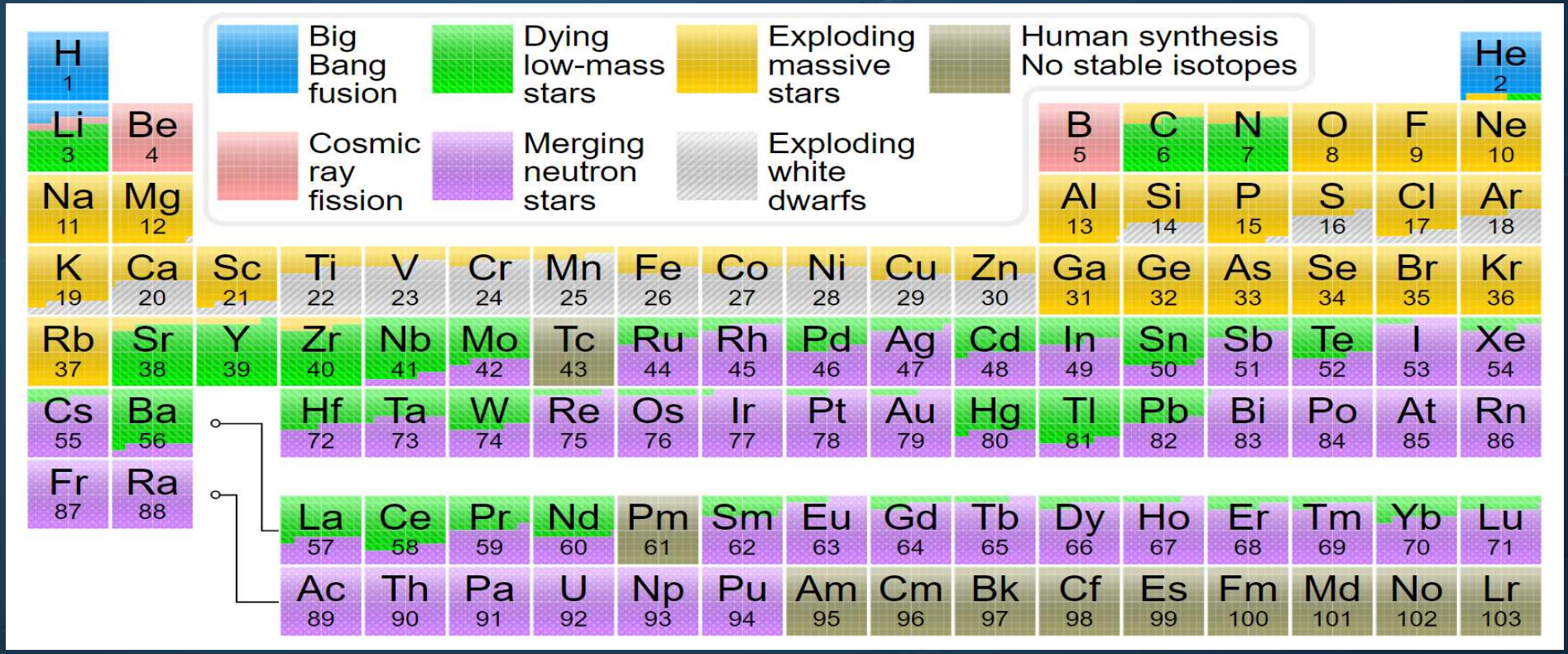
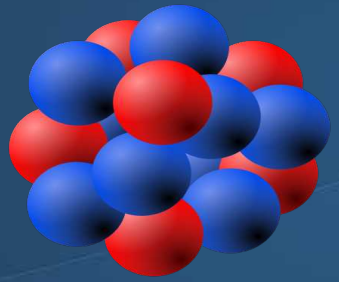
The Structured Atom Model - SAM

How were the elements created?



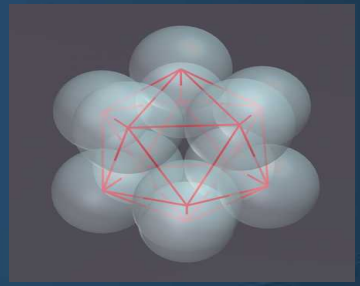
Is the Nucleus Structured?

Standard Model



- No known structure, nucleon position is indeterminate and the are moving.
- Understanding the nucleus requires advanced mathematics
- Nucleus is thought to be chaotic in nature.
- Requires 3 forces – electrostatic, strong and weak force.
- The neutron is a fundamental particle that decays into a proton and electron when removed from the nucleus.

Structured Atom Model - SAM



- Precise fixed structure that grows predictably and determines properties of the elements and the organization of the Periodic Table.
- A stable atom has a stable structure does not change.
- Easy to understand, easy to visualize
- Requires one force for the atom – electrostatic
- The nuclear neutron is a shared electron between protons. The free neutron is an unstable pairing of an electron and a proton.

Presentation content

- Introduction
- Key Principles of SAM
- The New Neutron
- The Structured Nucleus
- ICCF-21 – Cold Fusion – LENR
- Transmutation of Elements in Nature
  - Geological
  - Biological

