

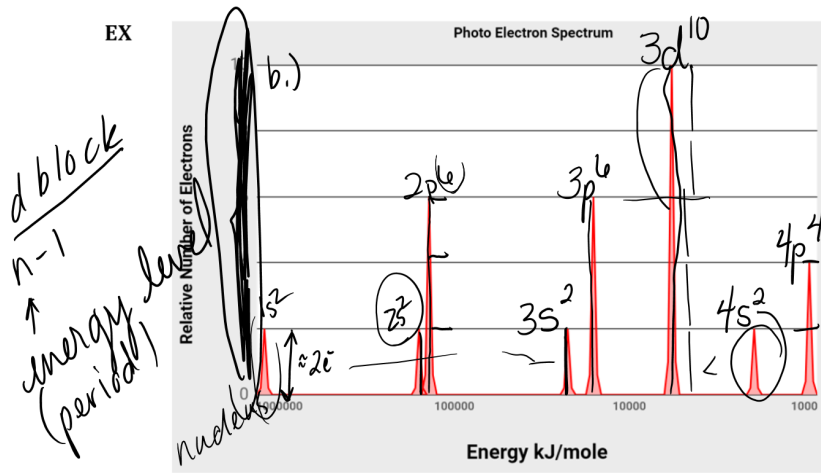
Photoelectron Spectroscopy Practice

Directions: For every PES shown below you will:

- Identify the element
- Label all peaks with the principle quantum number, subshell, and electrons in the shell (ex. $1s^2$)
- Write the electron configuration of that element
- Draw the orbital diagram for that element

The example is done in a [video walkthrough](#) for you.

EX



a.) Selenium

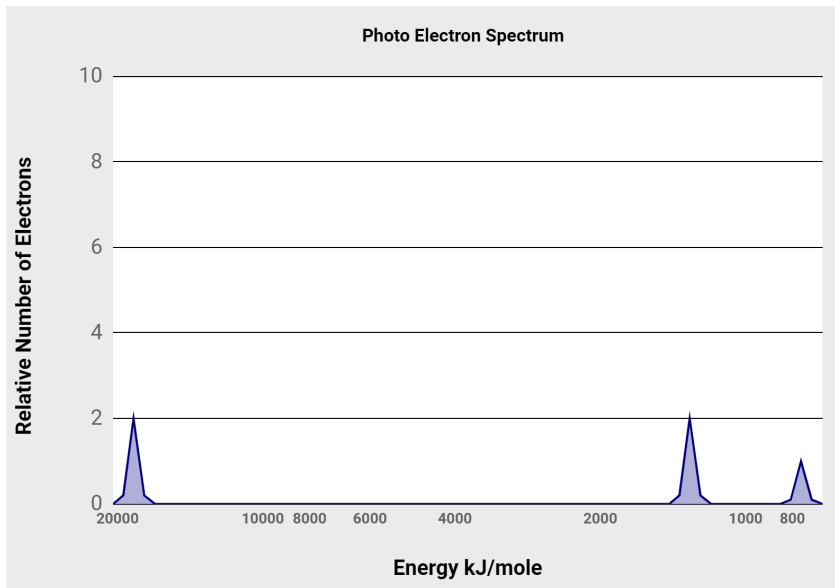
c.) $1s^2 2s^2 2p^6 3s^2 3p^6 3d^{10} 4s^2 4p^4$

