

LEMBAR KERJA PESERTA DIDIK (LKPD)

SIFAT KEPERIODIKAN UNSUR

Kelas :
Kelompok :
Anggota Kelompok : 1.
2.
3.
4.
5.



Tujuan Pembelajaran

Peserta didik dapat menganalisis perubahan sifat keperiodikan unsur seperti jari-jari atom, energi ionisasi, keelektronegatifan, dan afinitas elektron dalam tabel periodik.



Petunjuk Pengisian

1. Isi identitas kelompok yang terdapat pada halaman awal LKPD!
2. Kerjakan setiap aktivitas yang ada pada LKPD ini dengan cermat!
3. Jika telah selesai, silakan klik **"Finish"**, pilih **"Email my answers to my teacher"**, dan masukkan alamat e-mail berikut ini:
syifanuraisyah36@guru.sma.belajar.id !



Kegiatan1

Klik tombol putar "▶" pada rekaman suara di bawah ini dan dengarkan isi rekamannya dengan saksama.



Pendahuluan

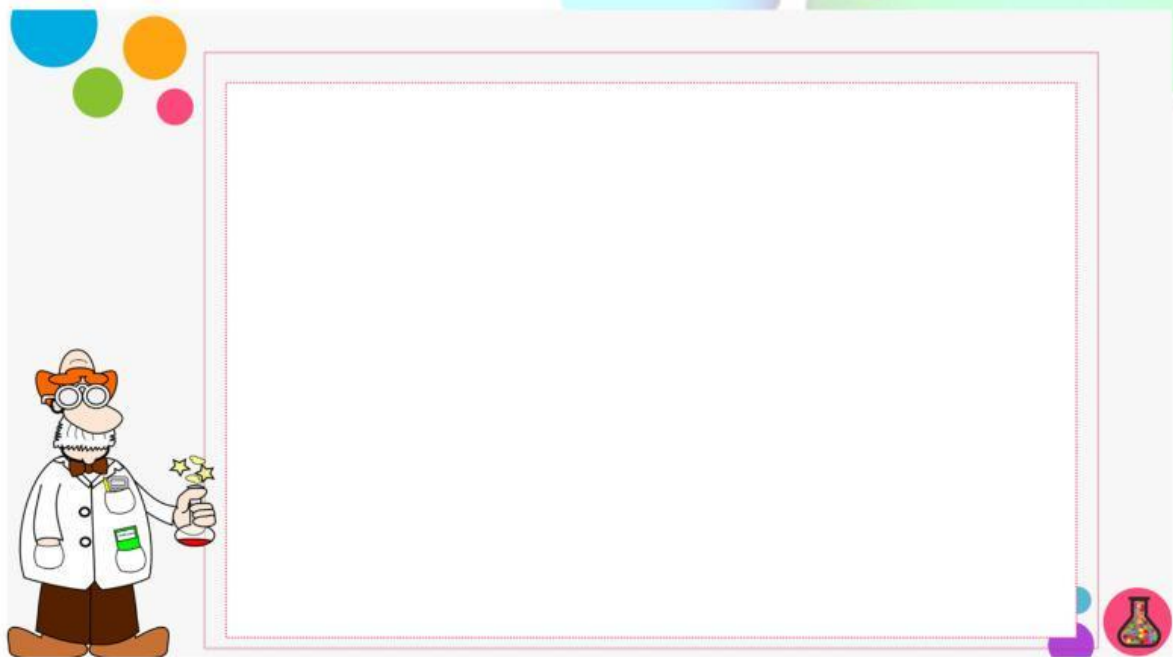
Silakan pilih salah satu sumber belajar berikut ini untuk mempelajari materi pembelajaran!

1. Website Materi



Syifa Ainun N, S.Pd.