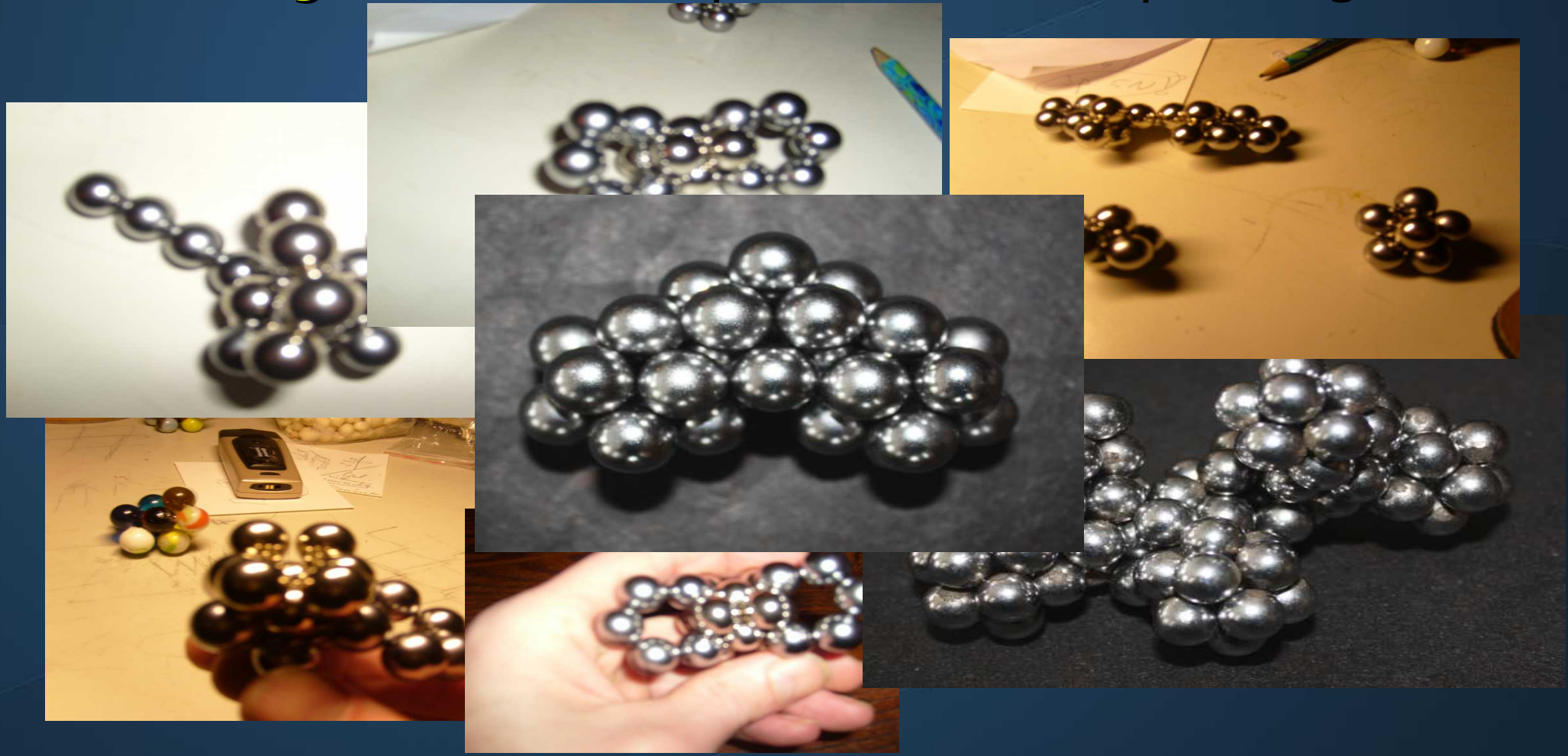
Edo (Edwin) Kaal
The Atom Hacker

- Born August 3, 1972 – Apeldoorn Netherlands
- Lifelong fascination with the complexity of the Periodic table and the elements.
- 2006 – Major life events resulted in his questioning everything – family, the courts, banking, politics and Science.
- He realized science had not advanced significantly in the last 10 years.
- Consciously decided to discard what he had been taught about atoms, electrons, protons, chemistry, etc. Started looking only at what he KNEW as absolute fact.

How many ways can 2 spheres fit together?
Let's try 3? What can nature teach me?

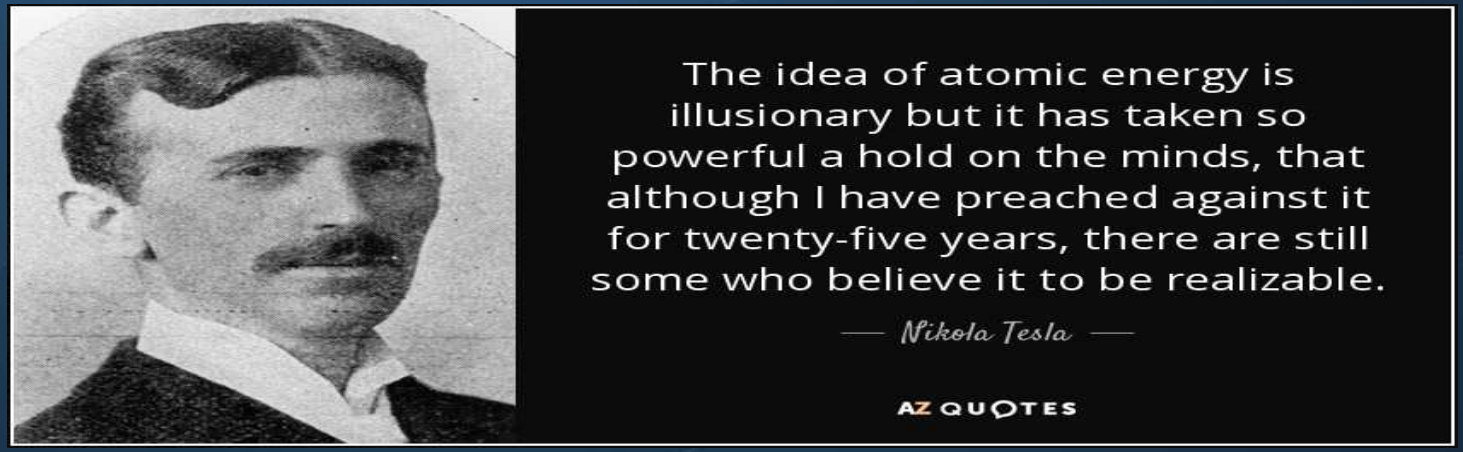
Early Explorations with Marbles

Magnets – the experts at dense packing



Key Principles

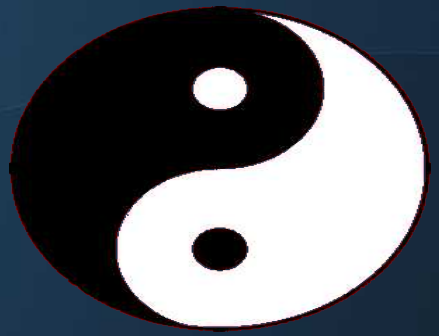
- Duality – the Proton and Electron.
- Dense packing – stability
- Platonic Solids - the tetrahedron and icosahedron.
- A static element has a static nucleus
- Must explain the Periodic Table of Elements and the properties of the elements



Duality

Everything that we know, both physical and non-physical, is perceived by us because of its dual nature. One cannot exist without the other.

- Female & Male
- Hot & Cold
- Love & Hate
- Positive and Negative

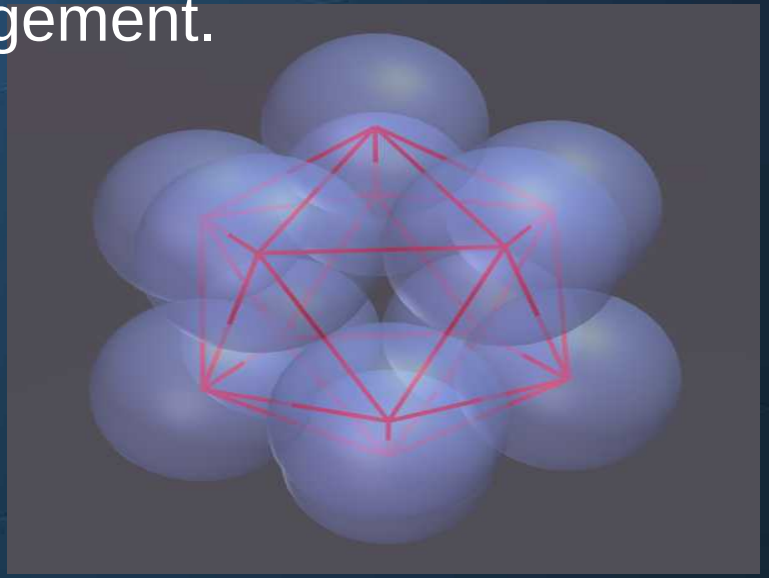


The proton is positive, solid, and creates structure.

