

Typische, unteilbare Atome

**Atome eines Elements
haben die gleiche Masse**

**Atome verschiedener Elemente
haben unterschiedliche Massen**

**Atome können neue
Verbindungen bilden**



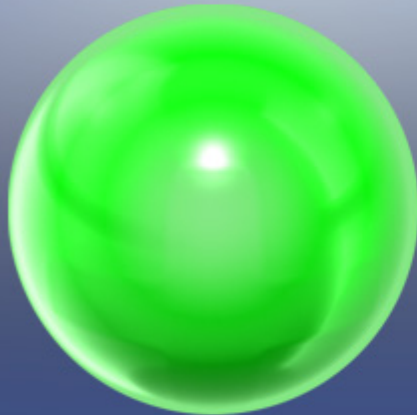
The diagram illustrates the experimental setup for Rutherford's alpha particle scattering experiment. A radiation source is positioned on the left, emitting a beam of alpha particles (represented by red dots) towards a central target. The target is a thin, rectangular piece of gold foil. Surrounding the foil is a large, circular, grey structure that acts as a detector or shield. The entire setup is placed on a blue grid surface.

Goldfolie

Zinksulfid-Schirm

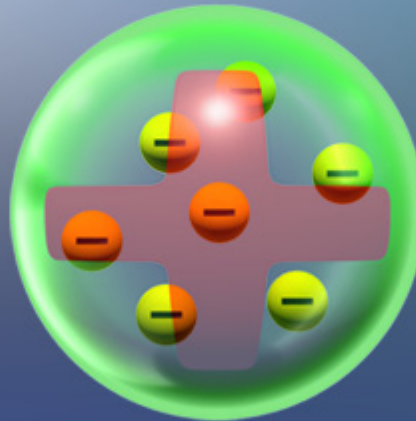
Strahlungsquelle

