

KERNKONSEPTE / KEY CONCEPTS/ KAKANYOKGOLO

FAKULTEIT / FACULTY/LEGORO: Natuurwetenskappe / Natural Sciences/Disaense tsa Tlhago

SKOOL / SCHOOL/SEKOLO: Chemie en Biochemie / Chemistry and Biochemistry

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Kernbegrip in Afrikaans	Definisie/verklaring in Afrikaans	Key concept in English	Definition/explanation in English	Kakanyokgolo mo Setswaneng	Tlhaloso/Thanolo mo Setswaneng
1. Absolute nulpunt	Die laagste moontlike temperatuur, gelykstaande aan $-273,15^{\circ}\text{C}$, wat as die nulpunt op die Kelvinskaal gebruik word.	1. Absolute zero	The lowest possible temperature, equivalent to $-273,15^{\circ}\text{C}$, used as the zero point of the Kelvin Scale.	1. Lefelatota	Themphereitšha e e kwa tlase go feta e e ka lekannngwang le $-273,15^{\circ}\text{C}$, e dirisiwa jaaka lefela mo Sekaleng sa Kelvin.
2. Suuroksied(e)	'n Niemetaaloksied wat as 'n suur optree.	2. Acidic oxide(s)	An oxide of a nonmetal that acts as an acid.	2. Okosaete tsa asiti	Okosaete ya se eseng metale o o dirang jaaka asiti.

3. Ware opbrengs	Die gemete hoeveelheid van 'n produk wat uit 'n chemiese reaksie verkry word.	3. Actual yield	The measured amount of product obtained from a chemical reaction.	3. Kuno ya nnete	Selekano se se lekantsweng sa kuno se se bonweng go tswa mo tsibogong ya sekhemikhale.
4. Antibindende molekuloorbital	'n Molekuloorbital waarin die energie van die elektrone hoër as dié van die elektrone van die oorspronklike atoomorbital is.	4. Antibonding molecular orbital	A molecular orbital in which the energy of the electrons is higher than that of the parent orbital electrons.	4. Modiko wa molekhulu wa go se tlamane	Modiko wa molekhulu mo maatla a dieleketerone a leng kwa godimo ga a dieleketerone tsa modiko tsa tsadi.
5. Atoom(-ome)	Die kleinste deeltjie van 'n element wat die chemiese eienskappe van daardie element vertoon.	5. Atom(s)	The smallest particle of an element that retains the chemical properties of that element.	5. Diathomo	Lenathwana le le nnye go feta la elemente le le tshwarang dipharologantshe tsa khemikhale.
6. Eenheid van atoommassa (u)	Die skaaleenheid van relatiewe atoommassas van die elemente; $1 u = 1/12$ van die massa van 'n koolstofatoom met ses protone en ses neutrone.	6. Atomic mass unit (u)	The unit of a scale of relative atomic masses of the elements; $1 u = 1/12$ of the mass of a carbon atom with six protons and six neutrons.	6. Yuniti ya mmase wa athomo (u)	Yuniti ya sekale ya dimmase-athomo tsa papiso ya dielemente; $1 u = 1/12$ ya mmase wa athomo ya khabono e e nang le diprotone di le thataro le dinyuterone di le thataro.
7. Atoomorbital (-ale)	Die materiegolf vir 'n toegelate energietoestand van 'n elektron in 'n atoom.	7. Atomic orbital(s)	The matter wave for an allowed energy state of an electron in an atom.	7. Mediko ya diathomo	Lekubu-sere la maatla a a letleletsweng a eleketerone mo athomong.
8. Avogadro-getal	Die aantal deeltjies in een mol van enige stof.	8. Avogadro's number	The number of particles in one mole of any substance.	8. Nomoro ya Avogadro	Palo ya manathwana mo moulung o le mongwe wa sere sengwe le sengwe.
9. 'n Gebalanseerde	'n Chemiese vergelyking wat die relatiewe	9. A balanced	A chemical equation showing the relative	9. Tekanyo ya khemikhale e e	Tekanyo ya khemikhale e e bontshang mothamo o o

