

# Within the Atom: A Popular View of Electrons and Quanta / 9781103030682 / John Mills / 244 pages / 2009 / BiblioBazaar, 2009

Free essays, homework help, flashcards, research papers, book reports, term papers, history, science, politics. The ground state is the lowest energy state of the atom. When the atom absorbs energy, it can move to a higher energy state, or excited state. How many quantum numbers are used to describe the properties of electrons in atomic orbitals? (a) 1 (b) 2 (c) 3 (d) 4 A spherical electron cloud surrounding an atomic nucleus would best represent (a) an s orbital. (b) a p orbital. (c) a combination of two different p orbitals. (d) a combination of an s and a p orbital. Within the atom: a popular view of electrons and quanta. Publish date unknown, Routledge. in English. aaaa. Not in Library. Add another edition? Within the atom. First published in 1921. Subjects. a popular view of electrons and quanta. This edition published by Routledge in London. The Physical Object. Pagination. 215p. : Number of pages. 215. ID Numbers. Open Library. OL18172081M. which of the following set of quantum numbers (ordered n,l,ml,ms) are possible for an electron in an atom? -3,2,2,-1/2. 4,3,-4,-1/2. The answer to your question is determined by using the definitions of the 4 quantum numbers.  $n = 1, 2, 3, \dots$ ,  $n, l = 0$  to  $n - 1$  >> This includes all possible values up to  $n - 1$ .  $ml =$  all values from  $-l$  to  $+l$  >> example if  $l = 2$  then  $ml = -2, -1, 0, +1, +2$ .  $ms = +1/2$  and  $-1/2$ . -3,2,2,-1/2 >> not possible because  $n$  cannot be negative. 4,3,-4,-1/2 >> not possible because  $ml$  must be from  $-3$  to  $+3$  by definition. 1. A compound dioxane, which is used as a solvent in various industrial processes, is composed of C,H, and O atoms. Combustion of a 2.203-g ? Determining pH? during extraction of a metal the ore is roasted if it is a? These scholars imagined atoms as varying in shape depending on the type of atom. They envisaged iron atoms as having hooks which locked them together, explaining why iron was a solid at room temperature. His model postulated the existence of energy levels or shells of electrons. Electrons could only be found in these specific energy levels; in other words, their energy was quantised, and couldn't take just any value. At this point, many scientists were investigating and trying to develop the quantum model of the atom. Chief amongst these was Austrian physicist Erwin Schrödinger, who you've probably heard of before (he's the guy with the cat and the box). In 1926 Schrödinger proposed that, rather than the electrons moving in fixed orbits or shells, the electrons behave as waves.