→ $[Ar] 4s^2 3d^{10} 4p^4$

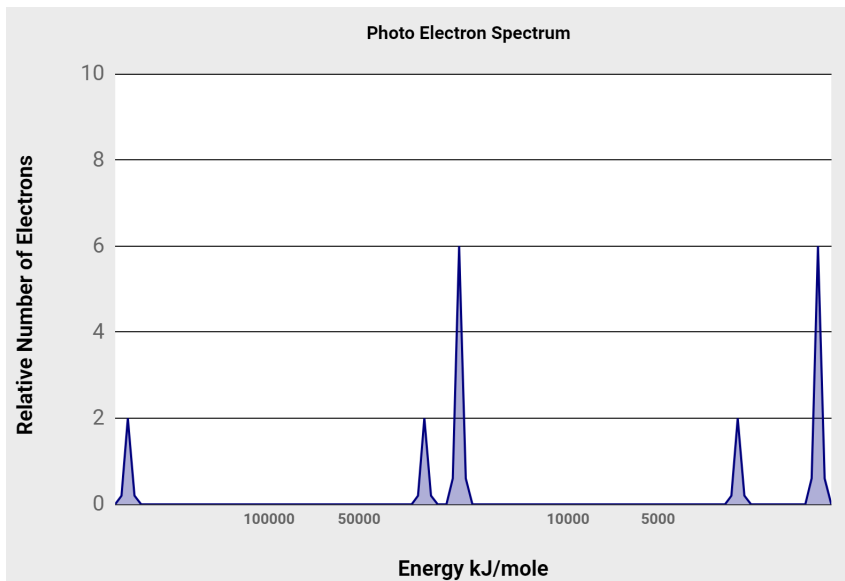
d.)

$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$
1s	2s	2p		3s	
n					
$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$	$\uparrow\downarrow$
3p		4s	3d		
$\uparrow\downarrow$	$\uparrow\downarrow$	\uparrow			
4p					