Dalton



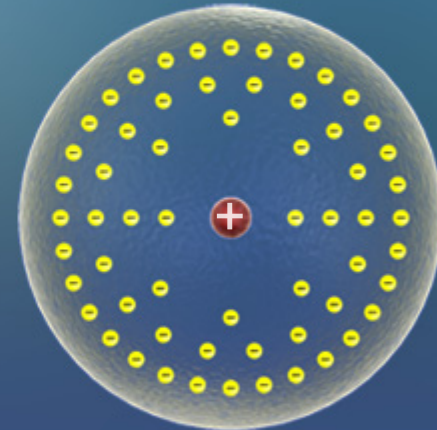
Kugelmodell

Thomson



Rosinenkuchenmodell

Rutherford



Kern-Hülle-Modell

Joseph John Thomson

1856 - 1940



**Entdeckung unterschiedlich
schwerer Atome eines Elements**

Entdeckung unterschiedlich
schwerer Atome eines Elements

Ernest Rutherford

1871 - 1937



**Entdeckung des
Protons**

Proton
Entdeckung des

James Chadwick

1891 - 1974



**Entdeckung des
Neutrons**

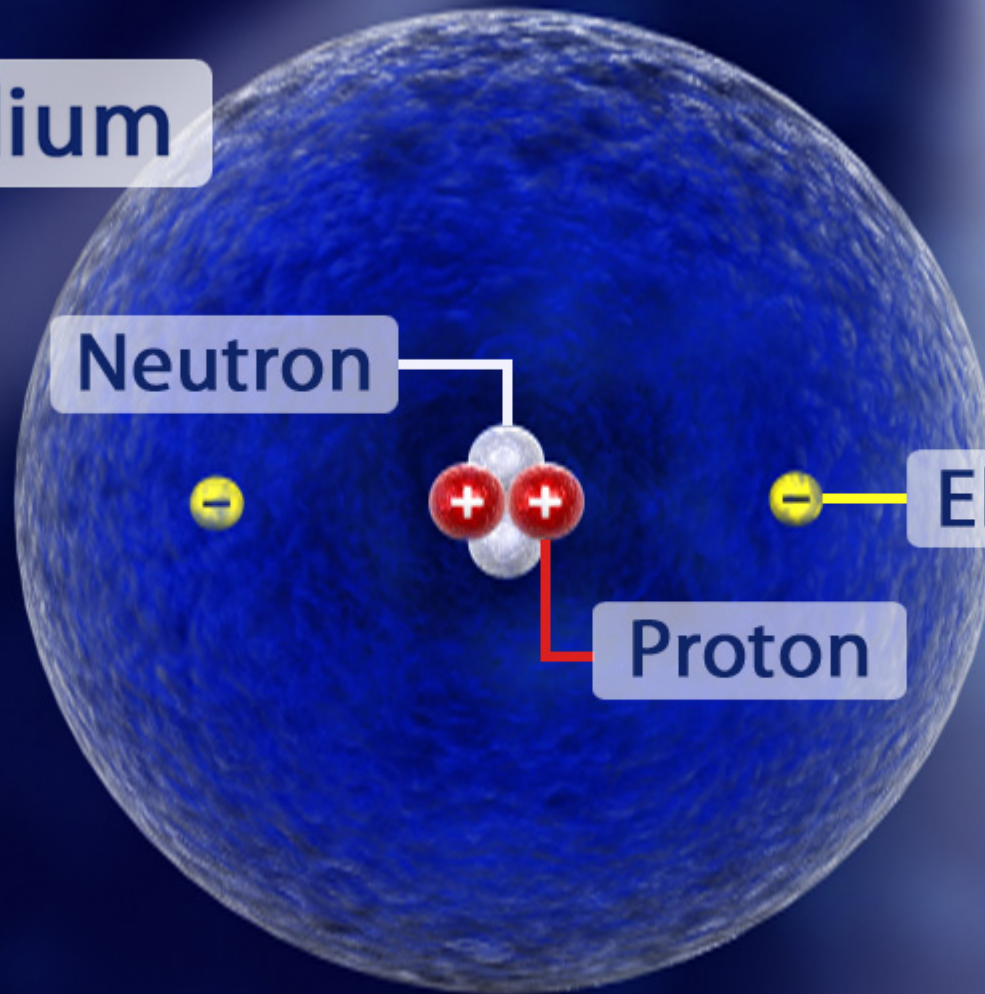
Neutron
Entdeckung des

Helium

Neutron

Elektron

Proton



Massenzahl

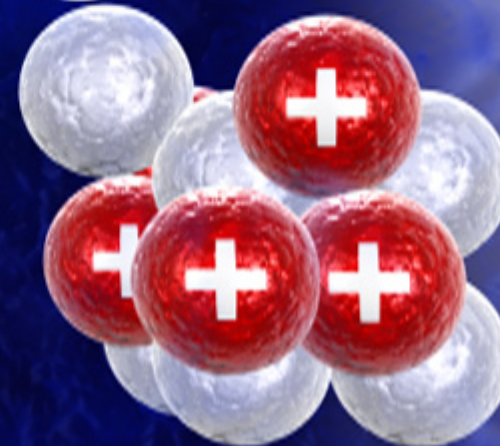
12

Kernladungszahl

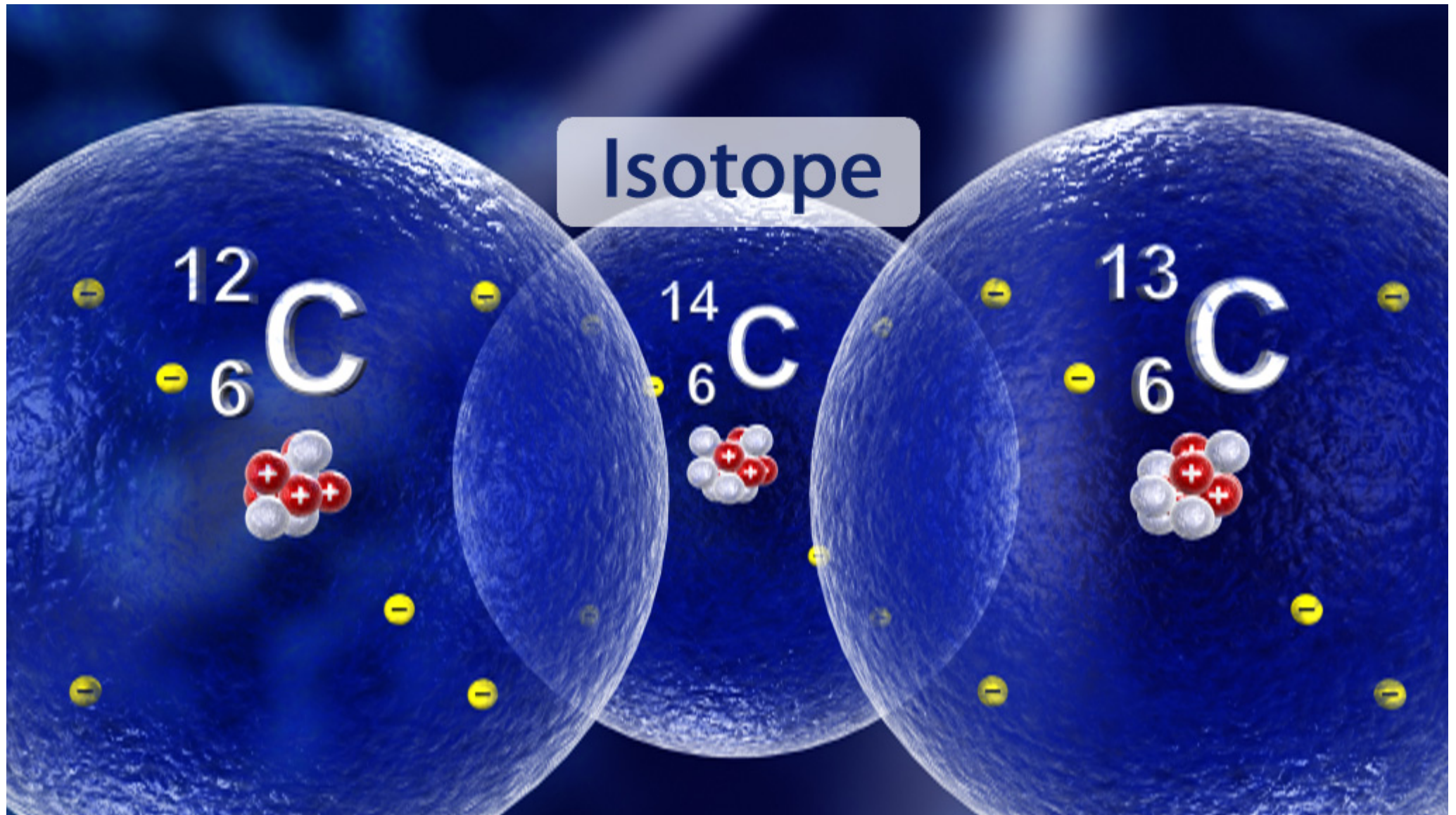
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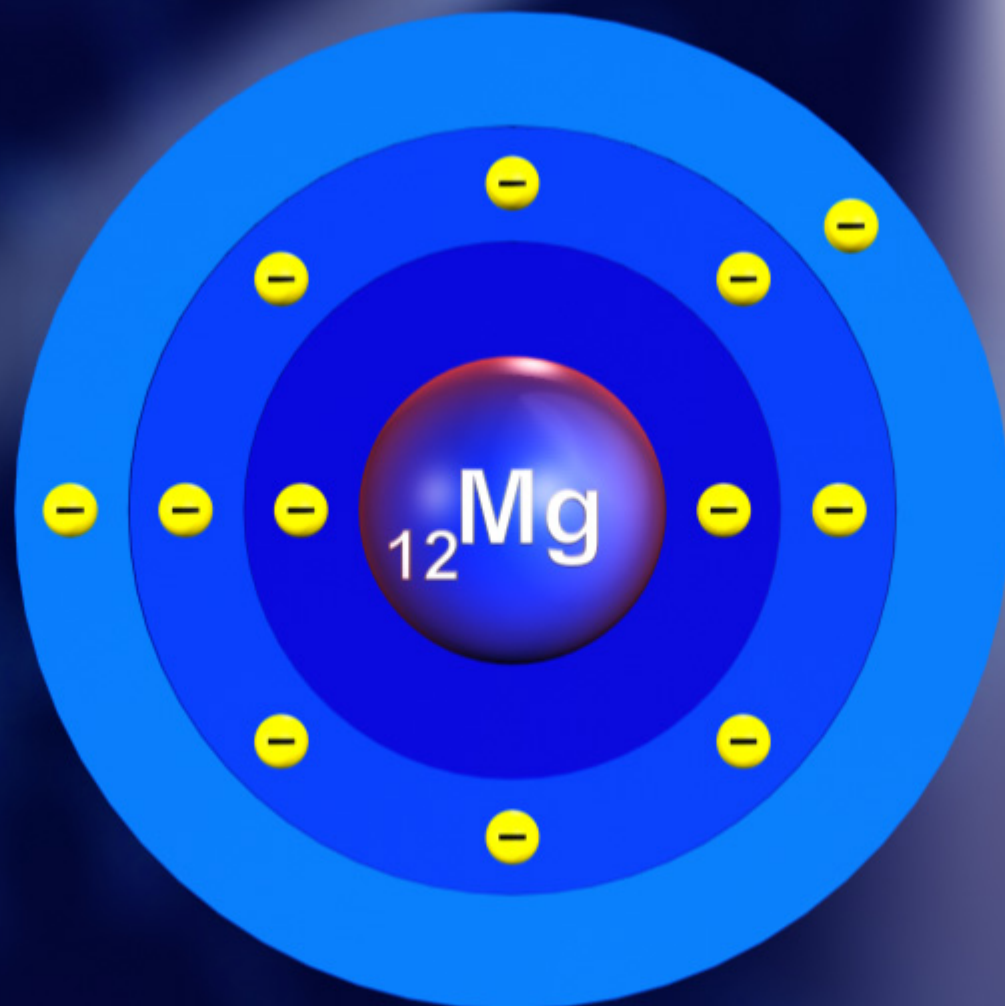
Ordnungszahl