chemiese vergelyking	hoeveelheid reagense en produkte aandui.	chemical equation	amounts of reactants and products.	lekalakantsweng	bapisitsweng wa didirani le dikuno.
10. Binding(s)	'n Interaksie tussen twee of meer atome wat hulle bymekaar hou deur die potensiële energie van hulle elektrone te verminder.	10. Bond(s)	An interaction between two or more atoms that holds them together by reducing the potential energy of their electrons.	10. Ditlamo	Tirisano gareng ga diathomo tse pedi kgotsa go feta tse di tlamanang mmogo ka go fokotsa maatla a phothenšiale a dieleketerone tsa tsona.
11. Bindende molekule-orbitaal	'n Molekule-orbitaal waarin die energie van die elektrone laer as dié van die elektrone van die oorspronklike atoomorbitaal is.	11. Bonding molecular orbital	A molecular orbital in which the energy of the electrons is lower than that of the parent orbital electrons.	11. Tlamano-modiko ya molekhule	Modiko wa molekhule mo maatla a dieleketerone a a kwa tlase ga a dieleketerone tsa tsadi tse di mo modikong.
12. Koördinatiewe kovalente binding	Die aantrekking tussen atome a.g.v. die deel van 'n alleenpaar elektrone van een atoom met 'n ander atoom.	12. Coordinate covalent bond(s)	The interatomic attraction resulting from the sharing of a lone pair of electrons from one atom with another atom.	12. Kgokaganyo ya ditlamo tsa khobalente	Kgogedi magareng ga diathomo e e tswang mo go abelaneng ga para-nosi ya dieleketerone go tswa mo athomong e le nngwe go ya go e nngwe.
13. Elektronpaar-geometrie	Die geometrie wat bepaal word deur al die bindings- en alleenpare in die valensieskil van die sentrale atoom.	13. Electron-pair geometry	The geometry determined by all the bond pairs and lone pairs in the valence shell of the central atom.	13. Jeometeri ya para ya dieleketerone	Jeometeri e e tlhomamisiwang ke dipara tsotho tsa tlamo le dipara-nosi mo legapeng la mo beilenseng ya athomo-gare.
14. Heisenberg se onsekerheids-beginsel	Dit is onmoontlik om gelyktydig die posisie en momentum van 'n elektron in 'n atoom met volle sekerheid te bepaal.	14. Heisenberg's uncertainty principle	It is impossible to determine both the position and the momentum of an electron in an atom simultaneously with great certainty.	14. Theo ya go sa nepang ya Heisenberg	Ga go kgonege go tlhomamisa mmogo ntlha le momenthamo wa eleketerone mo athomong ka gangwe ka nepo e kgolo.

