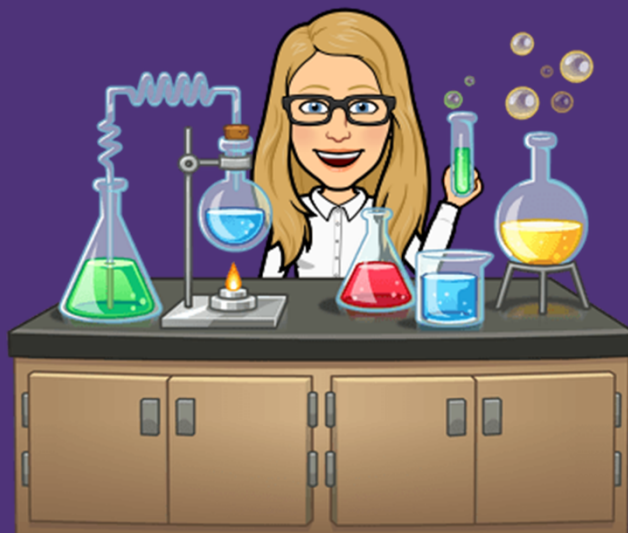


For clicker question voting, go to:
<https://pollev.com/lauriestarke263>



Dr. Laurie S. Starkey
Cal Poly Pomona

CHM 3150 Organic Chemistry II

Announcements 11/13/25

Today's Topic: Electrophiles for EAS Reaction (Ch. 18)

Ch. 17/18 (Step 3)

- ✓ Watch
- ✓ Read
- ✓ Practice

Daily To-Do

Flipped Lectures

Step 3

- Read Sec. 18.2 - 18.6 [Electrophiles for EAS](#)
- Work through **SkillBuilder 18.3 Steric Effects** & textbook problems 18.1-18.11
- Free Red Ink Homework: [EAS Homework II](#)

[Aromatic Reactions - Part 2](#)

45 minutes

skeleton notes pages 18-5 through 18-10

Electrophiles for Electrophilic Aromatic Substitution	38:43
Reaction: Halogenation	38:44
Electrophiles for Electrophilic Aromatic Substitution	40:27
Reaction: Nitration	40:28
Electrophiles for Electrophilic Aromatic Substitution	41:45
Reaction: Sulfonation	41:46
Electrophiles for Electrophilic Aromatic Substitution	43:19
Reaction: Friedel-Crafts Alkylation	43:20
Electrophiles for Electrophilic Aromatic Substitution	45:43
Reaction: Friedel-Crafts Acylation	45:44
Electrophilic Aromatic Substitution: Nitration	46:52
Electrophilic Aromatic Substitution: Nitration	46:53
Mechanism	48:56
Nitration of Aniline	52:40
Nitration of Aniline Part 1	52:41
Nitration of Aniline Part 2: Why?	54:12
Nitration of Aniline	56:10
Workaround: Protect Amino Group as an Amide	56:11
Electrophilic Aromatic Substitution: Sulfonation	58:16
Electrophilic Aromatic Substitution: Sulfonation	58:17
Example: Transform	59:25
Electrophilic Aromatic Substitution: Friedel-Crafts Alkylation	62:24
Electrophilic Aromatic Substitution: Friedel-Crafts Alkylation	62:25
Example & Mechanism	63:37
Friedel-Crafts Alkylation Drawbacks	65:48
A) Can Over-React (Dialkylation)	65:49
Friedel-Crafts Alkylation Drawbacks	68:21
B) Carbocation Can Rearrange	68:22
Mechanism	69:33
Friedel-Crafts Alkylation Drawbacks	73:35
Want n-Propyl? Use Friedel-Crafts Acylation	73:36
Reducing Agents	76:45
Synthesis with Electrophilic Aromatic Substitution	78:45
Example: Transform	78:46
Synthesis with Electrophilic Aromatic Substitution	80:59
Example: Transform	81:00

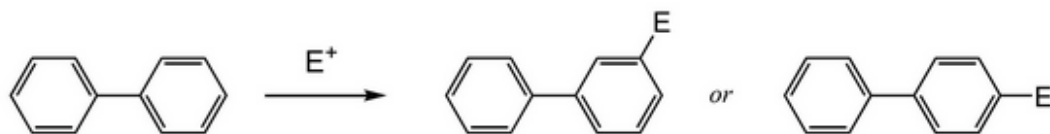
Electrophiles for EAS & Synthesis

Flipped Lecture: Ch. 18 Aromatic Rxns (Part 2 of 3)

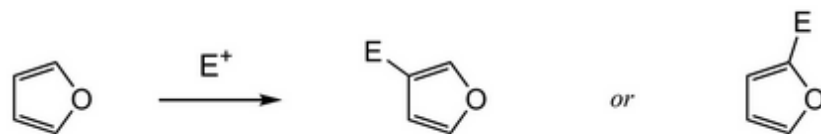
Assignments for Ch. 18: EAS#1 & EAS#2

California State Polytechnic University, Pomona
Organic Chemistry II CHM 3150, Dr. Laurie S. Starkey
Electrophilic Aromatic Substitution (EAS) Homework I

Name: _____ Section: _____ (day/time)



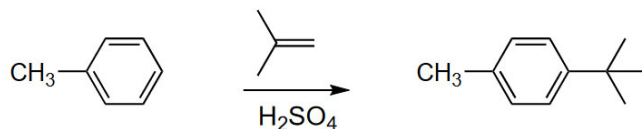
A) Which would you expect to be the major product?
hint: compare reactivity



B) Furan is known to give the 2-substituted compound as the major product. Explain why, using *of the competing intermediates*

California State Polytechnic University, Pomona
Organic Chemistry II, CHM 3150, Dr. Laurie S. Starkey
Electrophilic Aromatic Substitution (EAS) Homework II

Name: _____ Section: _____ (day/time)



A) Provide a complete mechanism for the above Friedel-Crafts Reaction.
Pay close attention to details, including lone pairs, formal charges and the use of curved arrows.