C



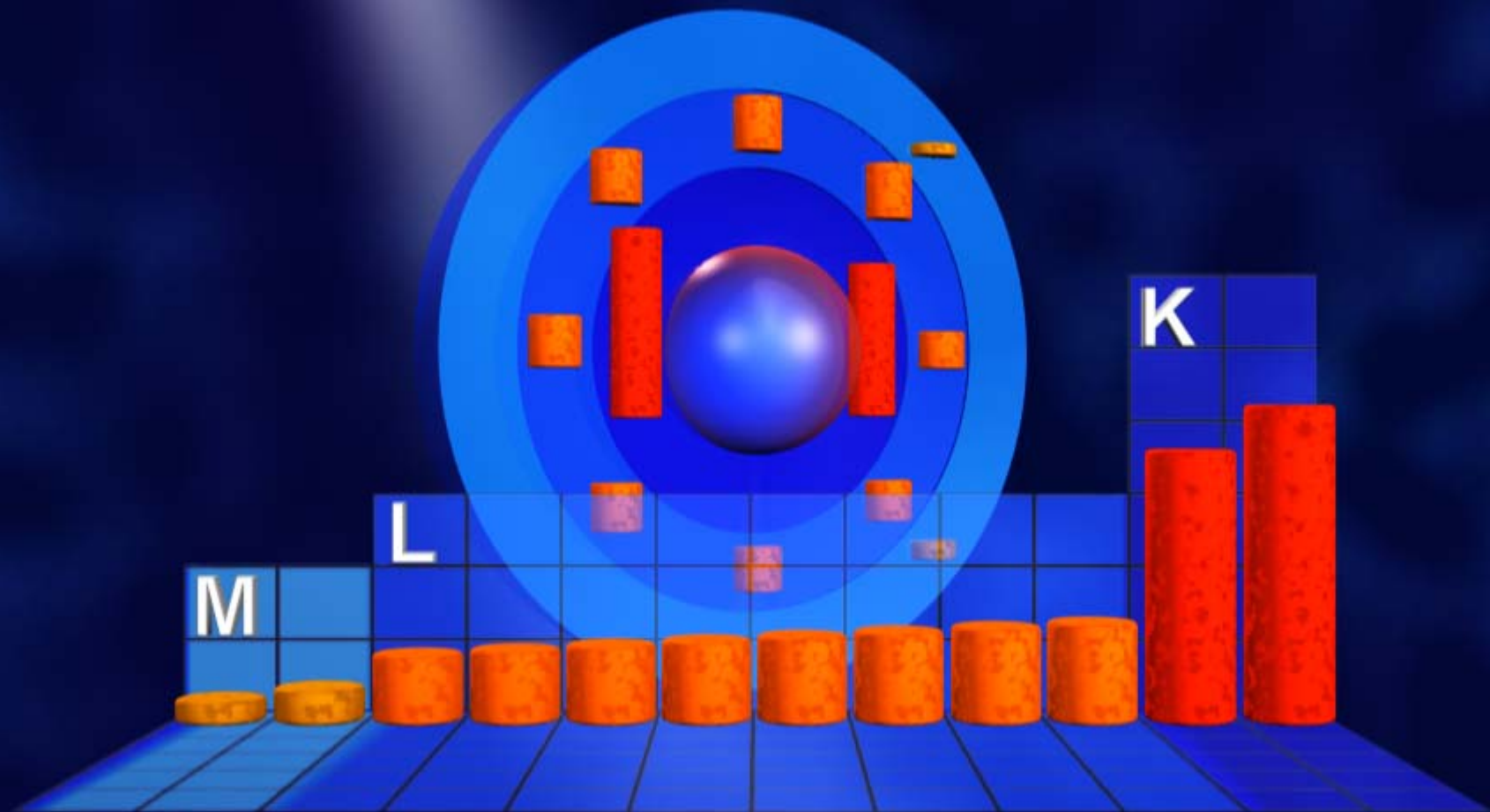
Isotope

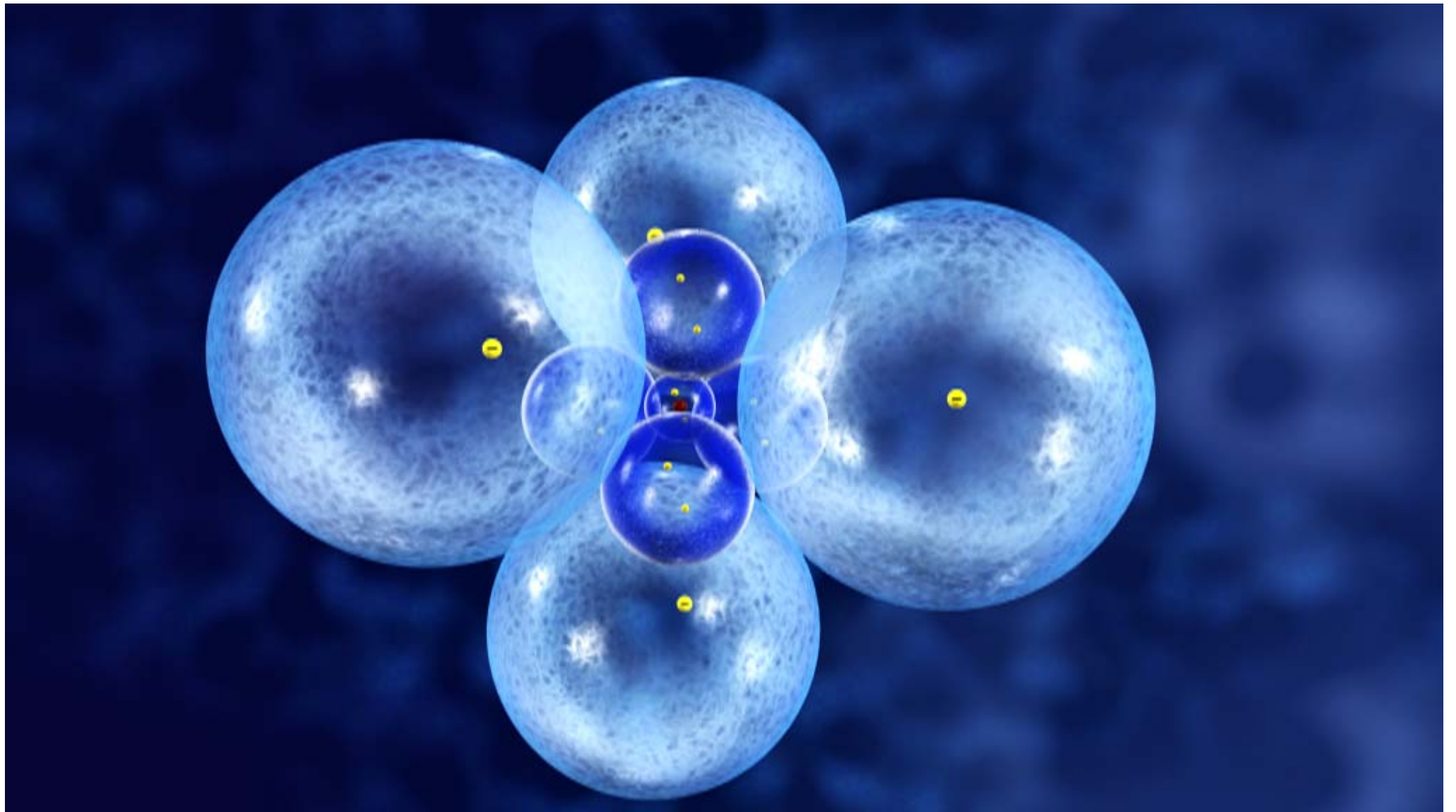






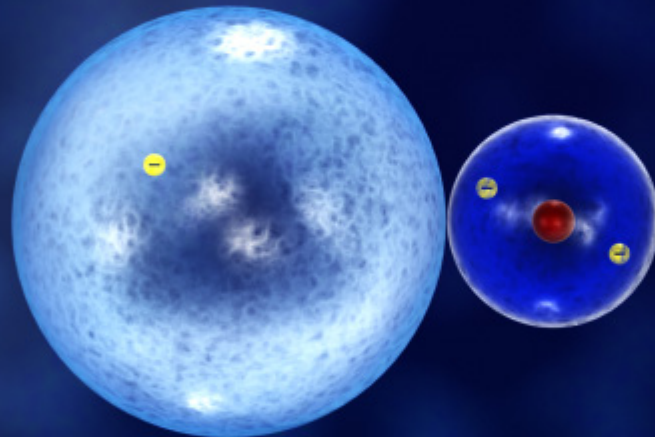
