

Chem. 540

Instructor: Nancy Makri

Models – Problem 11

Calculate the energy separation between the ground and the excited state for a particle in a one-dimensional box of length L . Obtain a numerical value in kJ/mol for the following two cases:

- (a) An electron in a box of length 1 nm.
- (b) A tennis ball of mass 10 g in a box of length 1 m.