

**CLASSIFIED**

# Welcome CSI Recruits



EURO Scholars

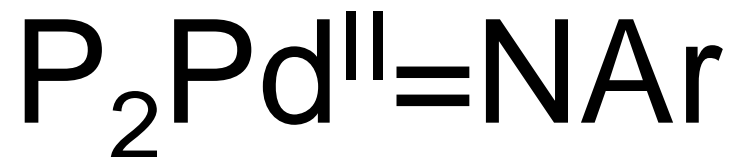
European Undergraduate  
Research Opportunity



Universiteit  
Leiden  
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# Quest for Palladium(II) Imido Complexes for Catalytic Isocyanate Formation



# Team Leader

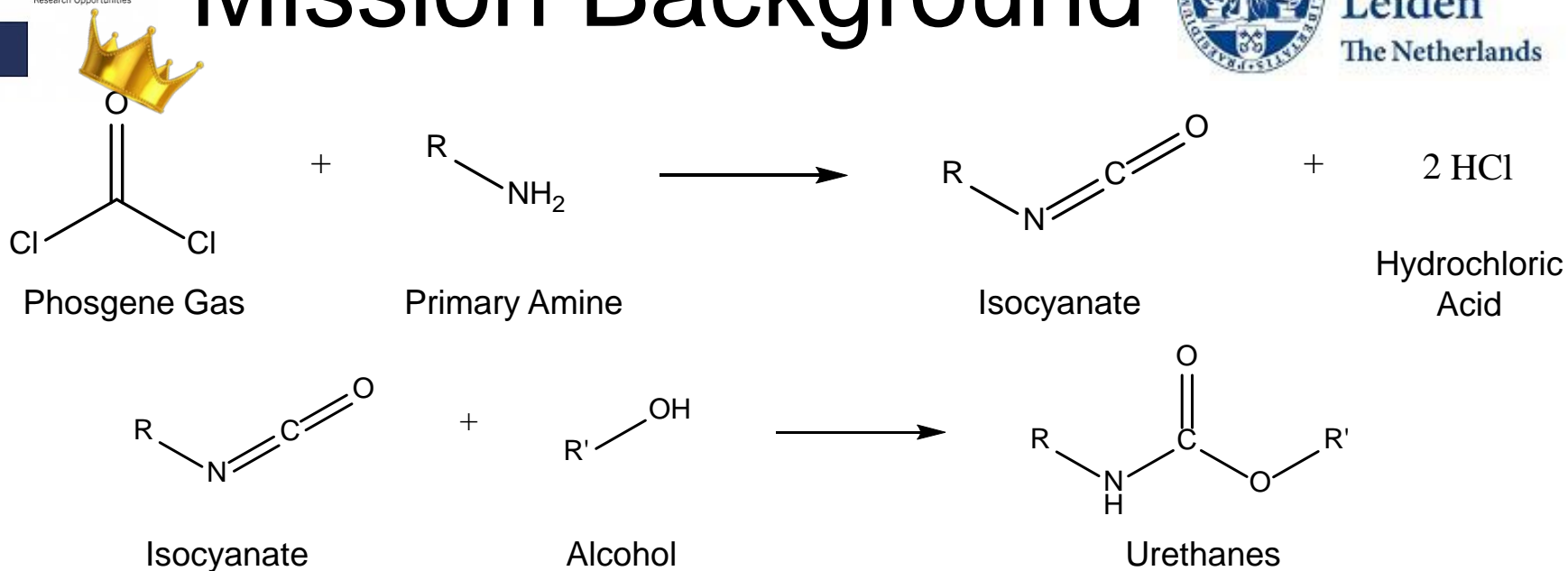


- 3<sup>rd</sup> Year Bachelor's Student
- Chemistry Major
- University: Michigan Technological University in Houghton, Michigan
- Hometown: Germantown, Wisconsin
- Leiden University Faculty of Science
- Plan to get a PhD in Inorganic Chemistry
- Interests: scientific public policy, heterogeneous catalysis, nuclear chemistry, alternative energy technology, electrochemistry, materials chemistry
- Like the outdoors, fishing, hiking, road trips, and cooking





# Mission Background



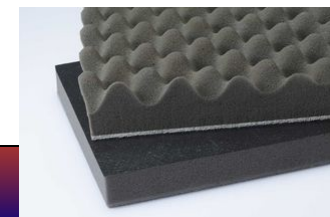
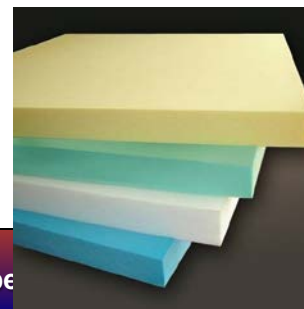
- Phosgene Gas

