|  |
| --- |
| **UV/visible radiation** |
| Excites electrons to a higher energy level in atoms or in bonds |
| Used with Beer’s Law (A = bc) to determine the concentration of a colored solution |

|  |
| --- |
| **microwave radiation** |
| Responsible for transitions in molecular rotational states |
| Used to identify types of bonds in a molecule |
| Lowest energy radiation (in this group) |

|  |
| --- |
| **X-radiation** |
| Removes valence and core electrons  |
| Highest energy radiation (in this group) |
| Used to determine the binding energies of valence and core electrons in elements |
| Used to create a photoelectron spectrum (PES graph) |
| An experimental method of proving the electron configuration of an element |

|  |
| --- |
| **infrared radiation** |
| Responsible for transitions in molecular vibrational states |
| Used to identify types of bonds in a molecule |