The electron is negative, more like a field or wave, and holds the structure together.

Spherical Dense Packing

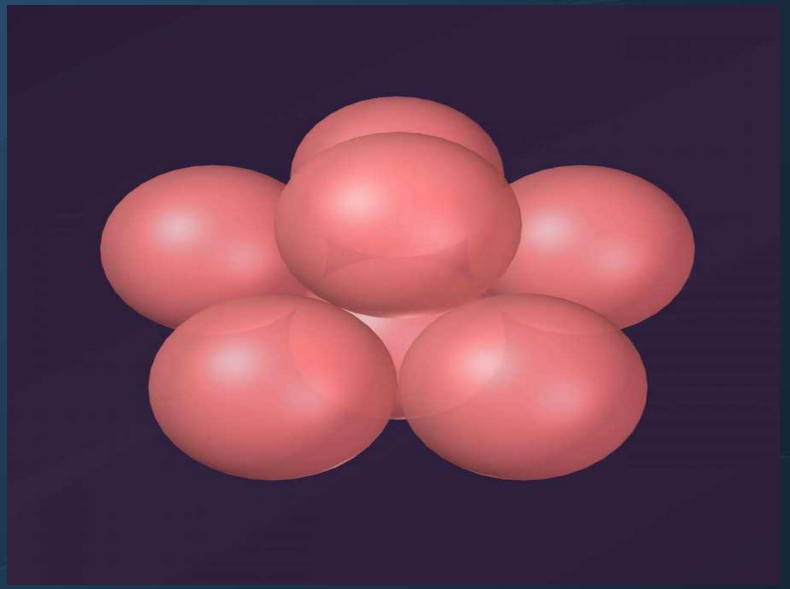
Discussions on dense packing focus on spheres stacked on a flat surface. The sides are triangles, however each layer is based on the square. This is not a strong arrangement.



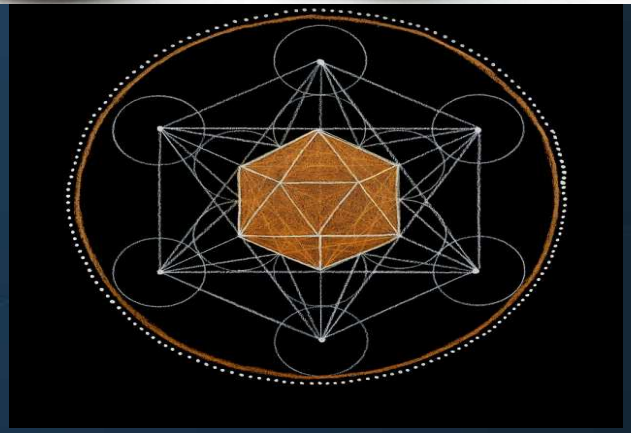
SAM is based on spherical dense packing. All faces are triangular. The icosahedron is the largest possible structure that is spherically dense packed.

Eureka – We have Lithium!

- Structure: Pentagonal Bi-pyramid – can be thought of as a partial icosahedron
- 3rd element of periodic table
- First solid element
- Prefers Lithium-7 over Lithium-6



Mans fascination with the Platonic Solids



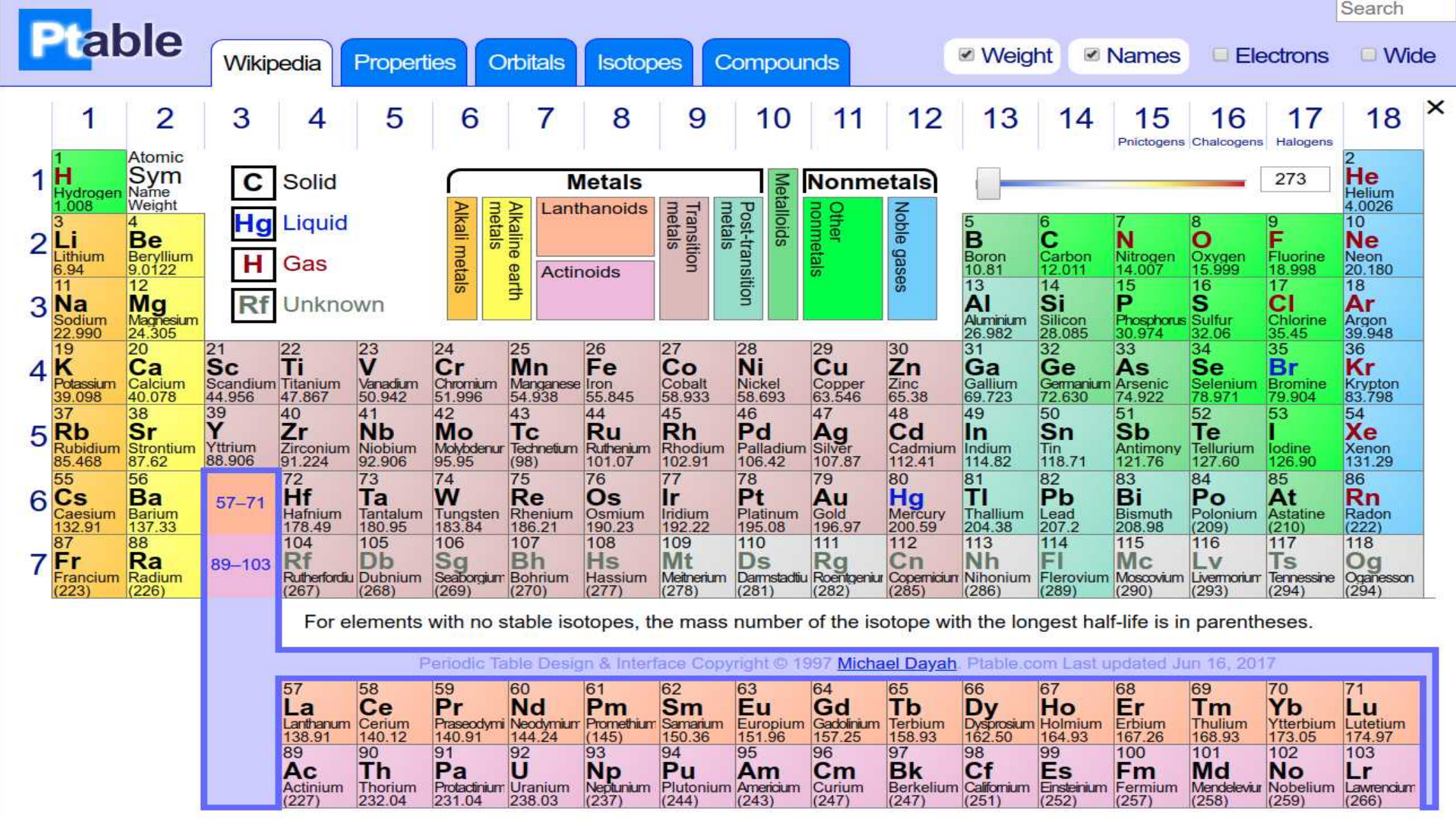
Platonic Solids

There are 5 platonic solids.