2. Video pembelajaran



3. Materi Presentasi (PPT)



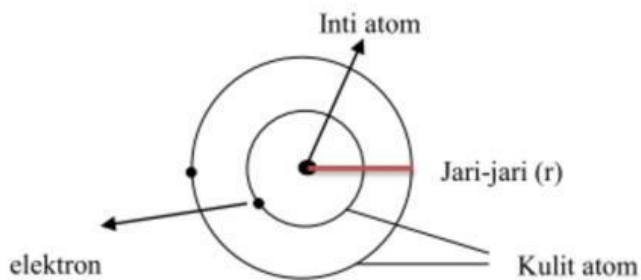


Kegiatan 2



A. Jari-Jari Atom

1. Perhatikan ilustrasi berikut!



Gambar 1. Ilustrasi jari-jari atom.

Berdasarkan ilustrasi di atas, maka dapat diketahui bahwa jari-jari atom adalah jarak antara dengan elektron terluar pada suatu atom.

2. Perhatikan tabel berikut!

Li	1,55	Be	1,12	B	0,98	C	0,77	N	0,75	O	0,74	F	0,72
Na	1,90	Mg	1,60	Al	1,43	Si	1,11	P	1,06	S	1,02	Cl	0,99
K	2,35	Ca	1,98	Ga	1,22	Ge	1,22	As	1,19	Se	1,16	Br	1,14
Rb	2,48	Sr	2,15	In	1,41	Sn	1,41	Sb	1,38	Te	1,35	I	1,33
Cs	2,67	Ba	2,21	Tl	1,75	Pb	1,75	Bi	1,46				

Tabel 1. Besaran Jari-jari Atom pada Beberapa Golongan Utama Sistem Periodik Unsur.

Sumber: Whitten, *General Chemistry*: 2004.

Berdasarkan data Tabel 1 di atas, kecenderungan jari-jari atom:

- Dalam satu golongan (dari atas ke bawah) yaitu semakin
- Dalam satu periode (dari kiri ke kanan) yaitu semakin



B. Energi Ionisasi

Tentukan pernyataan di bawah ini benar atau salah!

No.	Pernyataan	Benar	Salah
1.	Energi ionisasi adalah energi yang dibutuhkan untuk melepaskan elektron dari atom netral dalam fase gas.		
2.	Dalam satu periode dari kiri ke kanan, energi ionisasi cenderung menurun karena jumlah kulit bertambah.		
3.	Dalam satu golongan dari atas ke bawah, energi ionisasi cenderung meningkat karena gaya tarik inti terhadap elektron valensi semakin besar.		



C. Keelektronegatifan

Temukan 5 kata terkait dengan topik “keelektronegatifan” pada kotak di bawah ini.

Kata-kata bisa tersusun secara horizontal, vertikal, dan diagonal.

F	O	F	L	R	G	O	T	M	P	X	A	H	O	N	J	M	R
I	W	T	Z	P	X	I	T	X	E	V	C	B	A	I	L	K	S
S	A	Y	E	N	O	L	I	T	D	S	D	Z	D	Y	E	P	E
D	U	U	U	L	Y	L	E	M	H	P	W	P	P	X	G	F	L
M	B	R	O	T	E	E	L	N	O	N	P	O	L	A	R	U	F
R	Y	D	H	W	I	K	A	T	A	N	E	L	S	R	T	Q	U
K	E	E	L	E	K	T	R	O	N	E	G	A	T	I	F	A	N
T	R	O	T	T	I	N	G	O	H	J	G	R	H	M	L	P	P
H	D	O	Y	N	A	M	E	L	N	S	F	I	K	J	N	O	S



D. Afinitas Elektron

Pilihlah satu jawaban yang paling benar dari pilihan yang tersedia!

1. Afinitas elektron adalah...
 - A. Energi yang dibutuhkan untuk melepaskan elektron dari atom netral
 - B. Energi yang diperlukan untuk membentuk ikatan kovalen
 - C. Energi yang dilepaskan saat atom netral menangkap satu elektron
 - D. Jumlah elektron yang dimiliki atom di kulit terluar
 - E. Kemampuan atom menarik pasangan elektron ikatan dalam molekul

2. Pernyataan yang benar mengenai kecenderungan afinitas elektron dalam tabel periodik adalah...
 - A. Afinitas elektron meningkat dari atas ke bawah dalam satu golongan dan dari kanan ke kiri dalam satu periode.
 - B. Afinitas elektron menurun dari kiri ke kanan dalam satu periode dan dari atas ke bawah dalam satu golongan.
 - C. Afinitas elektron meningkat dari kiri ke kanan dalam satu periode dan menurun dari atas ke bawah dalam satu golongan.
 - D. Afinitas elektron tetap konstan dalam satu periode dan meningkat dalam satu golongan.
 - E. Tidak ada pola yang jelas dalam afinitas elektron pada tabel periodik.