K L M N O P Q

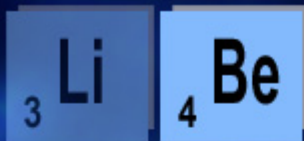




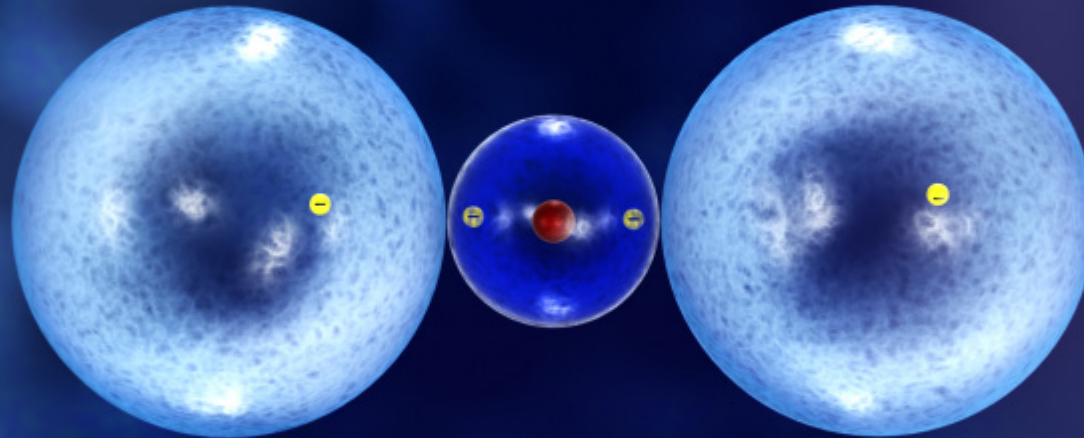


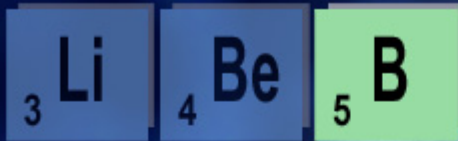
Lithium