- All vertices lie on a sphere.
- All angles are equal.
- All faces are the same.
- All vertices are surrounded by the same number of faces.

	Duals	Vertices	Sides	Face shape
Tetrahedron	Itself	4	4	Triangle
Hexahedron	Each Other	8	6	Square
Octahedron		6	8	Triangle
Icosahedron	Each Other	12	20	Triangle
Dodecahedron		20	12	Pentagon

Platonic Solid Duals


Ptable
Search
Wikipedia
Properties
Orbitals
Isotopes
Compounds
Weight
Names
Electrons
Wide
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
Pnictogens
Chalcogens
Halogens
Atomic
Sym
Name
Weight
C Solid
Hg Liquid
H Gas
Rf Unknown
Metals
Alkali metals
Alkaline earth metals
Lanthanoids
Actinoids
Transition metals
Post-transition metals
Metalloids
Nonmetals
Other nonmetals
Noble gases
273
1 H Hydrogen 1.008
2 He Helium 4.0026
3 Li Lithium 6.94
4 Be Beryllium 9.0122
5 B Boron 10.81
6 C Carbon 12.011
7 N Nitrogen 14.007
8 O Oxygen 15.999
9 F Fluorine 18.998
10 Ne Neon 20.180
11 Na Sodium 22.990
12 Mg Magnesium 24.305
13 Al Aluminium 26.982
14 Si Silicon 28.085
15 P Phosphorus 30.974
16 S Sulfur 32.06
17 Cl Chlorine 35.45
18 Ar Argon 39.948
19 K Potassium 39.098
20 Ca Calcium 40.078
21 Sc Scandium 44.956
22 Ti Titanium 47.867
23 V Vanadium 50.942
24 Cr Chromium 51.996
25 Mn Manganese 54.938
26 Fe Iron 55.845
27 Co Cobalt 58.933
28 Ni Nickel 58.693
29 Cu Copper 63.546
30 Zn Zinc 65.38
31 Ga Gallium 69.723
32 Ge Germanium 72.630
33 As Arsenic 74.922
34 Se Selenium 78.971
35 Br Bromine 79.904
36 Kr Krypton 83.798
37 Rb Rubidium 85.468
38 Sr Strontium 87.62
39 Y Yttrium 88.906
40 Zr Zirconium 91.224
41 Nb Niobium 92.906
42 Mo Molybdenum 95.95
43 Tc Technetium (98)
44 Ru Ruthenium 101.07
45 Rh Rhodium 102.91
46 Pd Palladium 106.42
47 Ag Silver 107.87
48 Cd Cadmium 112.41
49 In Indium 114.82
50 Sn Tin 118.71
51 Sb Antimony 121.76
52 Te Tellurium 127.60
53 I Iodine 126.90
54 Xe Xenon 131.29
55 Cs Caesium 132.91
56 Ba Barium 137.33
57–71
72 Hf Hafnium 178.49
73 Ta Tantalum 180.95
74 W Tungsten 183.84
75 Re Rhenium 186.21
76 Os Osmium 190.23
77 Ir Iridium 192.22
78 Pt Platinum 195.08
79 Au Gold 196.97
80 Hg Mercury 200.59
81 Tl Thallium 204.38
82 Pb Lead 207.2
83 Bi Bismuth 208.98
84 Po Polonium (209)
85 At Astatine (210)
86 Rn Radon (222)
87 Fr Francium (223)
88 Ra Radium (226)
89–103
104 Rf Rutherfordium (267)
105 Db Dubnium (268)
106 Sg Seaborgium (269)
107 Bh Bohrium (270)
108 Hs Hassium (277)
109 Mt Meitnerium (278)
110 Ds Darmstadtium (281)
111 Rg Roentgenium (282)
112 Cn Copernicium (285)
113 Nh Nihonium (286)
114 Fl Flerovium (289)
115 Mc Moscovium (290)
116 Lv Livermorium (293)
117 Ts Tennessine (294)
118 Og Oganesson (294)
For elements with no stable isotopes, the mass number of the isotope with the longest half-life is in parentheses.
Periodic Table Design & Interface Copyright © 1997 Michael Dayah. Ptable.com Last updated Jun 16, 2017
57 La Lanthanum 138.91
58 Ce Cerium 140.12
59 Pr Praseodymium 140.91
60 Nd Neodymium 144.24
61 Pm Promethium (145)
62 Sm Samarium 150.36
63 Eu Europium 151.96
64 Gd Gadolinium 157.25
65 Tb Terbium 158.93
66 Dy Dysprosium 162.50
67 Ho Holmium 164.93
68 Er Erbium 167.26
69 Tm Thulium 168.93
70 Yb Ytterbium 173.05
71 Lu Lutetium 174.97
89 Ac Actinium (227)
90 Th Thorium 232.04
91 Pa Protactinium 231.04
92 U Uranium 238.03
93 Np Neptunium (237)
94 Pu Plutonium (244)
95 Am Americium (243)
96 Cm Curium (247)
97 Bk Berkelium (247)
98 Cf Californium (251)
99 Es Einsteinium (252)
100 Fm Fermium (257)
101 Md Mendelevium (258)
102 No Nobelium (259)
103 Lr Lawrencium (266)

June 2016 – Electric Universe Conference
Phoenix, Az

- Edo presented publicly for first time in break-out room to 50 people.
- Afterward on EU Geology tour, James and Edo officially met while sitting together on the curb at the Grand Canyon Geology Museum.
- Together James and Edo have created software to build atoms according to SAM.
- Ethereal Matters website is place for people to discuss new and controversial subjects.

Chemistry and Physics 101

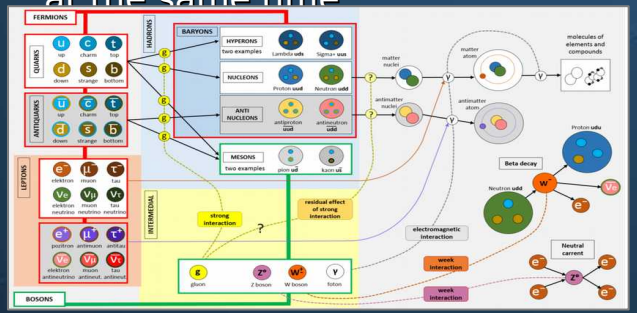
Particle Physics *Nuclear Physics* *Chemistry*

Quantum Mechanics

Structured Atom Model – SAM

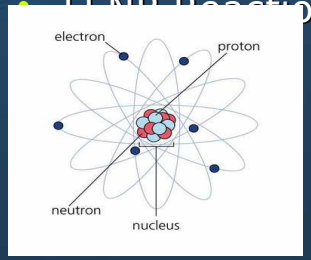
Quantum Concepts

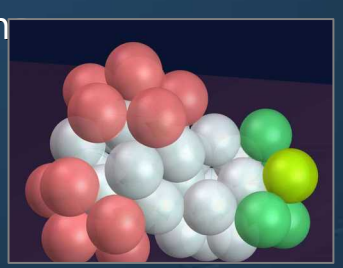
- Particles fading in and out of existence
- Over 200 particles identified
- Uncertainty Principle – cannot know both position and speed at the same time



