|  |  |  |
| --- | --- | --- |
| **EVERYTHING is about...**       image2.jpeg  **Shielding Effect**  Inner shell electrons \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  the outer \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ electrons  Keeps valence electrons from feeling the:  **Effective Nuclear Charge (Zeff)**  The relative \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the valence electrons have for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the nucleus.  Learn Electron Orbits in Rutherford Model - Problems L1 in 3 minutes.Adding a proton has a \_\_\_\_\_\_\_\_\_\_\_\_ effect than adding an e- .  Zeff = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Z = nuclear attraction = # protons  S = core/inner e- shielding the valence e-  = total number of e- minus the e- in the   highest occupied s and p energy levels  Magnesium:  Aluminum: | **Radius**  What is it?  INCREASES DOWN because....  Increased or Increased  Shielding Nuclear Charge         DECREASES TO RIGHT because....  Increased or Increased  Shielding Nuclear Charge        **Ionic Radius**  Cations Anions  **Isoelectric Species**  Atoms/Ions that have the same # of \_\_\_\_\_\_\_\_     * Increased protons pull \_\_\_\_\_\_\_\_\_\_\_\_\_\_   on valence electrons.   * Radius ends up \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   N-15 |  |
| **Ionization Energy**  What is it?  DECREASES DOWN because....  Increased or Increased  Shielding Nuclear Charge         INCREASES TO RIGHT because....  Increased or Increased  Shielding Nuclear Charge        **Subsequent Ionizations**   * Each time e- removed 🡪  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to take next one * Radius is getting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 🡪 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attraction * HUGE leap in I.E. once it achieves   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  08_01_Table  N-15 | **Electronegativity**  What is it?  DECREASES DOWN because....  Increased or Increased  Shielding Nuclear Charge         INCREASES TO RIGHT because....  Increased or Increased  Shielding Nuclear Charge |  |
| **Reactivity**  What is it?  METALS INCREASE DOWN because....  Increased or Increased  Shielding Nuclear Charge         NON-METALS INCREASE UP because....  Increased or Increased  Shielding Nuclear Charge | **Image result for periodic trends** |  |

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