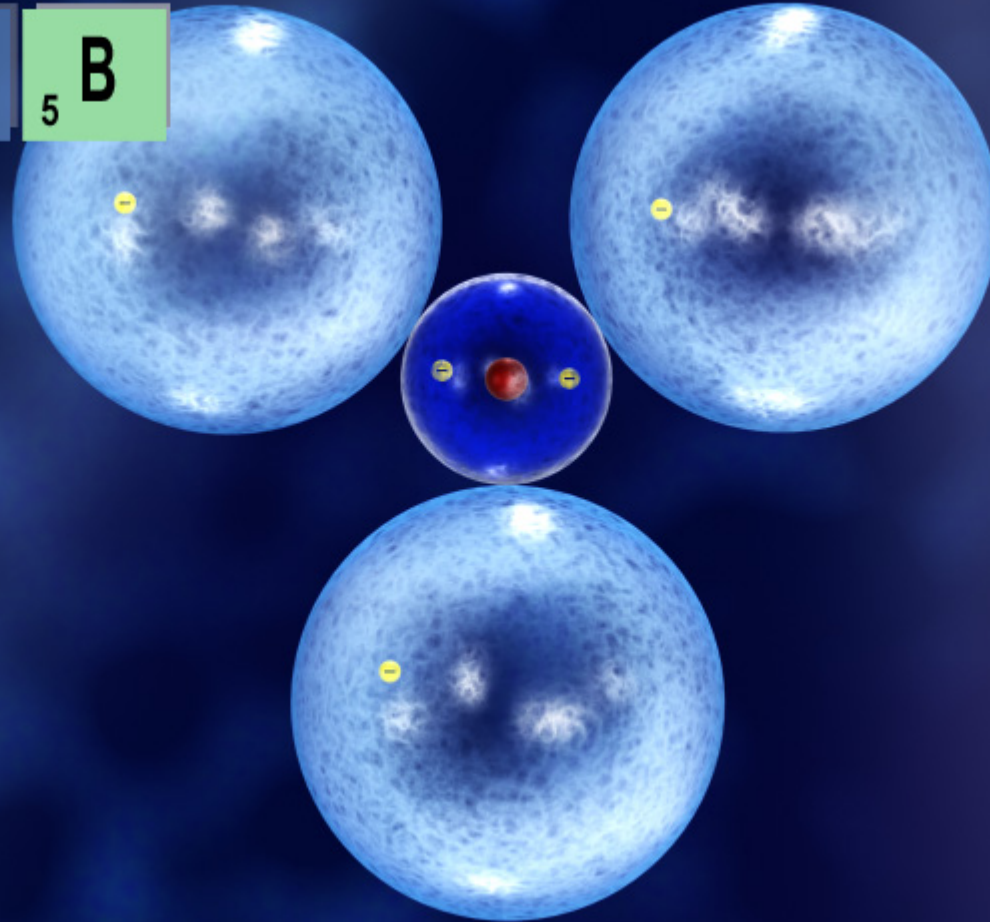


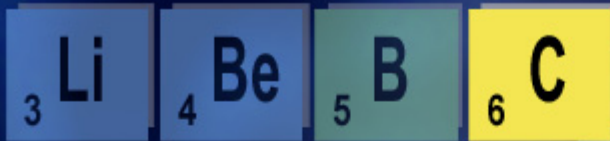
Beryllium



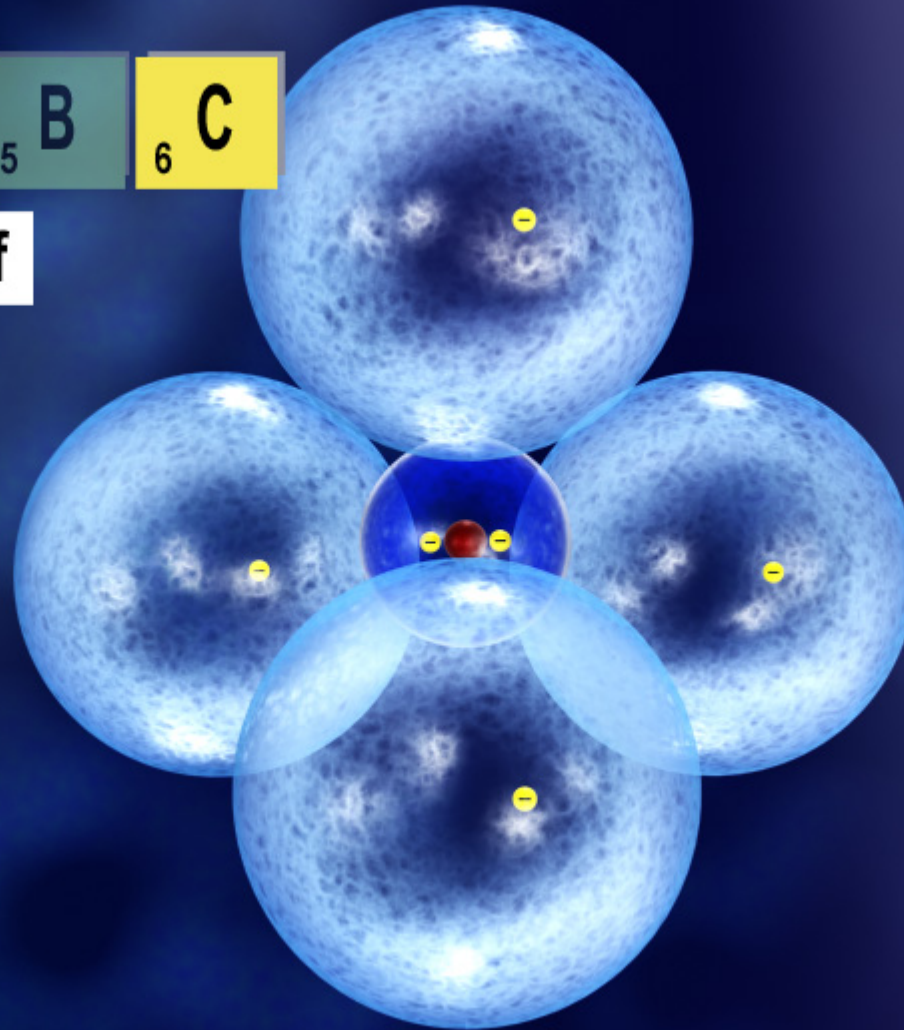


