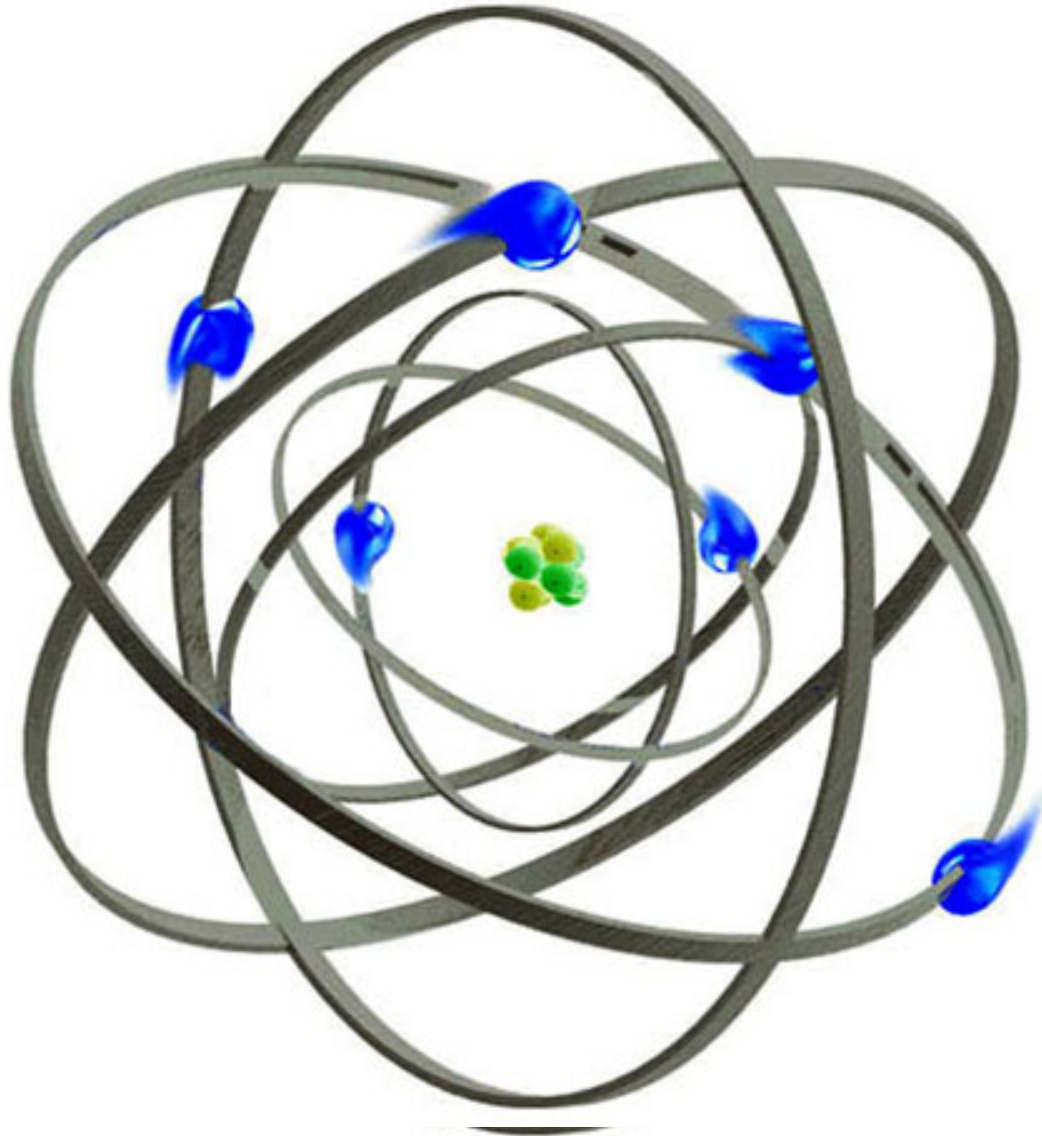


The atomic unit of energy



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The atomic unit of energy is the Hartree. One Hartree is equal to:

$$1 \text{ Ha} = \frac{e^2}{4\pi\epsilon_0 a_0}$$

where e is the charge on the electron, ϵ_0 is the vacuum permittivity and a_0 is the Bohr radius. Note that when all is said and done this is nothing more than the potential energy of two charges at a distance of a Bohr radius from each other. Calculate the value of the Hartree in Joules and then write it also in eV. What is the relationship with the Rydberg constant?