

Chemistry Desk

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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. 💎💎

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 **Adil hussain** March 23, 2017 at 8:11 AM
Very helpful....
Reply

 **Adil hussain** March 23, 2017 at 8:11 AM
Very helpful....
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 **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

Bond Energy and Bond Dissociation Energy

Application of Hess Law

Proof of Hess's Law

Hess's Law of Constant Heat Summation

Enthalpy Changes of Reactions and Phase Change

Standard Enthalpy Change

Factors Affecting Enthalpy of Reaction

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Basic Concepts

Introduction to Thermodynamics

Coordinate Bond or Dative Bond

Resonating Structures of Few Molecules



mumu June 20, 2018 at 4:17 PM

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

Reply



Unknown August 9, 2018 at 8:33 PM

Wwwwoowwww

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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

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Prediction of Shape of Molecules by VSEPR Theory

Valence Shell Electron Pair Repulsion (VSEPR) Theory

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Hybridization

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Valence Bond Theory (Modern Approach of Covalent B...

Applications of Dipole Moment

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Ionic Bond or Electrovalent Bond

Kossel-Lewis Approach

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PAUL'S Exclusion Principle

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Limitation's of BOHR'S Model

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Calculation of Radius of Orbits

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