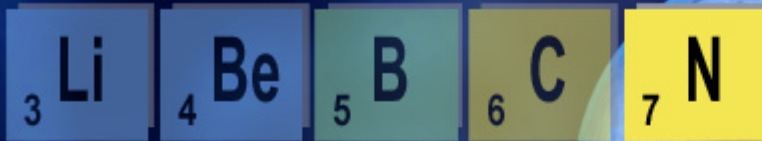
Bor



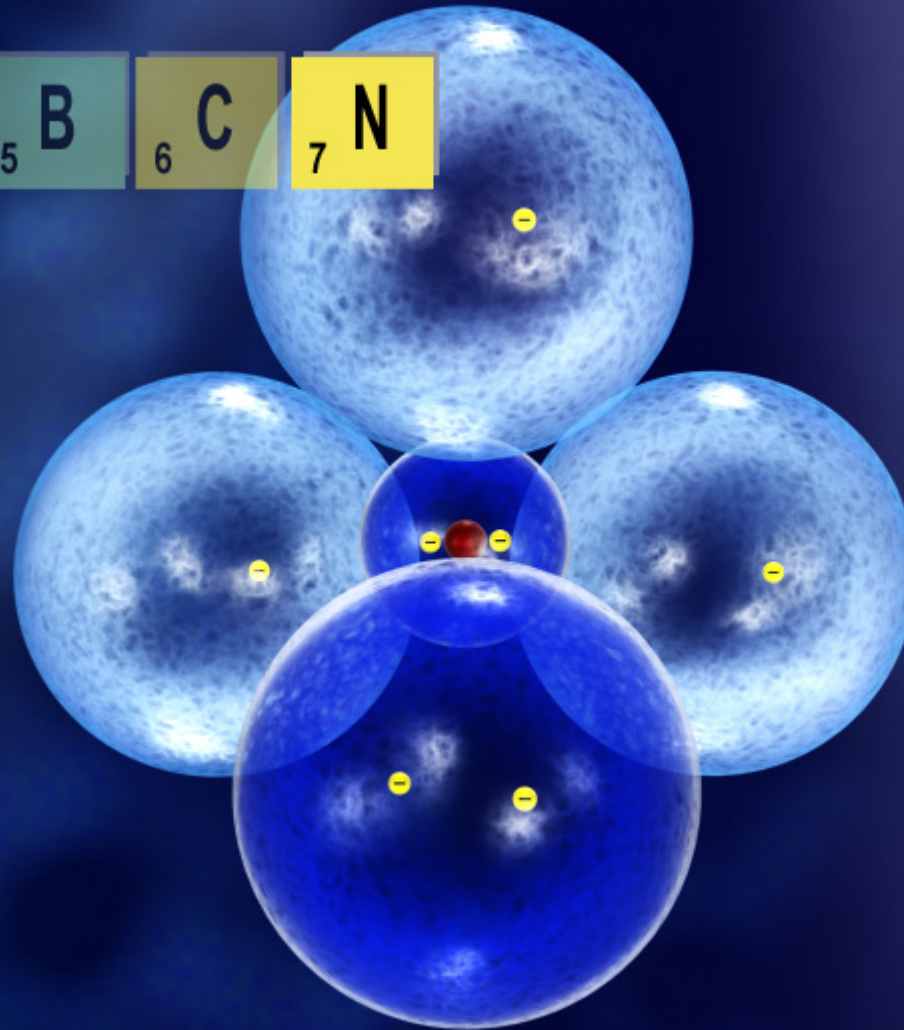


Kohlenstoff



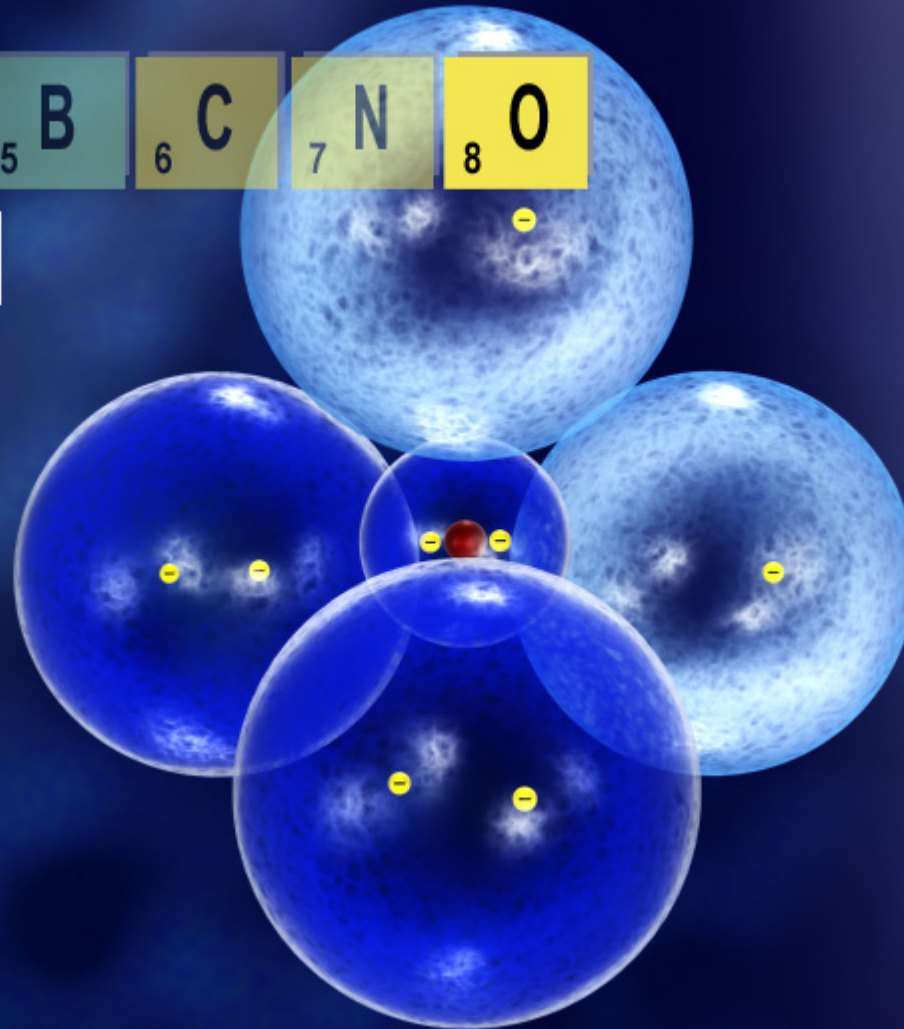


