

Take Home Exam 08: The Blue Shift

Assigned: 10/21/2022

Due (as pdf by email) 10/23/2022 (Sunday)

HW 08

Preamble:

These questions require answer in words. The questions are phrased as "true" or "false" to be followed by the reasoning(s) behind your answer.

Therefore please think carefully before writing down your answer. You may have to rewrite, to get your thoughts clearly down on paper (I still do this all the time when writing an abstract for a paper).

You may lean on equations if you wish to embellish your answer, but that is not needed.

In your explanation study the question from different points of view (at least two).

08.1

True or false: The Bohr model merges classical mechanics and physics with quantum phenomenon?

Answer: True/False

Explanation:

08.2

The quantization of the orbits of electrons around the nucleus is related, fundamentally to the Planck's Equation?

Answer: True/False

Explanation

08.3

The color of the glow emanating from small crystals of semiconductors is related to their bandgap?

Answer: True/False

Explanation:

08.4

The blue shift in the emission from smaller nanocrystals arises because the atoms are packed more tightly together as the crystal become smaller?

Answer: True/False

Explanation: