

ORGANIC CHEMISTRY 2 LECTURE GUIDE 2019

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Printed in the United States of America

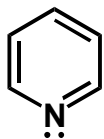
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ISBN 978-0578415017 (IQ-Proton Guru)

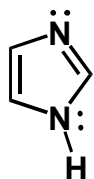
Lesson IV.5. Aromaticity Effects on Acidity and Basicity

Aromaticity and basicity – It's all about stability

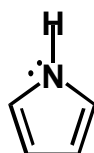
The basicity of molecules/sites in a molecule can be predicted by thinking about the behavior of the lone pairs as related to aromaticity:



pyridine



imidazole

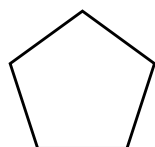
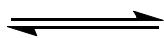


pyrrole

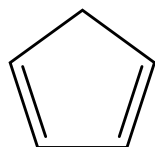
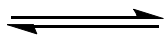
Notes

Lesson IV.5. Aromaticity Effects on Acidity and Basicity*Aromaticity and acidity – It's all about stability*

Likewise, we know that acid strength is tied to the relative stability of the conjugate base anion. If a compound becomes aromatic upon deprotonation, this will make it a stronger acid:

 $pK_a > 50$ 

A

 $pK_a = 16$ 

B

Notes