Friday, May 13, 2011

Limitation's of BOHR'S Model

Bohr's theory was unable to explain the following observations;
(i). Bohr's Model could not explain the spectra of atoms containing more than one electron.
(ii). It could not explain the ***Zeeman effect***. In presence of magnetic field, each spectral line gets split up into fine lines, the phenomenon, is known as Zeeman effect.
(iii). It could not explain the ***Stark effect***. In presence of electric field, each spectral line gets split up into fine lines, the phenomenon, is known as ***Stark effect***.
(iv). The main objection to Bohr's model was raised by ***Heisenberg's uncertainty principle***. According to Heisenberg's uncertainty principle, it is impossible to determine simultaneously the exact position and the momentum of a small moving particle like an electron. But, according to Bohr's model electron moves in well-defined orbits around the nucleus, and hence its position as well as momentum can be determined simultaneously, which is against the uncertainty principle. So, electron moves in well-defined orbits around the nucleus is impossible.

Posted by Santosh Agray at 11:49 PM
Labels: Atomic Structure

14 comments:

Anonymous August 16, 2016 at 6:04 PM

TRUE MAN !!!!!!!!!! Everybody who has studied 9th grade chemistry knows it .!!!

Reply

Anonymous November 14, 2016 at 10:58 AM

Nicely explained.. very helpful. ��

Reply

Adil hussain March 23, 2017 at 8:11 AM

Very helpful....

Reply

Adil hussain March 23, 2017 at 8:11 AM

Very helpful....

Reply

Unknown August 18, 2017 at 4:15 PM

Good info!

Reply

Unknown August 28, 2017 at 3:33 PM

very helpful.nice method.

Reply

Anonymous September 5, 2017 at 12:39 PM

So so very helpful

Reply

Unknown February 22, 2018 at 10:07 PM

Good

Reply

Unknown April 10, 2018 at 9:06 PM

Easy have my exams tomorrow gonna rock it

Reply

Unknown April 11, 2018 at 6:40 AM

Superb tips�� and point for us

Reply

mumu June 20, 2018 at 4:17 PM

Thanks...it help me a lot...

Reply

Unknown August 9, 2018 at 8:33 PM

Wwwooowwww

Reply

Replies

Unknown August 9, 2018 at 8:34 PM

Nice

Unknown October 30, 2018 at 10:08 PM

You share a knowledge those people wants excellent greatjob

Reply

Comment with your Google account if you'd like to be able to manage your comments in the future. If you comment anonymously, you won't be able to edit or delete your comment. Learn more

Comment as:

Publish Preview

Subscribe to: Post Comments (Atom)