Nuclear Reactions

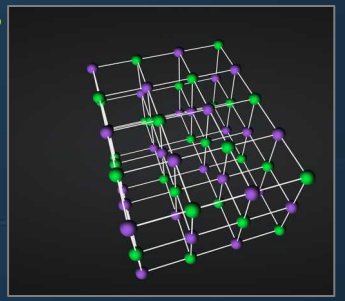
- Exploding Stars
- Nuclear Power Plants
- Atom/Hydrogen Bomb
- Radioactive decay
- LENR Reaction

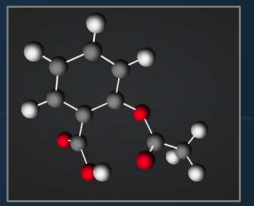




Chemical Reactions

- Burning Candle
- Photosynthesis
- Cooking an Egg
- Rusting Iron





http://etherealmatters.org

Key Principles of SAM

We have a duality – the proton-electron pair with the electrostatic force acting between them.

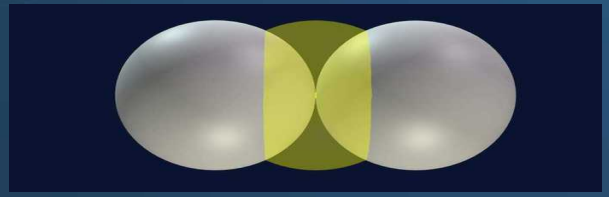
This force is the causal mechanism for the principle of densest packing that creates geometric shapes based on two of the platonic solids – the icosahedron and tetrahedron.

These geometric shapes combine together in a tree like fashion, in a specific ordered sequence and number.

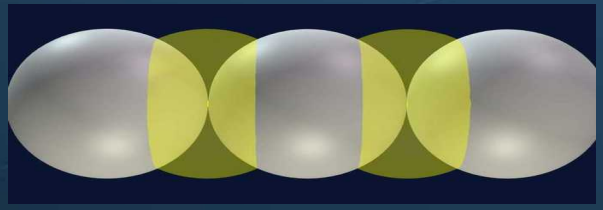
This structure creates all the elements, their isotopes

The New Neutron

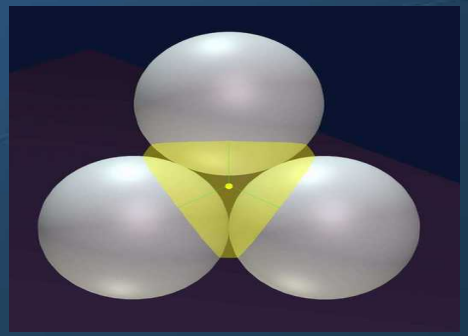
- A free neutron decays into a proton and electron within 15 minutes. A neutron is not stable by itself.
- SAM redefines the nuclear neutron to be a proton that shares it's electron with other protons in the nucleus.
- The nucleus is held together by the electrostatic force, there is no strong nuclear force.



Hydrogen-2 – Deuterium

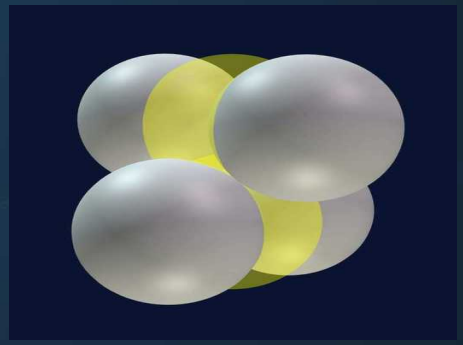


Hydrogen-3 – Tritium



Helium-3

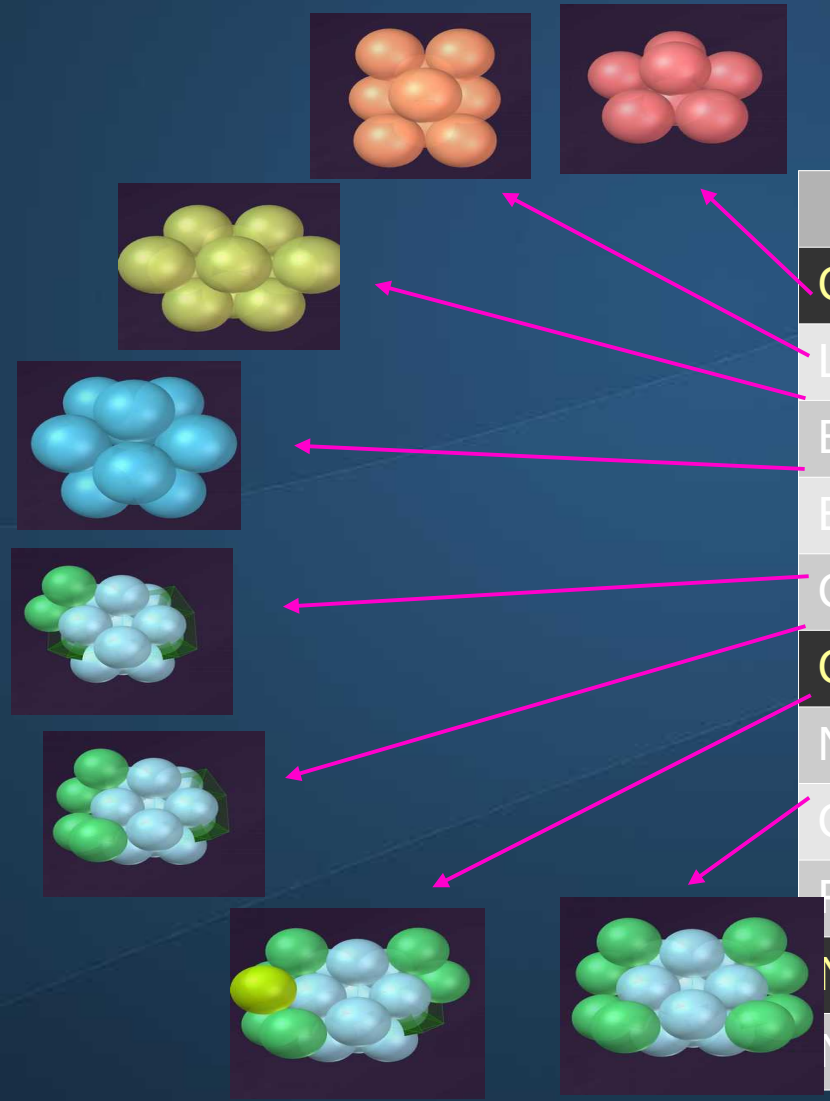
Helium-4



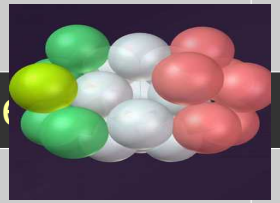
Carl Johnson
Support for the New Neutron