Stickstoff



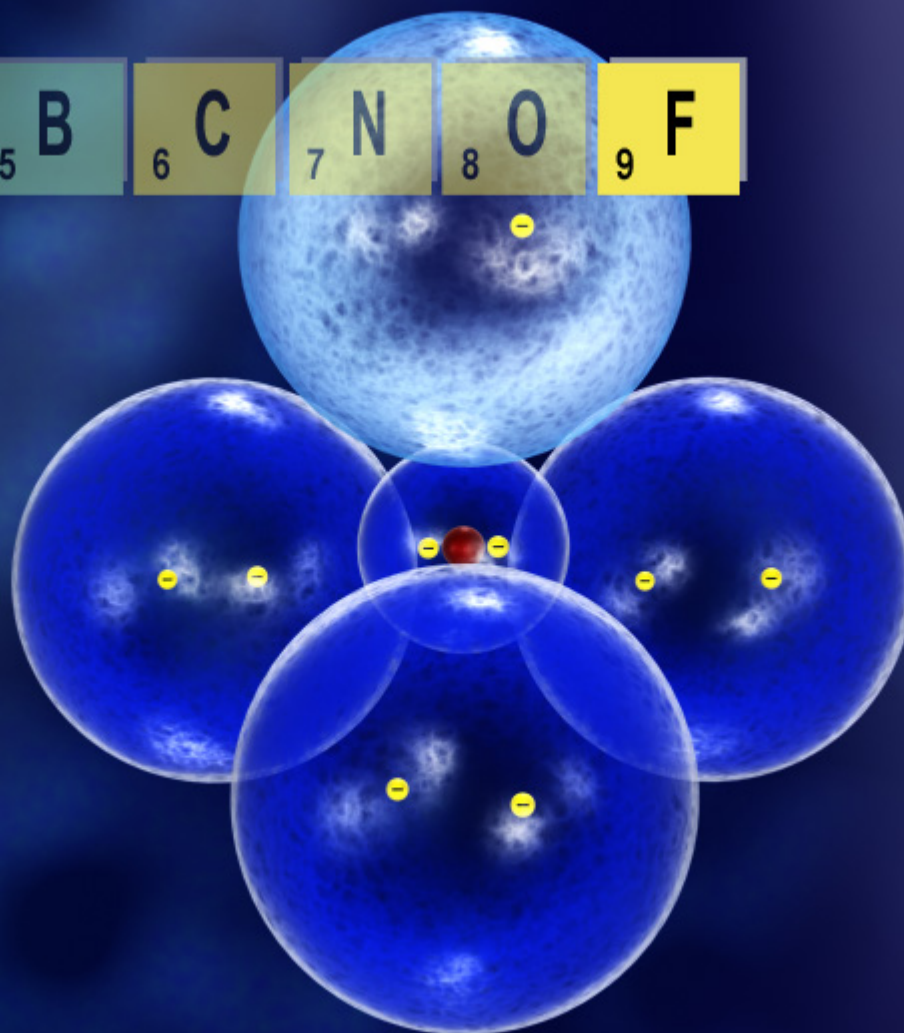
3 Li	4 Be	5 B	6 C	7 N	8 O
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Sauerstoff



