

Bell Ringer #22:

Socratic Room Name:
LEVEL70WARRIOR

Metals, Metalloids, Non-metals

<http://drmoad.weebly.com/>

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Agenda

Bell Ringer
Reactivity Trends
Whiteboard Questions
Periodic Trends Lab
Exit Ticket

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Ions

Cations

- Metals
- Lose Electrons
- + charge

Anions

- Non-Metals
- Gain Electrons
- - charge

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Practice Problems

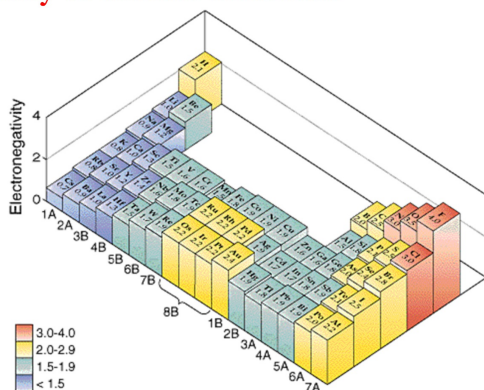
Draw the spin diagrams for:



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Electronegativity

Ability to attract electrons



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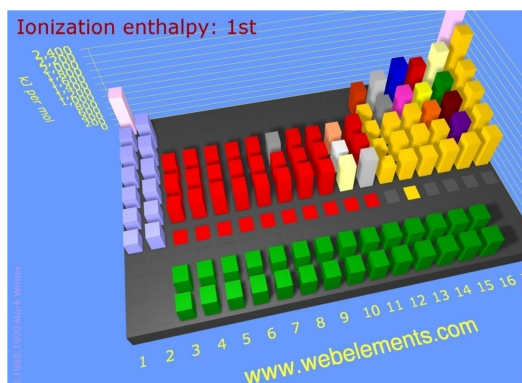
Electronegativity

- Rated on a scale from 0-4
- Noble gases don't have a value
- Non-metals want to gain electrons
- Metals have low electronegativity because they lose electrons

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Ionization Energy

Energy required to remove an electron



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Ionization Energy

- Increases across a period
- Decreases down a group
- Measured in kJ/mol

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Atomic Reactivity

Metals

- Down a group reactivity increases because it becomes easier for electrons to be taken away
- Across a period reactivity decreases because they have more valence electrons which requires more energy to get rid of.

Non-Metals

- Up a group reactivity increases because of higher electronegativity
- Across a period reactivity increases because the closer an atom is to having an octet the more it wants to have one.

http://edtech2.boisestate.edu/lindabennett1/502/periodic%20table%20e%20config/PTable_trends%20around%20table.html

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Whiteboard Practice Problems

Which of the following is most reactive?

Cr
Mn
Co
Zn

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Whiteboard Practice Problems

Which of the following is least reactive?

O
S
Se

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Whiteboard Practice Problems

When Mg form an ion, it will obtain an electron configurations similar to which element?

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Whiteboard Practice Problems

When S forms an ion, it will obtain an electron configuration similar to which element?

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Lab: Periodic Trends

https://en.wikipedia.org/wiki/Molar_ionization_energies_of_the_elements

<https://en.wikipedia.org/wiki/Electronegativity>

https://en.wikipedia.org/wiki/Atomic_radius

<http://drmoad.weebly.com/>

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Exit Ticket #22:

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Reactivity

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