

# Chapter 8 Atomic Electron Configurations

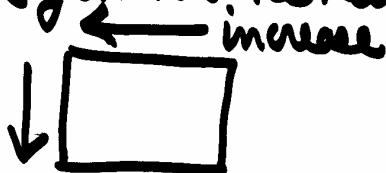
## Chemical Periodicity

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- ground state electron configuration of atoms + ions  
2 exceptions: Cu, Cr (there are many more)
- Hund's Rule
- diamagnetic vs paramagnetic
- appropriate set of 4 quantum numbers for last  $e^-$  in \_\_\_\_.

### • periodic properties (general trends)

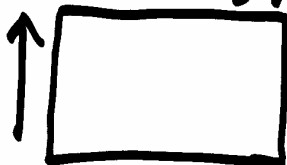
- atomic radii



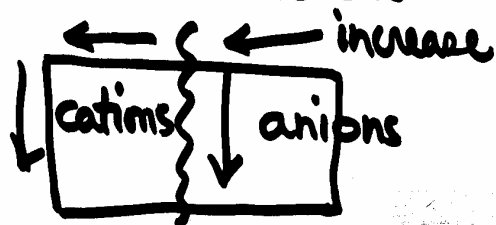
- first ionization energy, e.g.  $\text{Na(g)} \rightarrow e^- + \text{Na}^+(\text{g})$



- electron affinity, e.g.  $\text{Na(g)} + e^- \rightarrow \text{Na}^-(\text{g})$



- ionic radii - compare **isoelectronic** species



cations with cations  
anions with anions