15. Iso-elektroniese spesies	Molekule of ione met dieselfde aantal valensie-elektrone en vergelykbare Lewisstrukture.	15. Isoelectronic species	Molecules or ions that have the same number of valence electrons and comparable Lewis structures.	15. Dieleketerone-tshwano tsa lotso	Dimolekhule kgotsa diayone tse di nang le palo e e tshwanang ya dieleketerone beilense le dipopego tsa Lewis tse di ka tshwantshwang.
16. Alleenpaar (-are)	'n Paar valensie-elektrone wat nie tot binding bydra in 'n kovalente molekule nie.	16. Lone pair(s)	Pairs of valence electrons that do not contribute to bonding in a covalent molecule.	16. Dipara-nosi	Dipara tsa dieleketerone tsa beilense tse di sa tseyeng karolo mo go tlameng molekhule wa khobeilense.
17. Pi (π)-binding(s)	Die tweede (en derde, indien teenwoordig) binding in 'n meervoudige binding is die gevolg van sydelingse oorvleueling van p- atoomorbitale.	17. Pi (π) bond(s)	The second (and third, if present) bond in a multiple bond results from sideways overlap of p atomic orbitals.	17. Ditlamo tsa Pi	Tlamo ya bobedi (le ya boraro, fa e le teng) mo tlamong-ntsi, e tswa mo go akareletseng fa thoko ga mediko ya diathomo ya p.
18. Resonans-struktuur(-ure)	Die moontlike strukture van 'n molekule waarvoor meer as een Lewisstruktuur geskryf kan word. Dit verskil in die aantal bindingspare tussen 'n gegewe atoompaar.	18. Resonance structure(s)	The possible structures of a molecule for which more than one Lewis structure can be written, differing by the number of bond pairs between a given pair of atoms.	18. Dipopego tsa resonense	Dipopego tse di ka kgonegang tsa molekhule tse popego e e fetang bongwe ya Lewis e ka kwalwang, di farologana ka palo ya dipara tsa tlamo magareng ga para ya diathomo e e neelang.
19. Sigma (σ)-binding(s)	'n Binding wat deur die kop-aan-kop-oorvleueling van orbitale gevorm word, met die grootste elektrondigtheid langs die as van binding.	19. Sigma (σ) bond(s)	A bond formed by the overlap of orbitals head to head, and with bonding electron density concentrated along the axis of the bond.	19. Ditlamo tsa sigma (σ)	Tlamo e e diriwang ke go phukana ga mediko ka tlhogo go tlhogo, le ka tlamano ya kitlano ya dieleketerone e e kokoaneng mo aseng ya tlamo.
20. Stoïgiometrie-se	Die vermenigvuldigende getalle wat aan die spesies	20. Stoichiometric	The multiplying numbers assigned to the species in a	20. Dikhoefišente tsa	Dipalo tsa katiso tse di abelwang lotso mo tekanong

koëffisiënte	in 'n chemiese reaksie toegeken word om die vergelyking te laat balanseer.	coefficients	chemical equation in order to balance the equation.	Setiokhiometeri	ya khemikhale gore go lekalekanngwe tekano.
21. Oorgangs-elemente	Sommige elemente wat in rye 4 tot 7 van die periodieke tabel lê, nl. skandium tot sink, yttrium tot kadmium, en lantaan tot kwik.	21. Transition elements	Some elements that lie in rows 4 to 7 of the periodic table, comprising scandium through zinc, yttrium through cadmium, and lanthanum through mercury.	21. Dielemente tsa kgabaganyo	Dielemente dingwe tse di mo mekolokong ya 4 go ya go 7 tsa lenaane la dielemente, di dirwa ke scandium ka go dirisa zinc, yttrium ka cadmium, le lanthanum ka mekhuri.
22. Valensskil-elektronpaar-afstotingsmodel (VSEPA)	'n Model vir die voorspelling van die molekulevorms waarin strukturele elektronpare rondom elke atoom so gerangskik is om die hoeke tussen hulle te verkry.	22. Valence shell electron pair repulsion (VSEPR) model	A model for predicting the shapes of molecules in which structural electron pairs are arranged around each atom to maximize the angles between them.	22. Sekao sa legapa la beilense la para ya dieleketerone tse di kobanang (LBPEK)	Sekao sa go ka bonelapele dipopego tsa dimolekhule mo sebopegong sa dipara tsa dieleketerone di rulagantswe go dikologa athomo nngwe le nngwe go godisa dikhutlo magareng ga tsona.
23. Golfmeganika	'n Algemene teoretiese benadering tot atoomgedrag wat die elektron in 'n atoom as 'n materiegolf beskryf.	23. Wave mechanics	A general theoretical approach to atomic behaviour that describes the electron in an atom as a matter wave.	23. Makhubu a semotšhini	Mokgwa wa teori ya kakaretso wa maitsholo a athomo o o tthalosang eleketerone jaaka sere sa lekhubu.