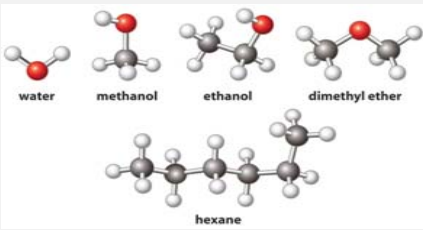


Lecture 16 CH101 A1 (MWF 9 am) Fall 2016 Copyright © 2016 Dan Dill dan@bu.edu

[TP] Identify the compound with the **smallest** energy of vaporization (kJ/mol).

25% 1. water
25% 2. ethanol
25% 3. dimethyl ether
25% 4. hexane



water methanol ethanol dimethyl ether
hexane

BOSTON UNIVERSITY

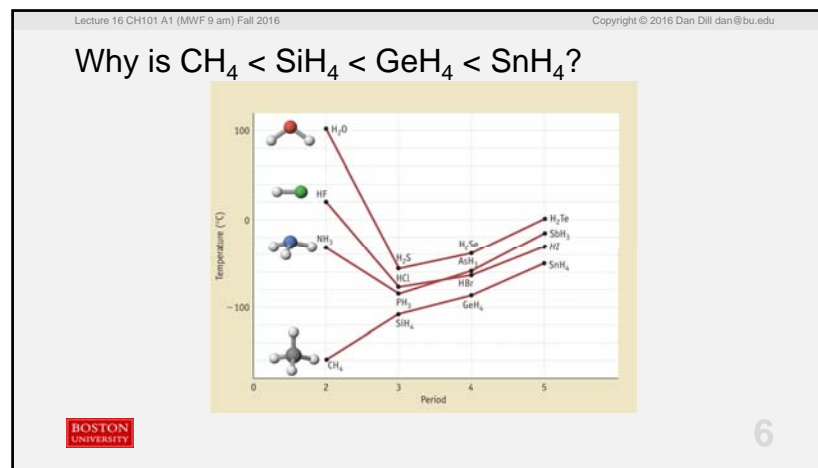
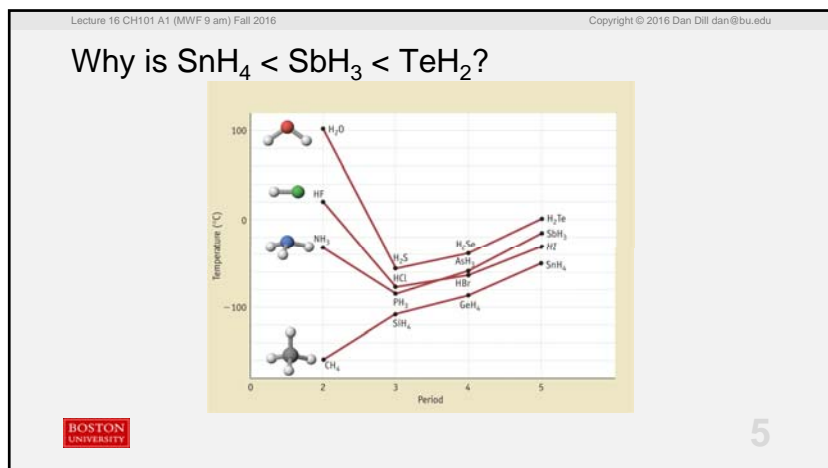
Response Counter 10 1

Lecture 16 CH101 A1 (MWF 9 am)
Friday, October 14, 2016

- Complete: Relative boiling points

Next lecture: Review: Intermolecular forces; dissolving ionic solids, solubility rules (memorize solubility guidelines fig 6.28 p 181); precipitation reactions; concentrations after precipitation; ionization of molecular solutes; self-ionization of water

BOSTON UNIVERSITY



Lecture 16 CH101 A1 (MWF 9 am) Fall 2016

Copyright © 2016 Dan Dill dan@bu.edu

[TP] The correct order of **polarity** of HBr, HCl and HI is (least to most) ...

- 17% 1. HBr < HCl < HI
- 17% 2. HBr < HI < HCl
- 17% 3. HCl < HBr < HI
- 17% 4. HCl < HI < HBr
- 17% 5. HI < HCl < HBr
- 17% 6. HI < HBr < HCl



Response Counter

10

7

Lecture 16 CH101 A1 (MWF 9 am) Fall 2016

Copyright © 2016 Dan Dill dan@bu.edu

[TP] The correct order of **boiling point** of HBr, HCl and HI is (lowest to highest) ...

- 17% 1. HBr < HCl < HI
- 17% 2. HBr < HI < HCl
- 17% 3. HCl < HBr < HI
- 17% 4. HCl < HI < HBr
- 17% 5. HI < HCl < HBr
- 17% 6. HI < HBr < HCl



Response Counter

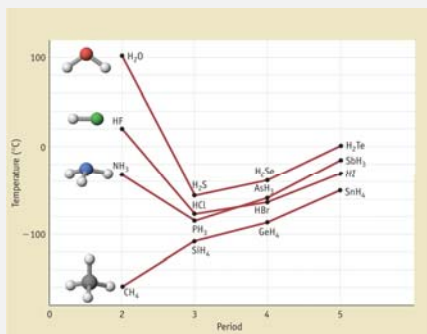
10

8

Lecture 16 CH101 A1 (MWF 9 am) Fall 2016

Copyright © 2016 Dan Dill dan@bu.edu

Why is HCl < HBr < HI?