- Graduated 1967 physics degree University of Chicago
- Meticulously analyzed NIST data over period of 6+ years.
- Found there is no room for neutron binding energy.
- Weight of nucleus = protons + electrons + mass defect
- Papers:
    - Neutrinos do not exist
    - Nuclear Physics May be Fairly Simple
    - Nuclear Physics - Statistical Analysis of Isotope Masses

“Nuclets” – Building Blocks of the Atom



	# Protons	Valence
Growing Phase - Metals		
Lithium	7	+1
Beryllium	9	+2
Boron	11	+3
Carbon	12	+4/-4
Capping Phase - Non-Metals		
Nitrogen	14	-3
Oxygen	16	-2
Flourine	19	-1
Neutral Ending - Ine		
Neon	20	0

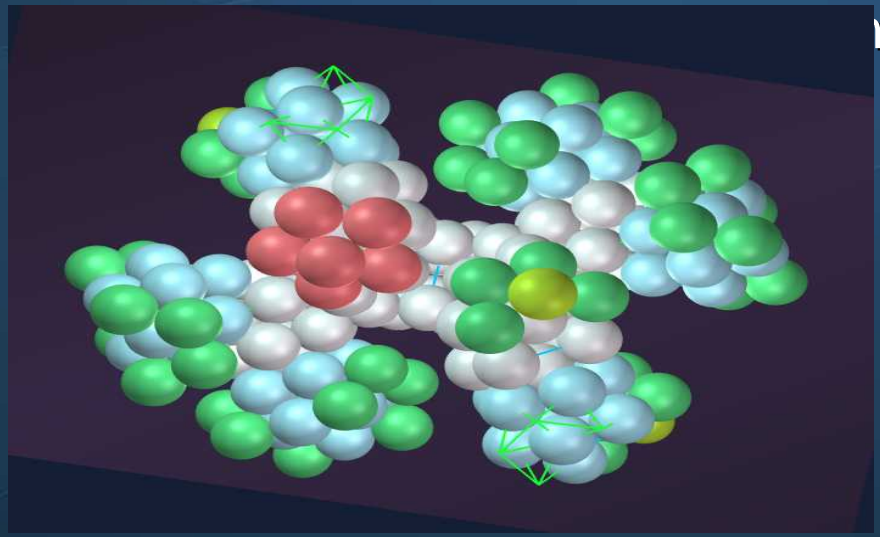


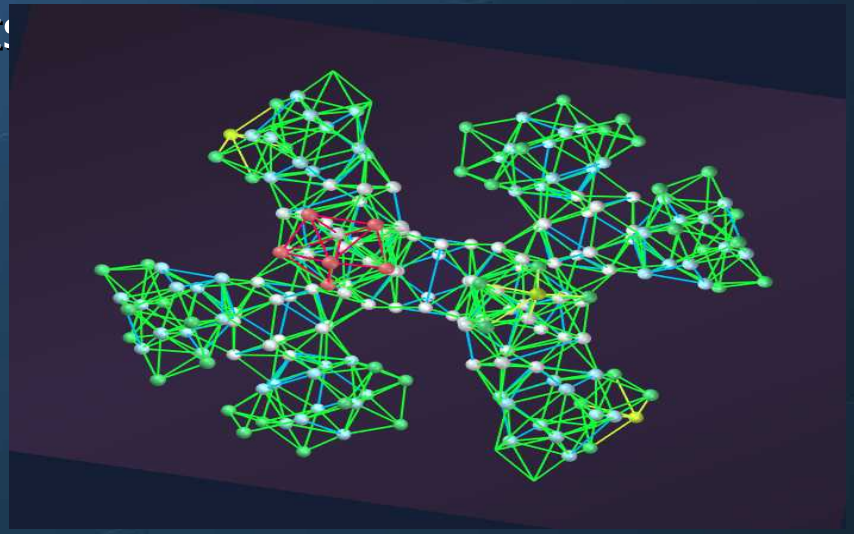
- Sodium – alkali metal
- Starts 2nd row of PTE

All Nuclet Atom

The Shape of the Larger Elements

- The nucleus grows like a tree, splitting into branches as it gets larger.
- The center has 1 nuclet, this splits into 2 nuclets, which split into 4 nuclets and finally 8 nuclets.



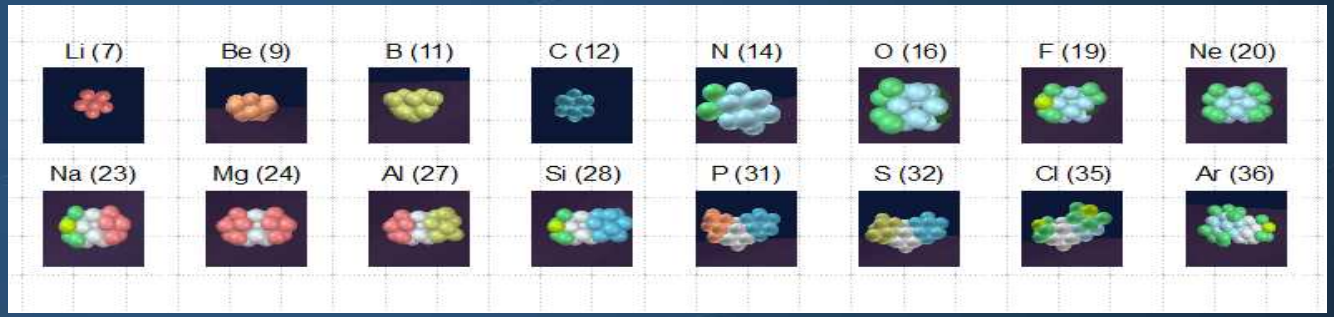


Gold?

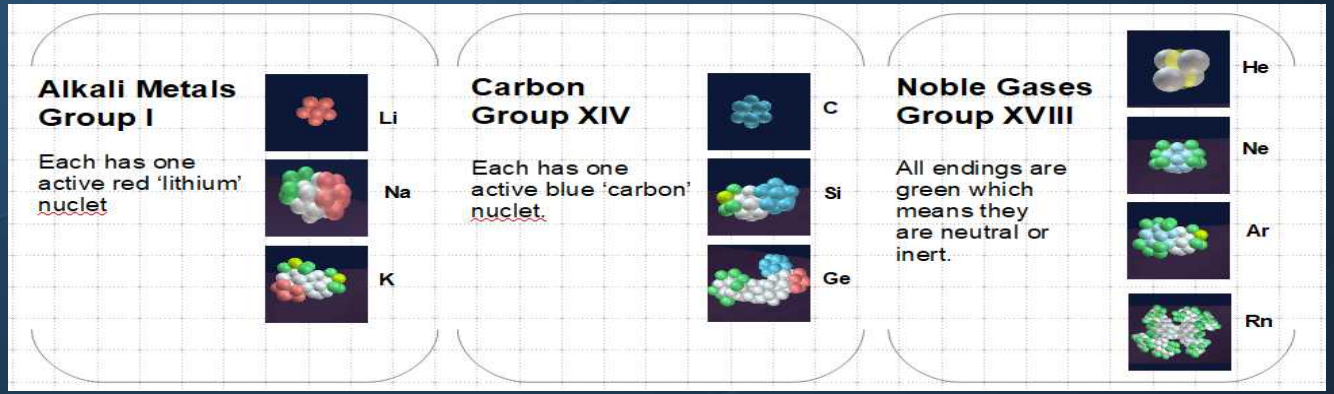
SAM Linked to the Properties of the Elements

