

Course Chem 345 Lecturer Prof. Gellman
 Day Wednesday Date 4/22/15
 Notes Taken By Cassie James Total # of Pages 5

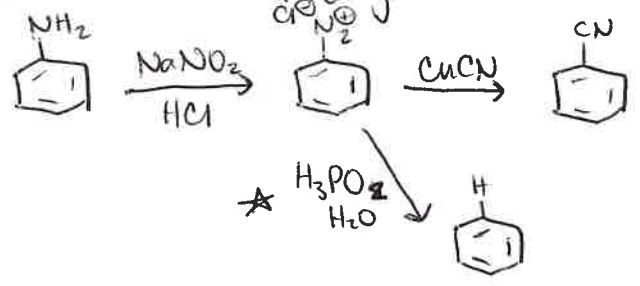
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Exam #3: Friday, May 1 = Through Chp. 23 (amines)

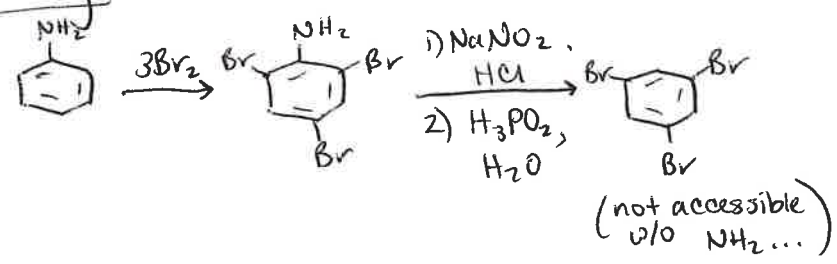
Same rooms as previous exams

Office hours Today 4-6 pm (none on Friday)

Recall: Reactions of aryl diazonium ions...



Utility:



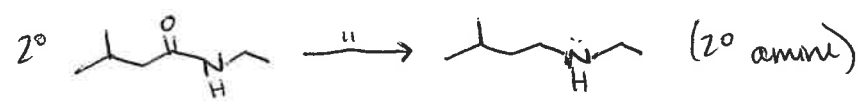
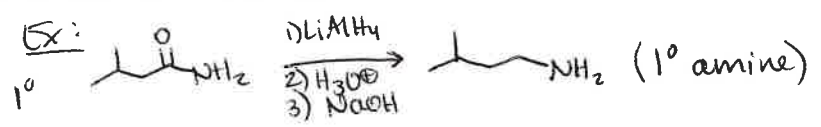
* use amino group as directing group and then remove

Synthesis of amines

Recall: Hard to control S_N2 reactivity of amines...

* Solution to the "over-alkylation" problem:

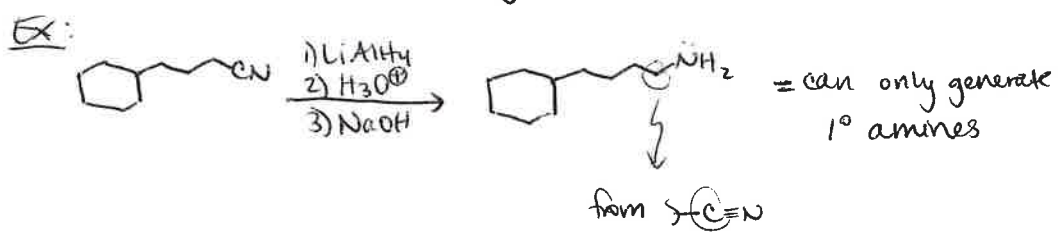
- 1) Reductive amination (discussed last time)
- 2) Reduction of amides (Chp. 21)



