

**B.Sc. Semester-IV
Core Course-IX (CC-IX)
Organic Chemistry-III**



III. Heterocyclic Compounds

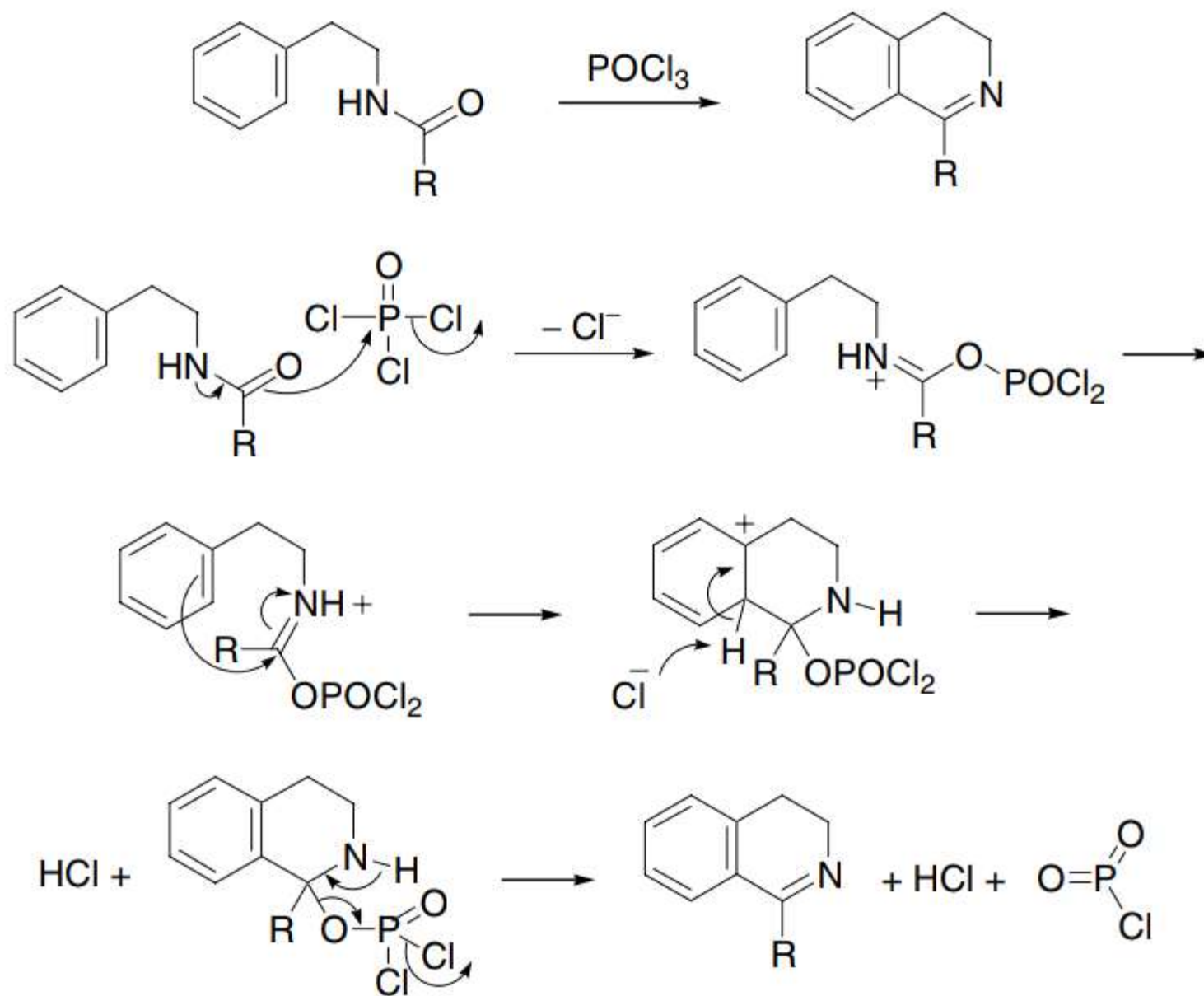
11. Bischler-Napieralski Reaction



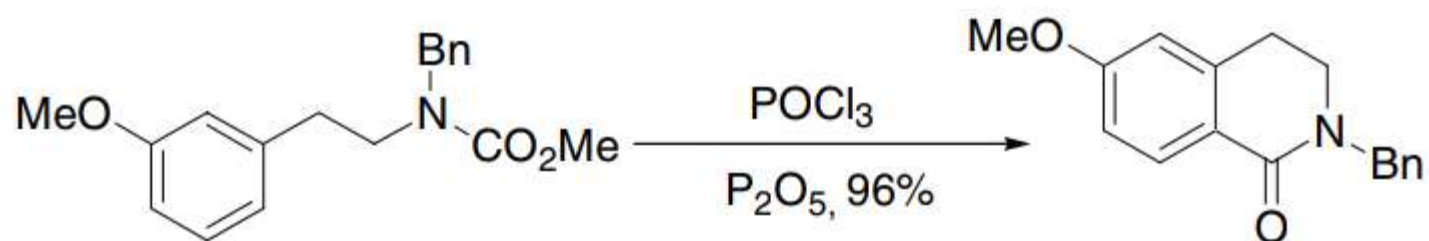
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Bischler-Napieralski reaction

