

Announcements

Monday, April 27, 2009

Ch 18 MC due before class today.

Ch 12/13 MC now available, due next Mon May 4.

Review sessions in lab this week.

- Mon **3:00 pm** (corrected time)
- Tue 1:00 pm
- Wed 8:00 am

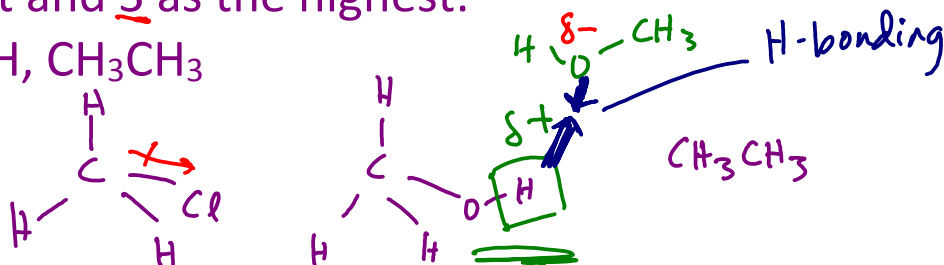
Discussion assignment 2: Phase 2 due Mon, Apr 27. Phase 3 instructions will be up later today. Review your sources and find the one most compelling argument on the **opposite side** of your phase 2 posting.

Exam 3 next Mon, May 4, covering chapters 10, 18, 12, and 13. A study guide will be up soon.

Boiling point practice

Rank these in order of increasing boiling point, with 1 as the lowest and 3 as the highest:

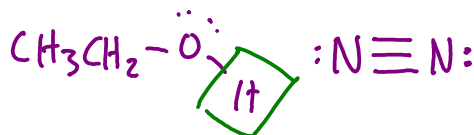
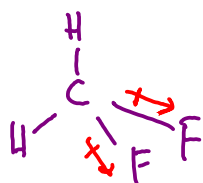
CH₃Cl, CH₃OH, CH₃CH₃



H-bonding?	no.	<u>yes!</u>	no
Dp-dp	polar	(polar)	nonpolar
Disp.	~50	~32	~30
boiling pt	2	<u>highest</u> 3	lowest 1

Rank these in order of increasing boiling point, with 1 as the lowest and 4 as the highest:

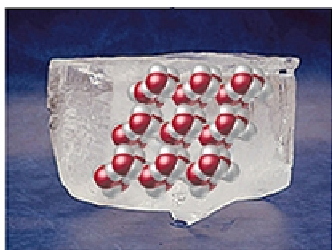
CH₂F₂, CH₃OH, CH₃CH₂OH, N₂.



H-bond?	no	<u>yes!</u>	<u>yes!</u>	no
dipole-dipole	yes (polar)	yes (polar)	yes (polar)	no (nonpolar)
dispersion	~52	~32	~46	~28
b.p.	2	3	4 highest	1 lowest

Types of solids

	<u>Molecular</u>	<u>Ionic</u>	<u>Metallic</u>
Made of:	molecules $H_2O(s)$	ions (formula units) $NaCl(s)$	atoms $Au(s)$
Elements:	all nonmetals	metal + nonmetal NH_4Cl (polyatomic ions)	metals
Held together by:	IMF's intermolec. forces • H-bonding • dipole-dipole • dispersion	ionic bonds $\oplus \leftrightarrow \ominus$	metallic bonds
Charges?	Partial charges $\delta+ \leftrightarrow \delta-$	full charges	
Melting point:	low ($< 200^\circ C$)	<u>very high</u> ($> 800^\circ C$)	variable melting pts.



Ice

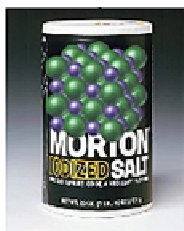


Table salt



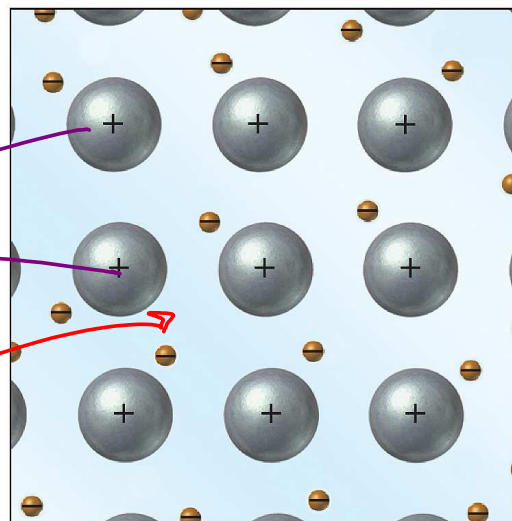
Gold

metals conduct electricity

↓
sea of shared electrons

metal atoms

metallic solid



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