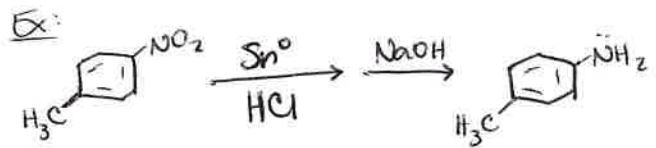
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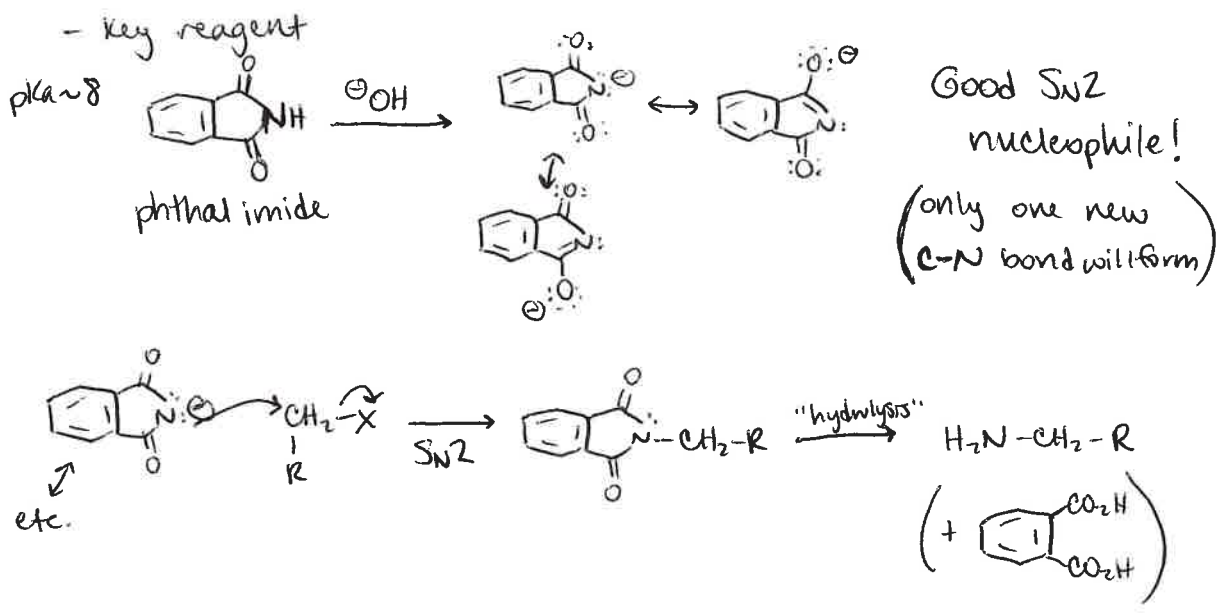
3) Reduction of nitriles (1° only)



4) Reduction of aryl nitro groups



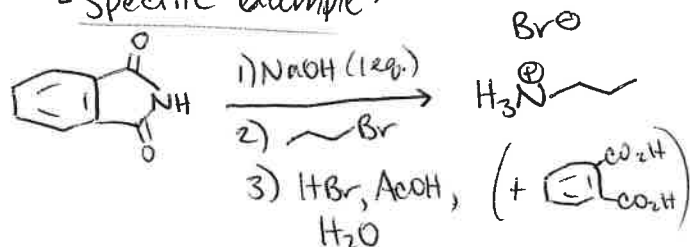
5) Gabriel synthesis - 1° only



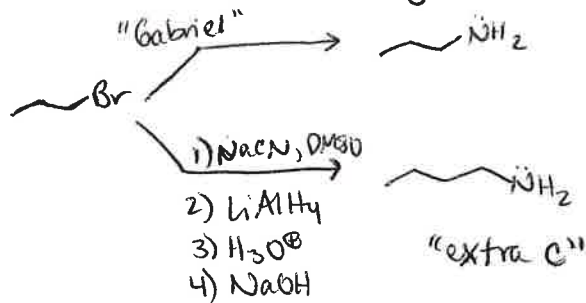
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- specific example:

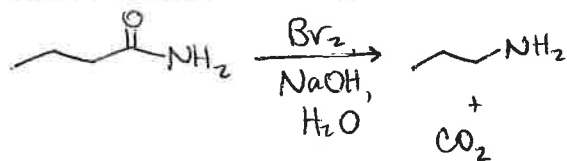


- Note complementarity:

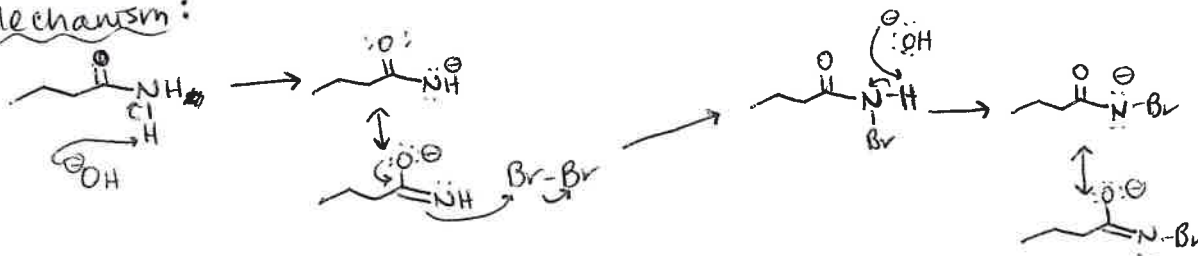


~~scribble~~

• Hofmann Rearrangement:



