

ORGANIC CHEMISTRY 2 LECTURE GUIDE 2019

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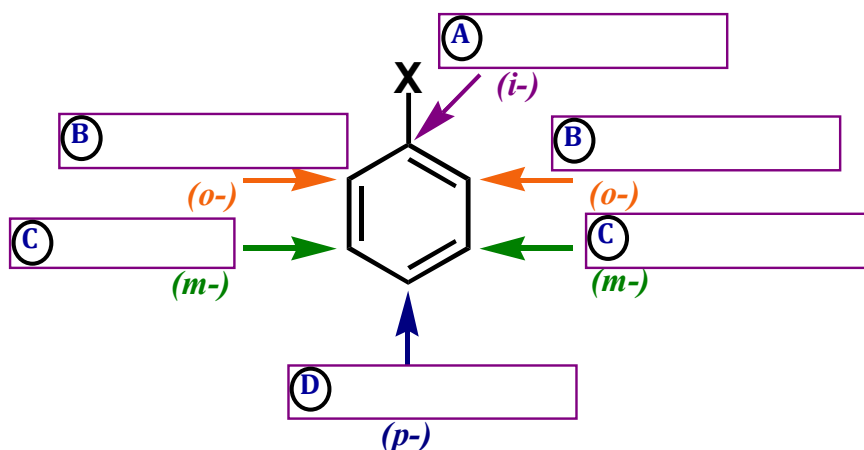
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Lesson IV.10. Nomenclature of Polysubstituted Benzene Compounds

Naming polysubstituted benzene and ortho-/meta-/para- system

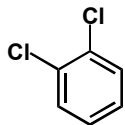
When naming benzene derivatives, you can use benzene as the parent chain and numbers to denote positions of substituents, like we learned for cycloalkanes in Organic 1. However, there is another widely-used nomenclature method for disubstituted benzenes you must also know:



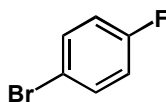
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Lesson IV.10. Nomenclature of Polysubstituted Benzene Compounds

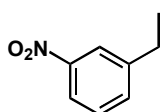
Benzene nomenclature examples



(A)



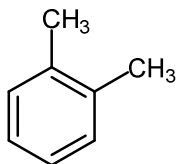
(B)



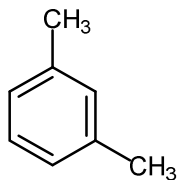
(C)

Dimethylbenzene has a common name:

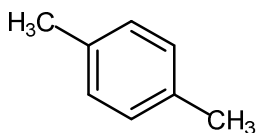
(D)



o-xylene



m-xylene

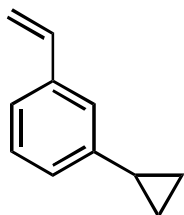


p-xylene

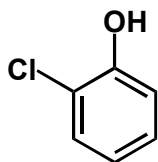
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Lesson IV.10. Nomenclature of Polysubstituted Benzene Compounds*Benzene nomenclature examples*

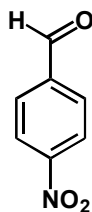
If a particular molecule contains a benzene derivative with a common name, then use that as the parent, and the substituent that is part of the parent structure always is given the number 1 (it is the *ipso*-position if you are using *o*-/*m*-/*p*-):



(A)



(B)



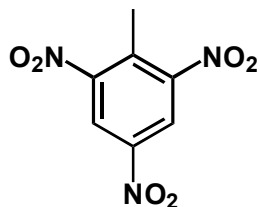
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Lesson IV.10. Nomenclature of Polysubstituted Benzene Compounds

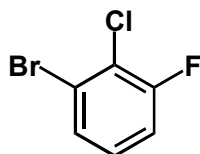
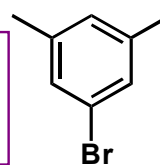
Benzene nomenclature examples

If there are more than two substituents on the benzene ring, you must number rather than using *o-/m-/p-*:



(A)

(B)



(C)

Notes