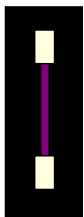


The Four Problems...

1. Atomic structure: why aren't the electrons in the nucleus?



2. Why do gases glow when electrified?

3. Why are only certain colors seen?



$$4. \quad 1/\lambda = R(1/4 - 1/n^2) ?$$

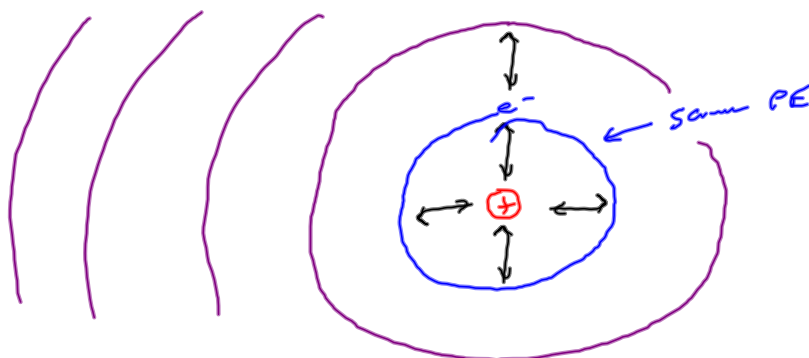
$$1/\lambda = R(1/9 - 1/n^2) ?$$

$$1/\lambda = R(1 - 1/n^2) ?$$

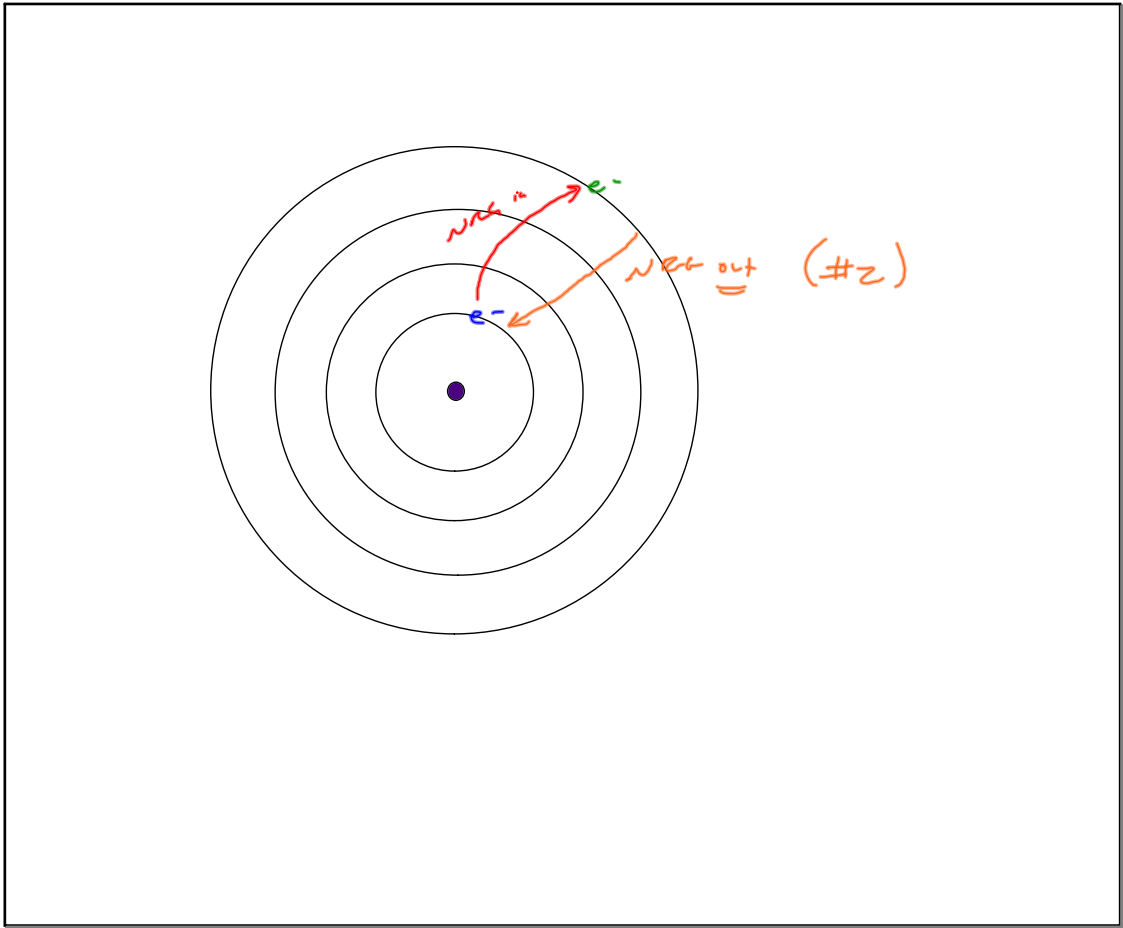
Sep 21-7:03 AM