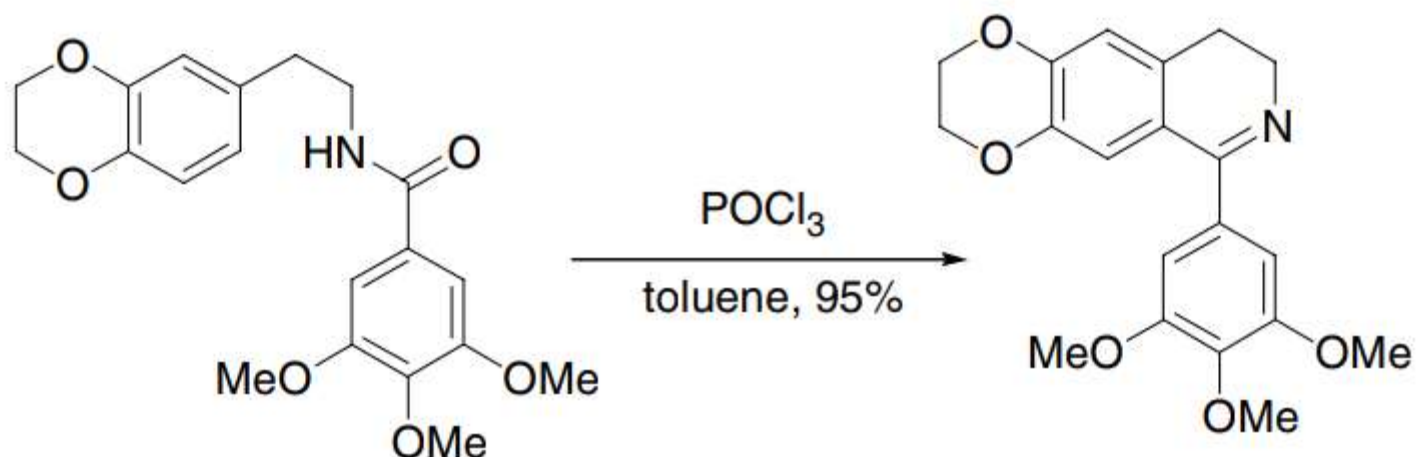
Dihydroisoquinolines from β -phenethylamides using phosphorus oxychloride.



Example 1⁶



Example 2¹⁰



References

1. Bischler, A.; Napieralski, B. *Ber. Dtsch. Chem. Ges.* **1893**, *26*, 1903. Augustus Bischler (1865–1957) was born in South Russia. He studied in Zurich with Arthur Hantzsch. He discovered the Bischler–Napieralski reaction while studying alkaloids at Basel Chemical Works, Switzerland with his coworker, B. Napieralski.
2. Fodor, G.; Nagubandi, S. *Heterocycles* **1981**, *15*, 165.
3. Rozwadowska, M. D. *Heterocycles* **1994**, *39*, 903.
4. Sotomayor, N.; Dominguez, E.; Lete, E. *J. Org. Chem.* **1996**, *61*, 4062.
5. Doi, S.; Shirai, N.; Sato, Y. *J. Chem. Soc., Perkin Trans. 1* **1997**, 2217.
6. Wang, X.-j.; Tan, J.; Grozinger, K. *Tetrahedron Lett.* **1998**, *39*, 6609.
7. Sanchez-Sancho, F.; Mann, E.; Herradon, B. *Synlett* **2000**, 509.
8. Ishikawa, T.; Shimooka, K.; Narioka, T.; Noguchi, S.; Saito, T.; Ishikawa, A.; Yamazaki, E.; Harayama, T.; Seki, H.; Yamaguchi, K. *J. Org. Chem.* **2000**, *65*, 9143.
9. Miyatani, K.; Ohno, M.; Tatsumi, K.; Ohishi, Y.; Kunitomo, J.-I.; Kawasaki, I.; Yamashita, M.; Ohta, S. *Heterocycles* **2001**, *55*, 589.
10. Capilla, A. S.; Romero, M.; Pujol, M. D.; Caignard, D. H.; Renard, P. *Tetrahedron* **2001**, *57*, 8297.
11. Nicoletti, M.; O'Hagan, D.; Slawin, A. M. Z. *J. Chem. Soc., Perkin Trans. 1* **2002**, 116.
12. Wolfe, J. P. *Bischler–Napieralski Reaction In Name Reactions in Heterocyclic Chemistry*, Li, J. J.; Corey, E. J. Eds.; Wiley & Sons: Hoboken, NJ, **2005**, 376–385. (Review).

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