- Dangerous
- Chemical Weapon Used in WWI
- Cause 85% of chemical related deaths in WWI
- Reacts with proteins in pulmonary alveoli to disrupt oxygen transfer



- Isocyanates

- Makes foams, plastics, coatings, curing agents, pharmaceuticals

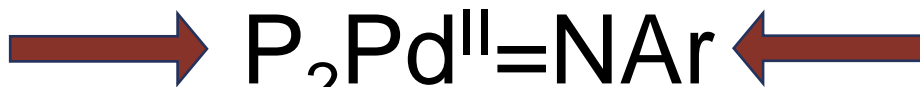


# Mission Objective

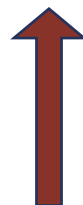


- Goal is to make palladium imido complex for isocyanate production

Two proton abstraction from aromatic amines with palladium alkyl intermediates



Single proton abstraction from asymmetrical palladium amides

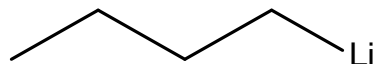


Oxidation of palladium zero to palladium two with aromatic azides



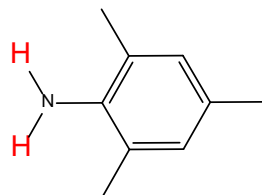
# Team A: Two Proton Forest

Asset Profile:

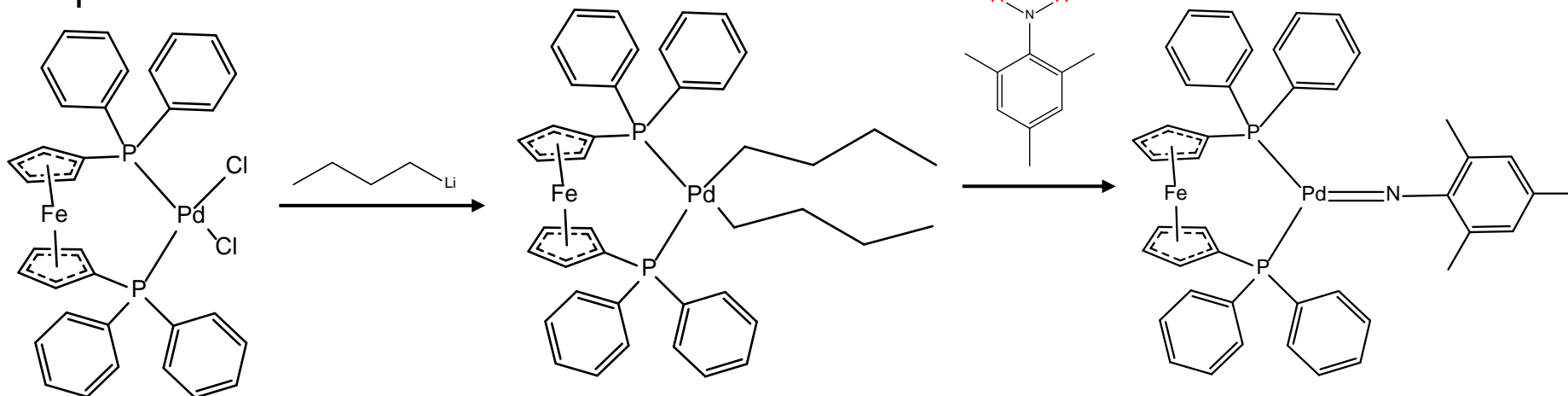


Attributes: Always knows a solution, negative outlook, volatile temper

Asset Profile:

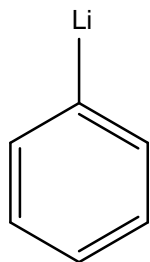


Attributes: Team player, donates time to palladium



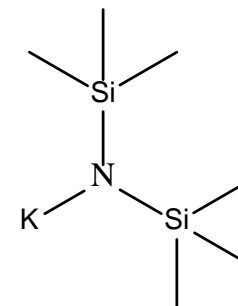
# Team B: Single Proton Bog

Asset Profile:

