Answer on Question #51094-Physics- Atomic Physics

The ratio of energy required to remove an electron from the first three bohr's orbit of hydrogen is?

Solution

Energy required to remove an electron from the bohr's orbit of hydrogen is

$$E_n = \frac{R_H}{n^2}.$$

R_H is a constant value.

The ratio of energy required to remove an electron from the first three bohr's orbit of hydrogen is

$$E_1 : E_2 : E_3 = \frac{1}{1^2} : \frac{1}{2^2} : \frac{1}{3^2} = 1 : \frac{1}{4} : \frac{1}{9}.$$