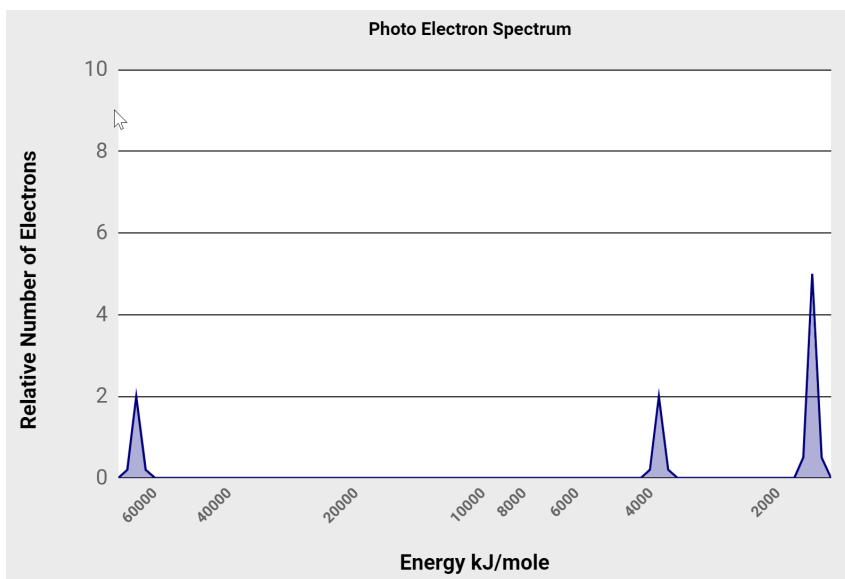
1



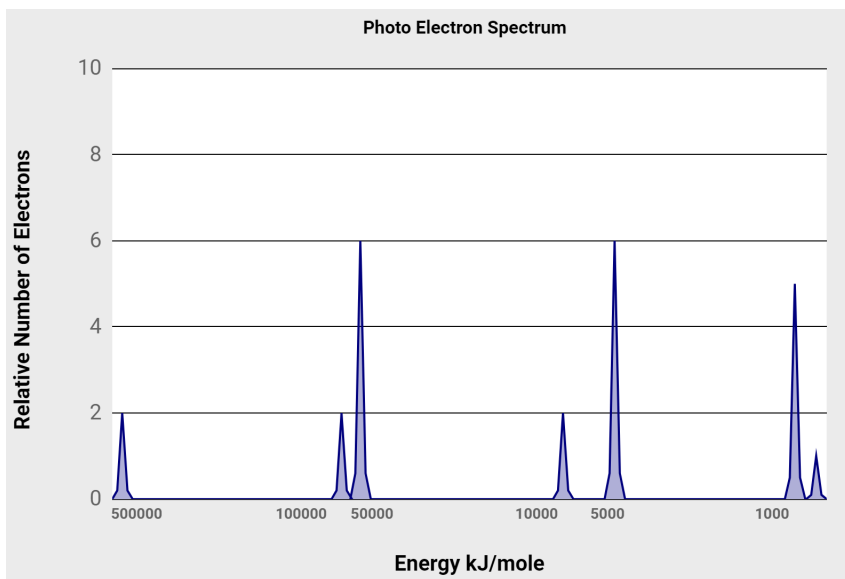
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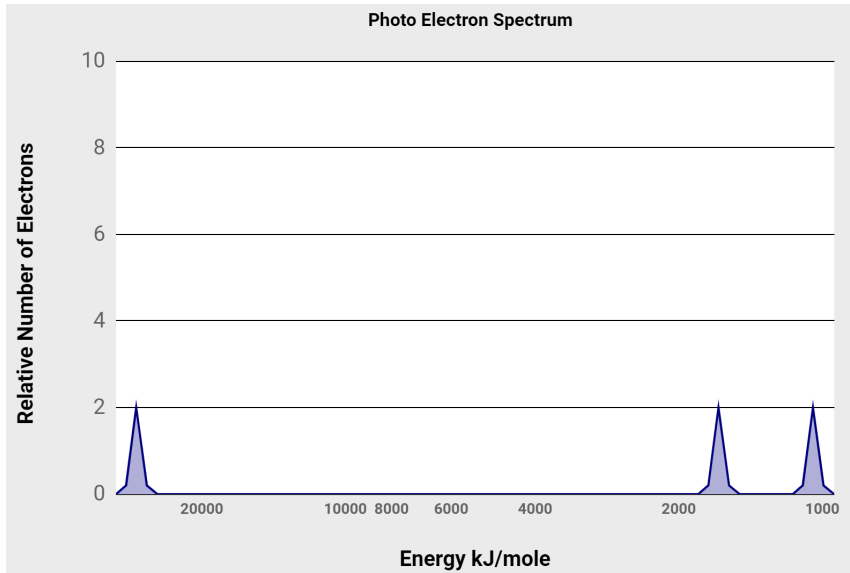
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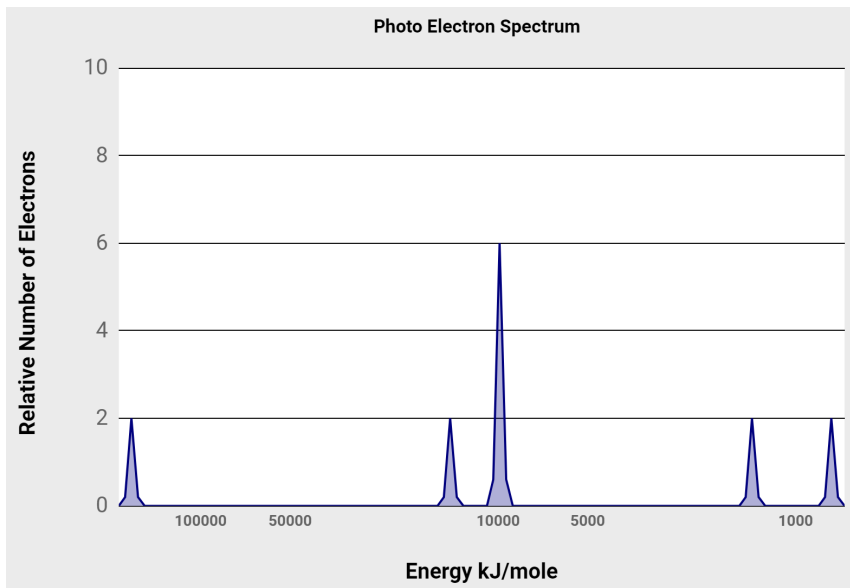