* Mechanism:

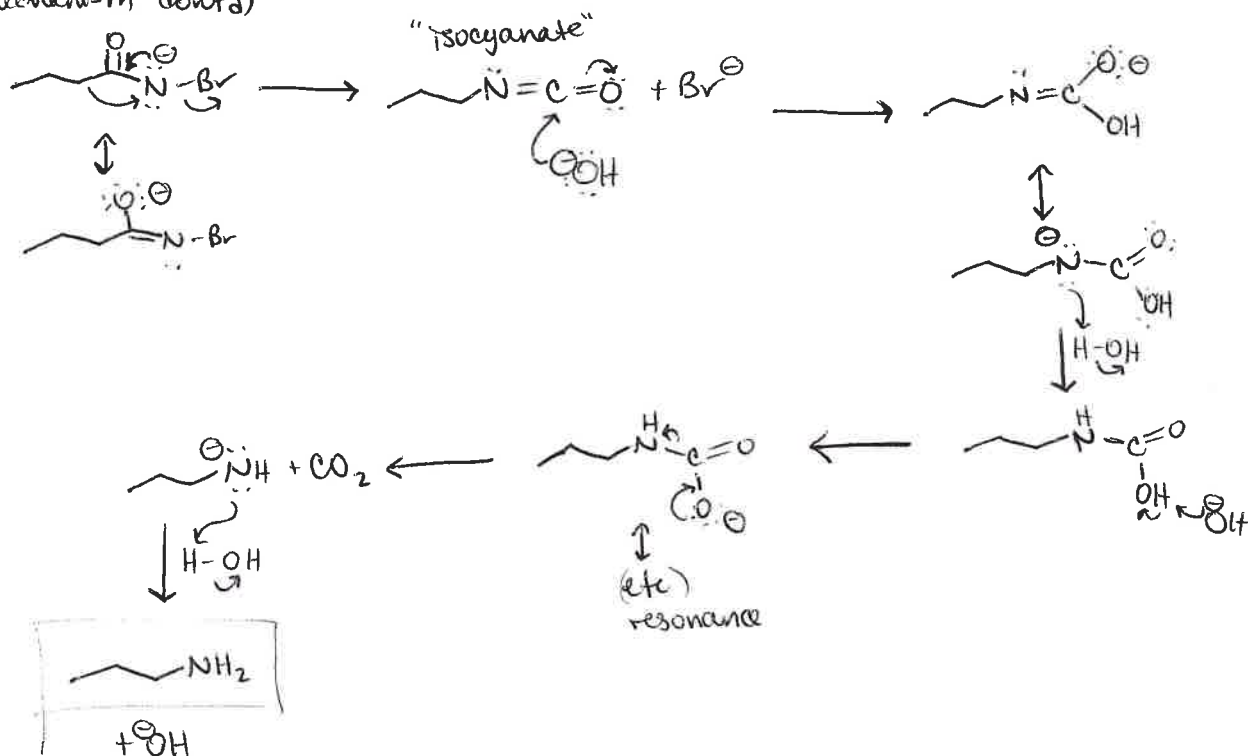


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on next
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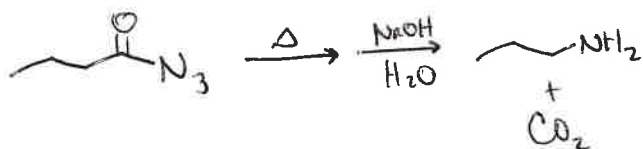
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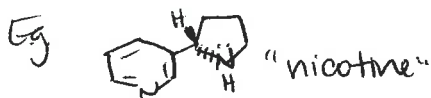
(mechanism cont'd)



• See text regarding "Curtius rearrangement"



• Note: § 23.12 - "Alkaloids" - N-containing natural molecules



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Chp. 27 - Pericyclic Reactions

↳ Recommended problems: All