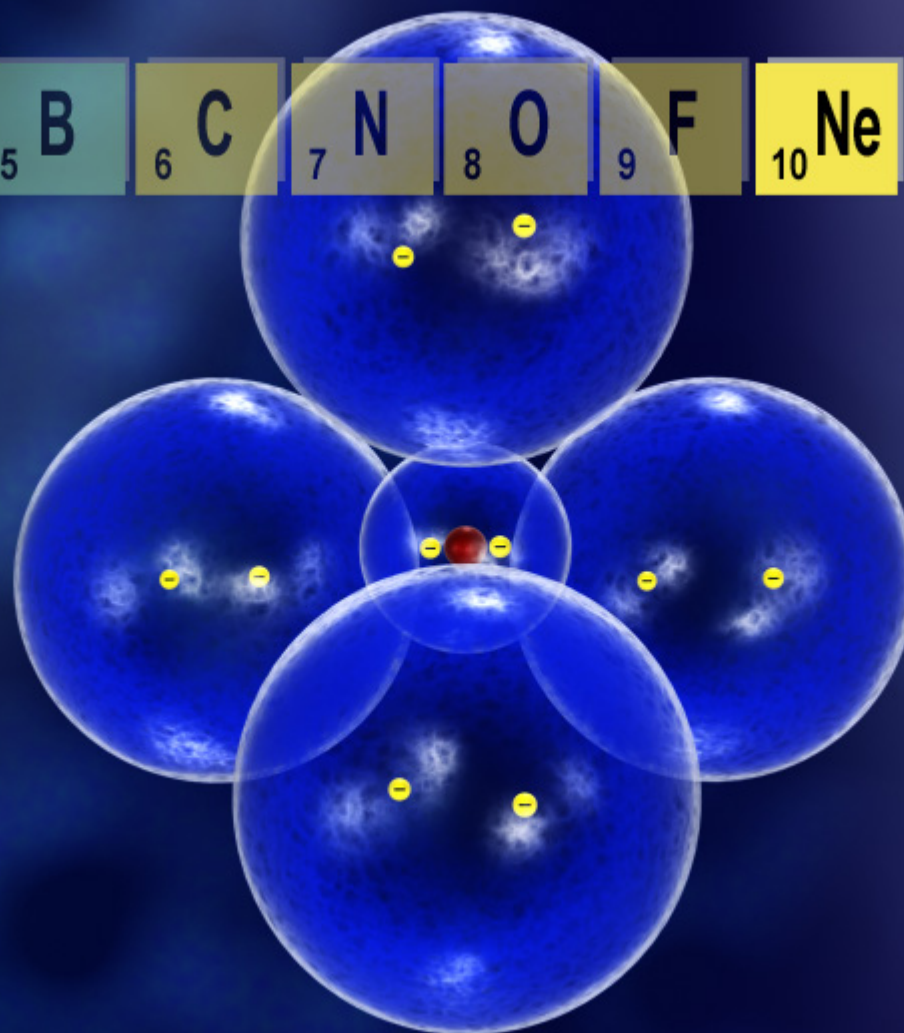


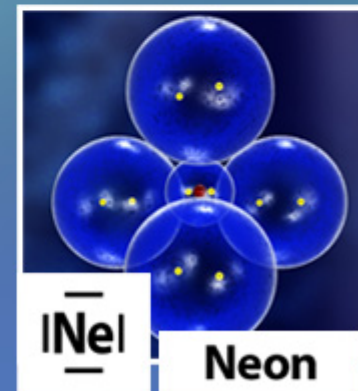
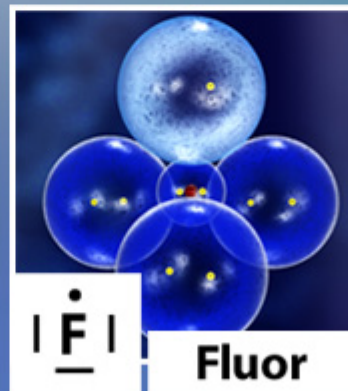
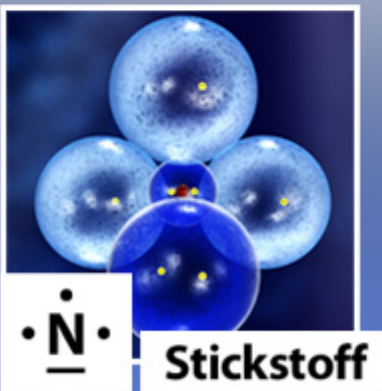
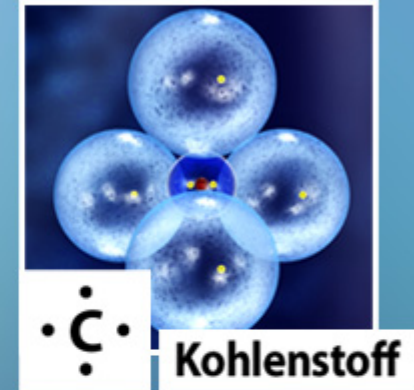
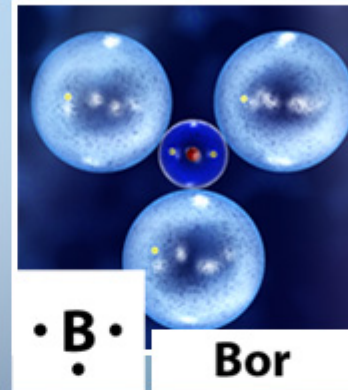
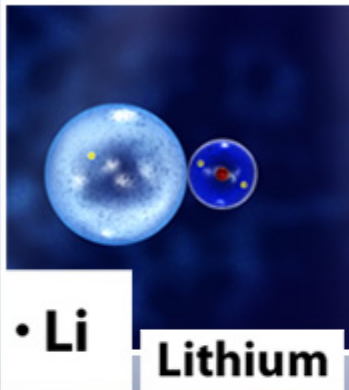
Fluor



3 Li	4 Be	5 B	6 C	7 N	8 O	9 F	10 Ne
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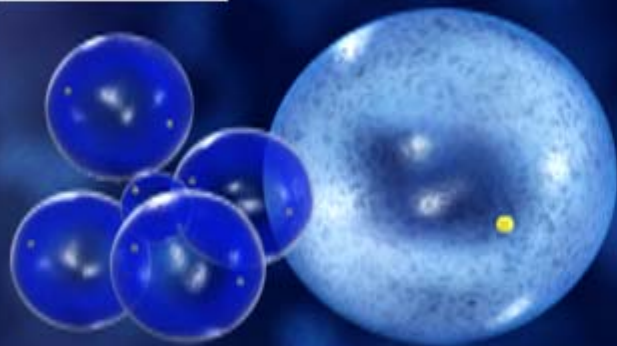
Neon





Na

Natrium



Cl

Chlor