EAS #1 Homework 5.0

FridayFive Week 11 - Nanotechnology 4.0

OLC Report Week 12 1.0

EAS #2 Homework 5.0



Do you know what this weekend is?!

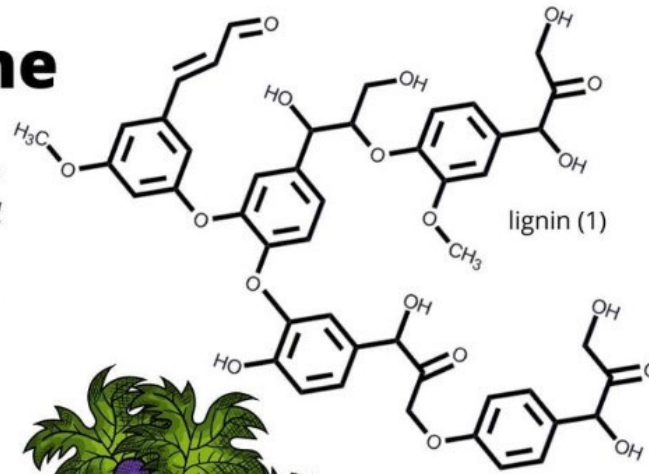
CHM 3150 Organic Chemistry II, Dr. Laurie S. Starkey, Fall 2025					
<i>Tentative Schedule (Chapter and Worksheet #)</i>					
Week	Mon	Tues	Wed	Thurs	Fri
9	10/20	10/21 Ch. 21 #1	10/22	10/23 Ch. 21 #2	10/24
10	10/27	10/28 Ch. 21 #3	10/29	10/30 Ch. 21 #4	10/31
11	11/3	11/4 Ch. 17 #1	11/5	11/6 Ch. 17/18 #2	11/7
12	11/10	11/11 Holiday	11/12	11/13 Ch. 17/18 #3	11/14
13	11/17	11/18 17/18 #4 Ch. 22.10, 22.11	11/19	11/20 Ch. 16 #1	11/21
14	11/24	11/25 Exam III	11/26	11/27 Holiday	11/28 Holiday

Smoke Taint in Wine

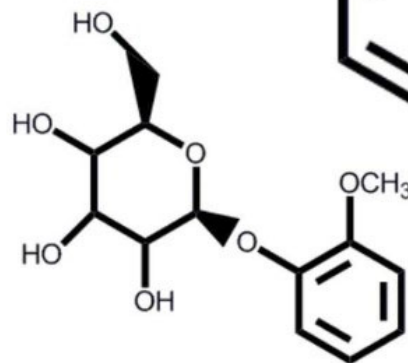
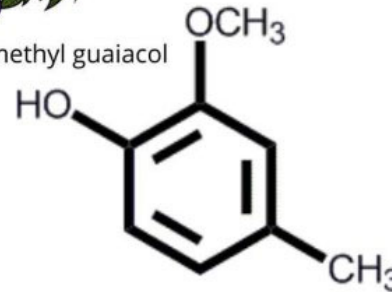
Lignin is found in the cell walls of wood and bark. The complex polymer breaks down into volatile phenols when burned.

Volatile phenols in smoke include guaiacol, 4-methyl guaiacol and cresols that may impart ashy flavors on wine.

The nontoxic volatile phenols bind to sugars in the grape skins and berries forming nonvolatile glycoconjugates with no smoke flavor or aroma.



4-methyl guaiacol

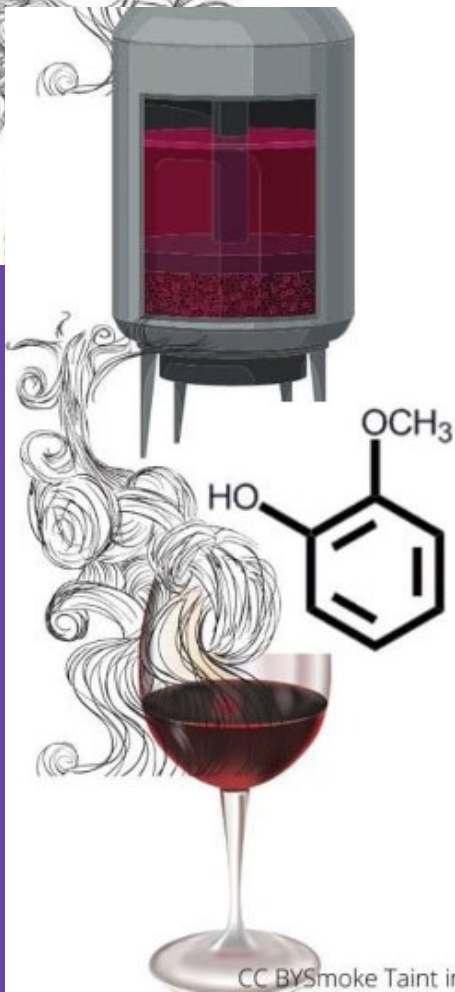


glycoconjugates (2)

Phenols in smoke bind to sugars in grape skins

Smoke Taint in Wine

Smoke Taint in Wine
by Brooke Taylor



During fermentation, yeast enzymes break the glycosidic bond separating the sugar and volatile phenols. Smoke sensory characteristics can now be detected.

The glycoside bond will continue to break during bottle aging. Enzymes in saliva will also break the bond and may cause a lingering ashy taste.