Cycle of 8 +1 +2 +3 +4/-4 -3 -2 -1 0

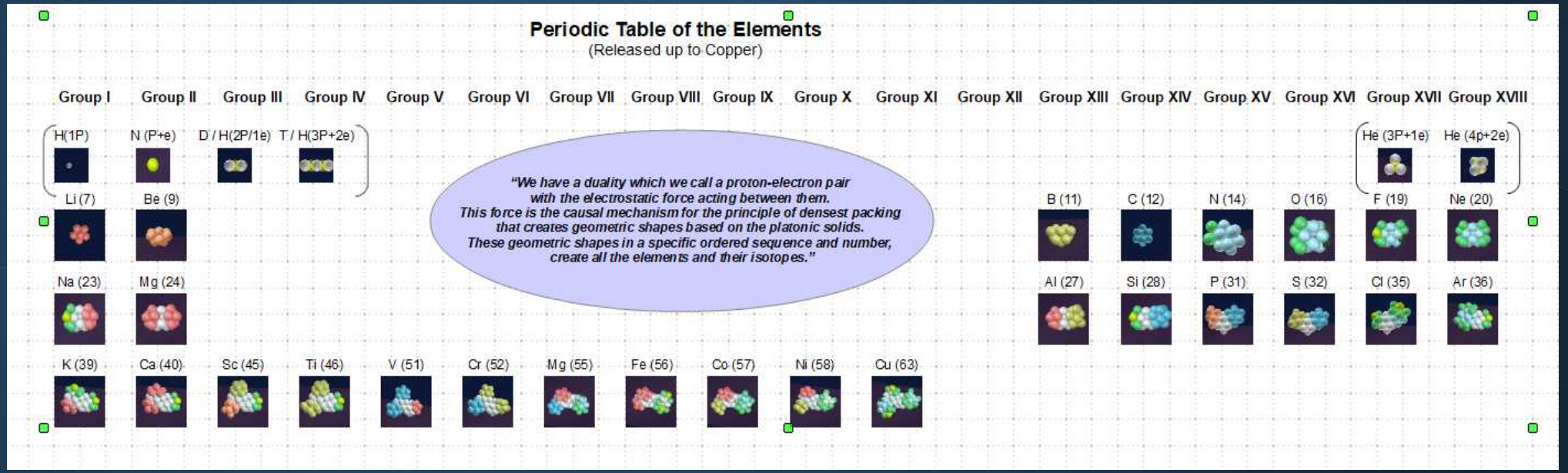
The periods



Groups



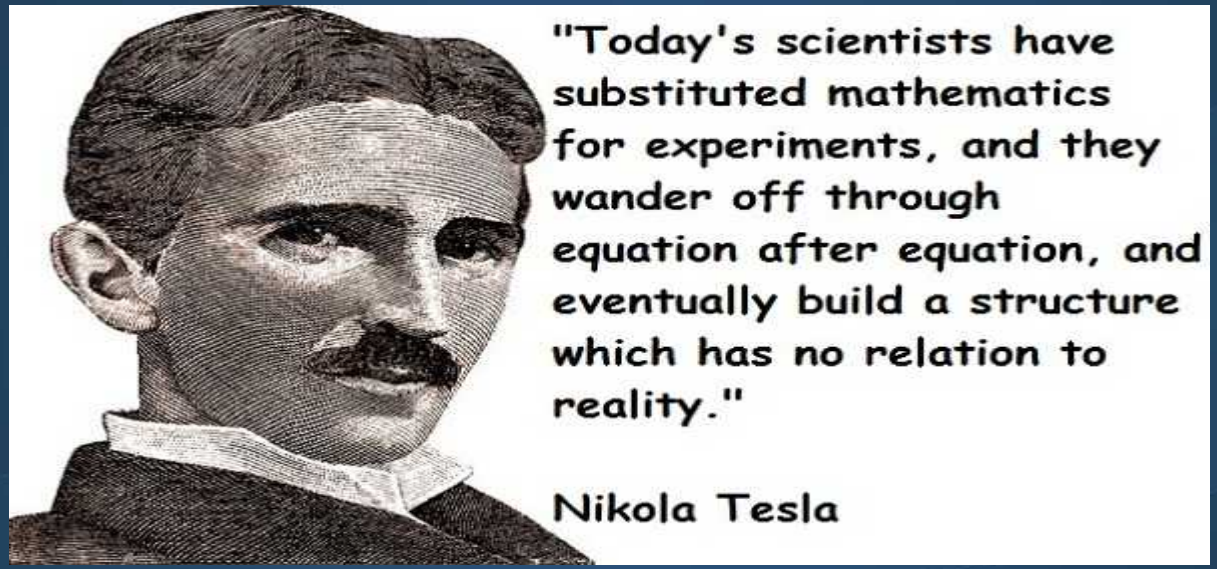
The First 29 Elements Created by SAM



For more information and background visit the page
https://etherealmatters.org/sam

The Atom According to SAM:

- Is based on the proton – electron duality.
- The neutron is a proton/electron pair, electrons are shared inside the nucleus and hold it together.
- There is no strong or weak force, only electricity.
- Does not need mathematical equations to depict the nucleus – good for education
- Is structured according to specific rules (of growth) and shapes
- Shows that the properties of the elements are dictated by the structure of the nucleus
- Is static in nature
- Tends to resist absorption of energy, reverting to its ground-state, if possible



"But as to atomic energy, my experimental observations have shown that the process of disintegration is not accompanied by a liberation of such energy as might be expected from the present theories."