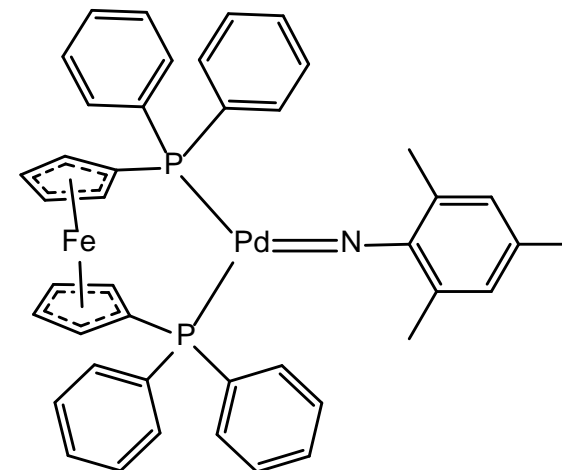
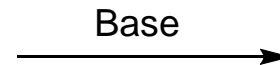
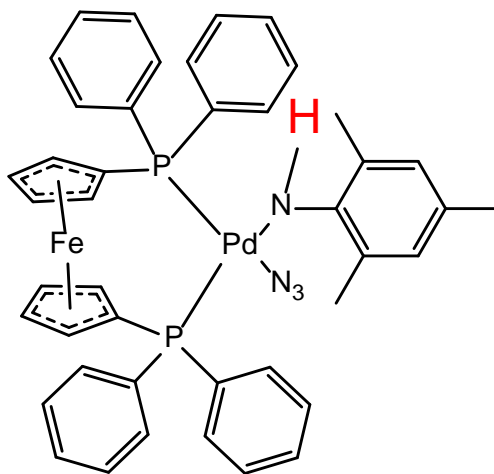


Attributes: Integral to the solution, volatile when humid, basic driver

Asset Profile:



Attributes: Has a twin and cousins are triplets, loves Starbucks and pretends to be vegetarian, great driver





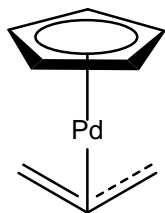
# Team C: Oxidation of Palladium Zero

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Research Opportunities



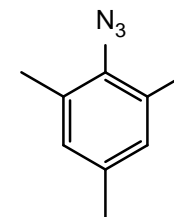
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Deep Cover Operative:

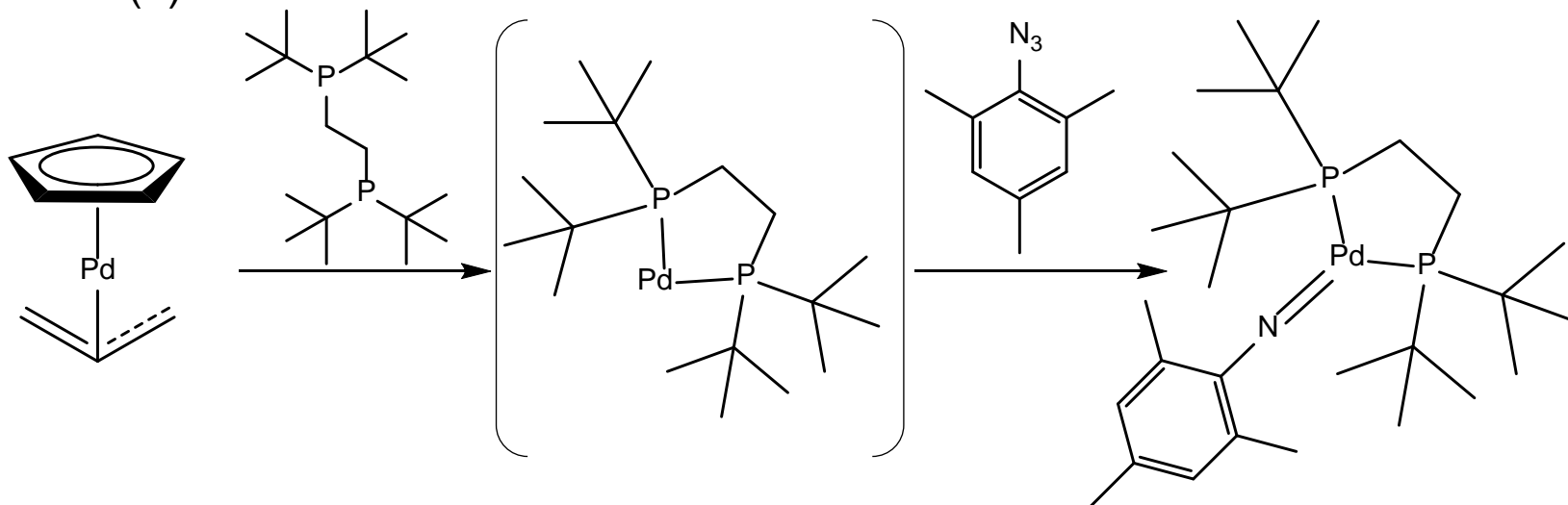


Attributes: Responds only to code word dtbpe, true identity is Palladium(0)

Agent Profile:



Attributes: Cold towards other agents, only works under pressure, dangerous and not to be trusted



# Acknowledgments



Prof. Dr. Lies Bouwman  
Amin Sk, MSc  
Entire MCBIM Group  
Usha Mohunlol  
Vienna Chapin