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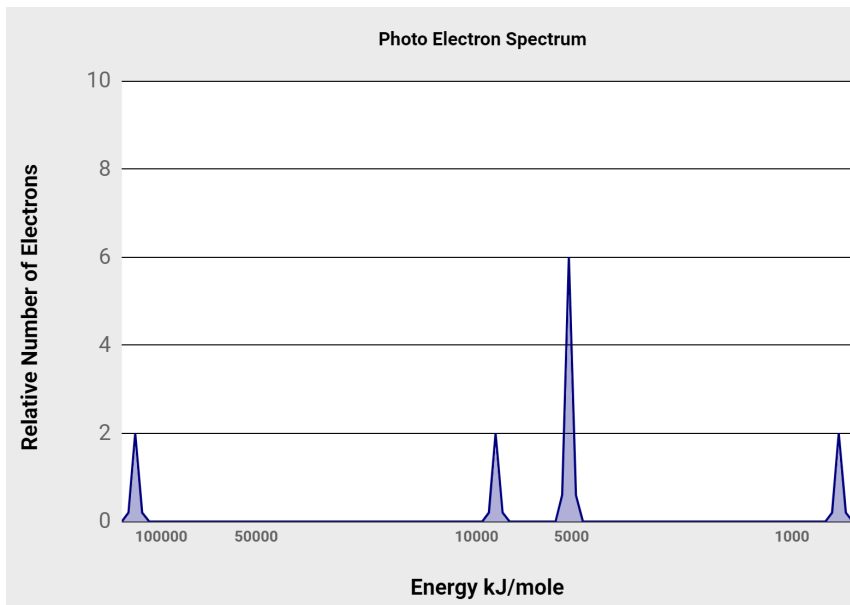
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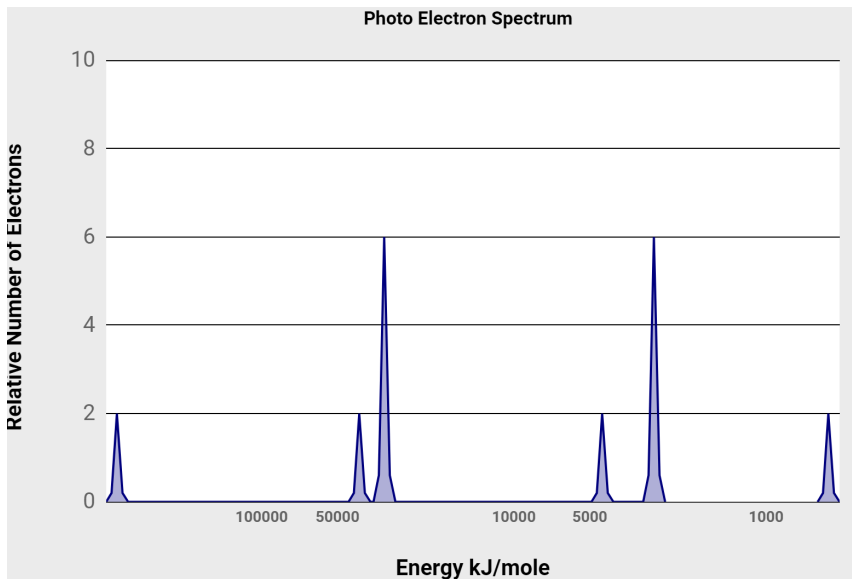
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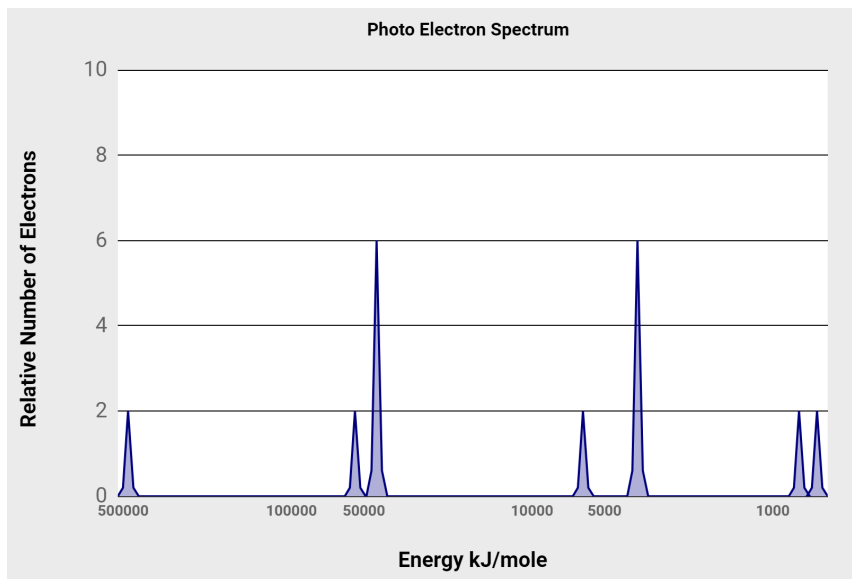
7



8



9



10