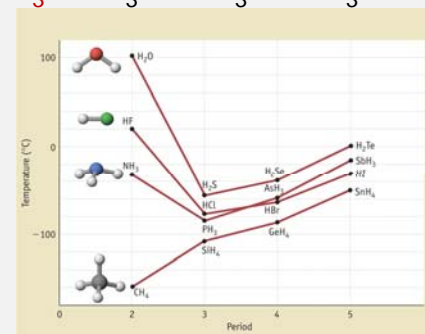


9

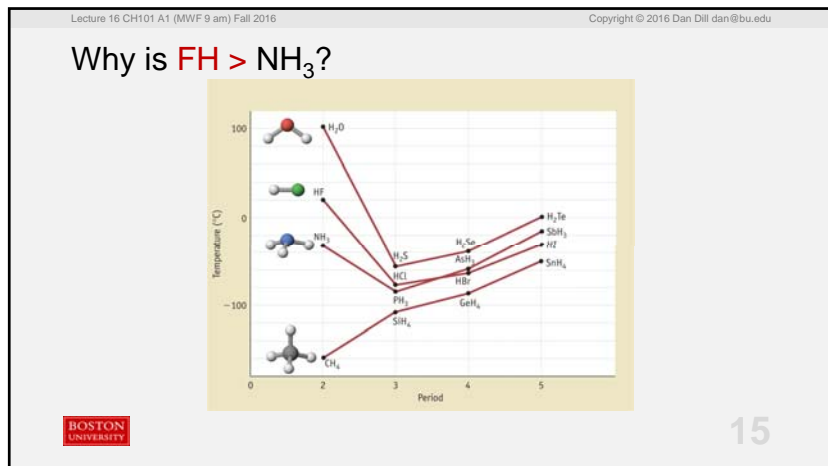
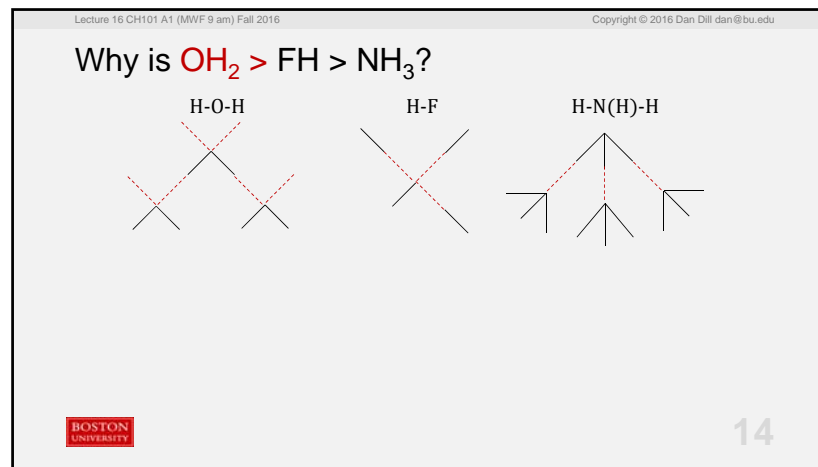
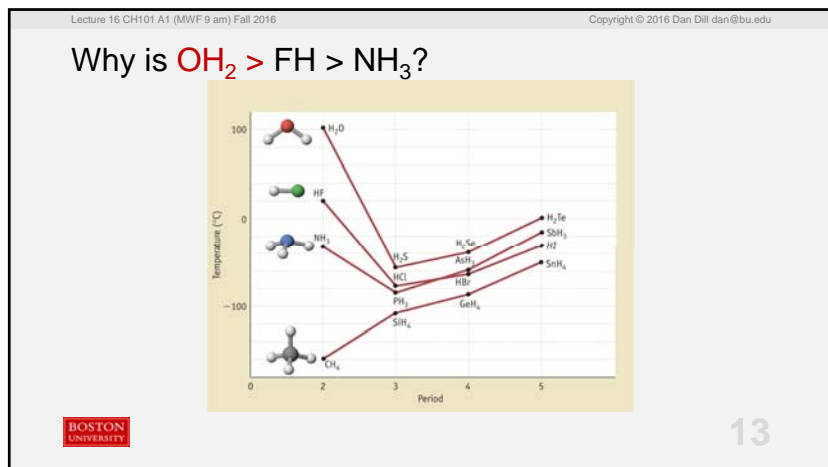
Lecture 16 CH101 A1 (MWF 9 am) Fall 2016

Copyright © 2016 Dan Dill dan@bu.edu

Why is $\text{NH}_3 > \text{PH}_3 < \text{AsH}_3 < \text{SbH}_3$?



12



Lecture 16 CH101 A1 (MWF 9 am) Fall 2016 Copyright © 2016 Dan Dill dan@bu.edu

[TP] Identify the compound with the **smallest** energy of vaporization (kJ/mol).

25% 1. water
25% 2. ethanol
25% 3. dimethyl ether
25% 4. hexane

water methanol ethanol dimethyl ether

hexane

Response Counter 10 19

BOSTON UNIVERSITY