Bohr's Answer \rightarrow $n\hbar$ is quantized

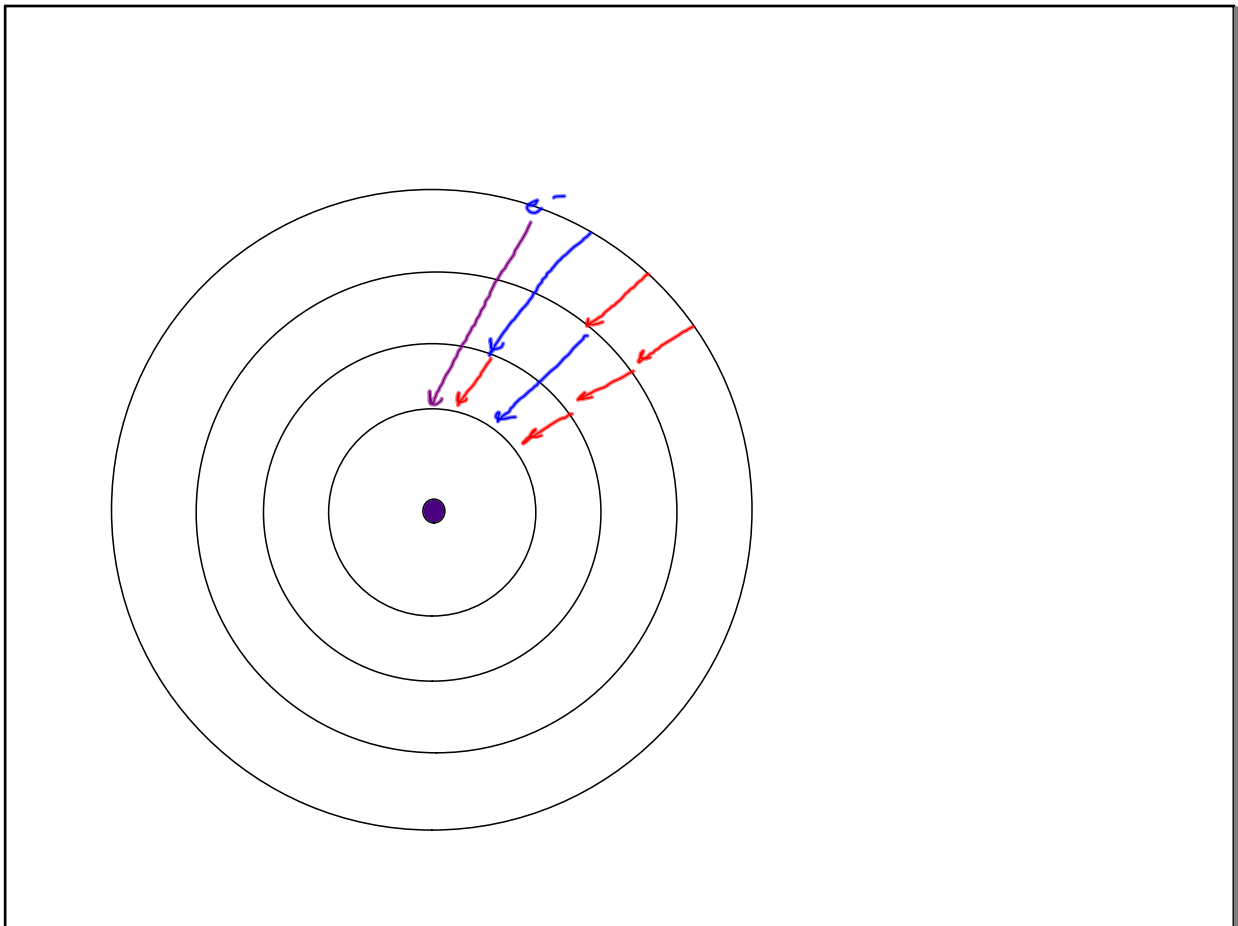
$$e^- \quad n\hbar = \text{Potential } n\hbar$$



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Oct 1-9:00 AM

$E = -k \left(\frac{1}{n_1} - \frac{1}{n_2} \right)$
 $E = -k \left(\frac{1}{n_1} - \frac{1}{n_2} \right)$
 ring to ring from
 e- from ∞ far away
 $E = -k \left(\frac{1}{n_1} \right)$
 radius of rings $\neq r_0$
 r_0
 Nuc.

Oct 1-9:09 AM