A blank periodic table grid is shown. The grid is composed of squares. The first column has 4 squares. The second column has 3 squares. The third column has 1 square. The fourth column has 1 square. The fifth column has 1 square. The sixth column has 1 square. The seventh column has 1 square. The eighth column has 1 square. The ninth column has 1 square. The tenth column has 1 square. The eleventh column has 1 square. The twelfth column has 1 square. The thirteenth column has 1 square. The fourteenth column has 1 square. The fifteenth column has 1 square. The sixteenth column has 1 square. The seventeenth column has 1 square. The eighteenth column has 1 square. The nineteenth column has 1 square. The twentieth column has 1 square. The twenty-first column has 1 square. The twenty-second column has 1 square. The twenty-third column has 1 square. The twenty-fourth column has 1 square. The twenty-fifth column has 1 square. The twenty-sixth column has 1 square. The twenty-seventh column has 1 square. The twenty-eighth column has 1 square. The twenty-ninth column has 1 square. The thirtieth column has 1 square. The thirty-first column has 1 square. The thirty-second column has 1 square. The thirty-third column has 1 square. The thirty-fourth column has 1 square. The thirty-fifth column has 1 square. The thirty-sixth column has 1 square. The thirty-seventh column has 1 square. The thirty-eighth column has 1 square. The thirty-ninth column has 1 square. The fortieth column has 1 square. The forty-first column has 1 square. The forty-second column has 1 square. The forty-third column has 1 square. The forty-fourth column has 1 square. The forty-fifth column has 1 square. The forty-sixth column has 1 square. The forty-seventh column has 1 square. The forty-eighth column has 1 square. The forty-ninth column has 1 square. The fiftieth column has 1 square. The fifty-first column has 1 square. The fifty-second column has 1 square. The fifty-third column has 1 square. The fifty-fourth column has 1 square. The fifty-fifth column has 1 square. The fifty-sixth column has 1 square. The fifty-seventh column has 1 square. The fifty-eighth column has 1 square. The fifty-ninth column has 1 square. The sixtieth column has 1 square. The sixty-first column has 1 square. The sixty-second column has 1 square. The sixty-third column has 1 square. The sixty-fourth column has 1 square. The sixty-fifth column has 1 square. The sixty-sixth column has 1 square. The sixty-seventh column has 1 square. The sixty-eighth column has 1 square. The sixty-ninth column has 1 square. The seventieth column has 1 square. The seventy-first column has 1 square. The seventy-second column has 1 square. The seventy-third column has 1 square. The seventy-fourth column has 1 square. The seventy-fifth column has 1 square. The seventy-sixth column has 1 square. The seventy-seventh column has 1 square. The seventy-eighth column has 1 square. The seventy-ninth column has 1 square. The eightieth column has 1 square. The eighty-first column has 1 square. The eighty-second column has 1 square. The eighty-third column has 1 square. The eighty-fourth column has 1 square. The eighty-fifth column has 1 square. The eighty-sixth column has 1 square. The eighty-seventh column has 1 square. The eighty-eighth column has 1 square. The eighty-ninth column has 1 square. The ninetieth column has 1 square. The ninety-first column has 1 square. The ninety-second column has 1 square. The ninety-third column has 1 square. The ninety-fourth column has 1 square. The ninety-fifth column has 1 square. The ninety-sixth column has 1 square. The ninety-seventh column has 1 square. The ninety-eighth column has 1 square. The ninety-ninth column has 1 square. The hundredth column has 1 square. The letter 'A' is in the bottom-left cell. A yellow circle is in the far right column.

A

B

- b. Energi ionisasi terbesar

Fluorin
(F)

Cesium
(Cs)

Neon
(Ne)