SINOCOMPOUND**  
Accelerate to the next phase

**IN THIS ISSUE**  
High Potency APIs • Contract Research & Toxicology • Supply Chain Management • Sustainability • Regulation & Compliance

# SINOCOMPOUND

- Booth #617
- Our Offering
- Our Partner Philosophy

**SINOCOMPOUND** |



**THANK YOU**

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**SC**