Question #84784, Chemistry / Other | for confirmation

What is meant by degeneracy ? Calculate degeneracy for the J = 0, 1, 2 rotational energy levels.

Answer:

Degeneracy plays a fundamental role in quantum statistical mechanics. For an N-particle system in three dimensions, a single energy level may correspond to several different wave functions or energy states. These degenerate states at the same level are all equally probable of being filled. The number of such states gives the degeneracy of a particular energy level.

Energy
degeneracy = 5
degeneracy = 3
non-degenerate (ground state)

Degenerate states in a quantum system

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