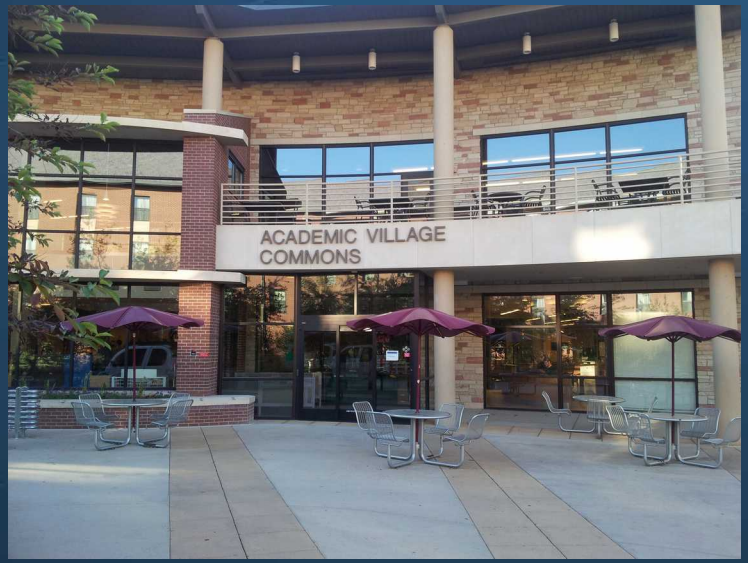
Nikola Tesla on atomic energy

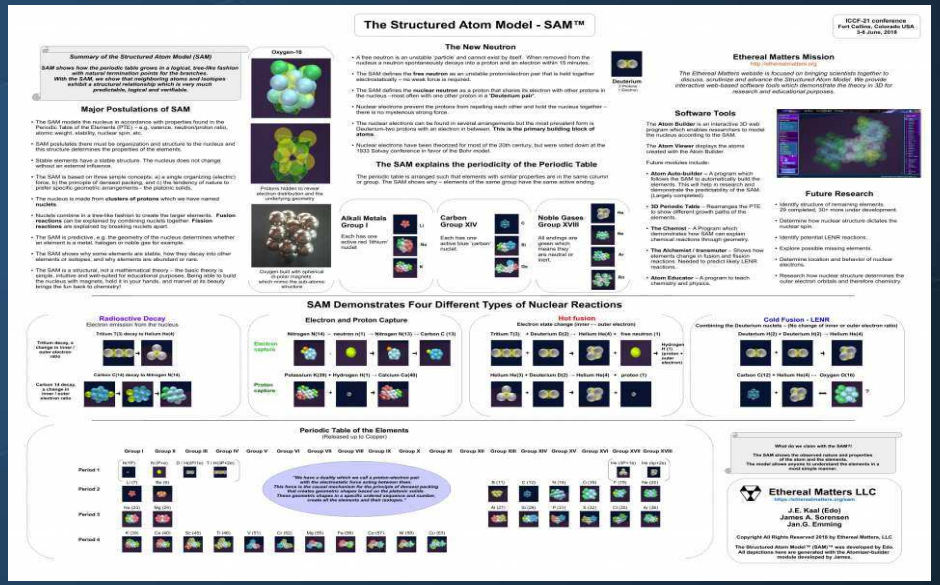
International Conference on Cold Fusion ICCF-21

Fort Collins, CO – June 3-8

Presentation of SAM at ICCF-21

In June 2018 the SAM team visited the ICCF-21 conference at CSU in Fort Collins, CO. The intention was to promote SAM and to learn about the LENR field.





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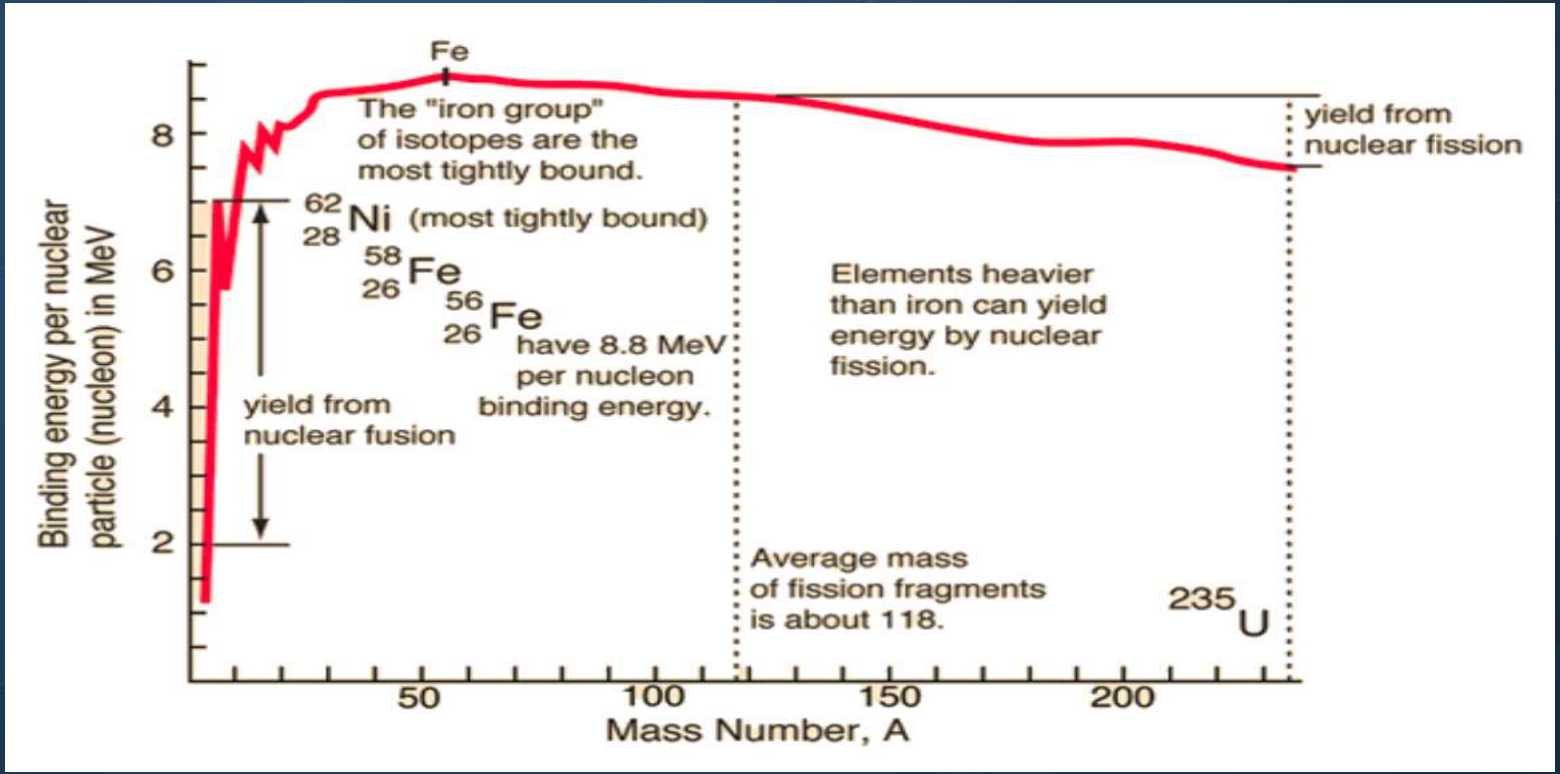
Mass Defect



Issues in LENR Preventing a Break-Through

- Lack of repeatability, failures outnumber success.
- Each batch of palladium electrodes perform differently
- No theoretical model - reactions are not understood.
- Most people are trying to recreate Pons and Fleischmann, few are working with plasma.

Low Energy Nuclear Reactions (LENR) Briefing

National Defense Authorization Act – 2017

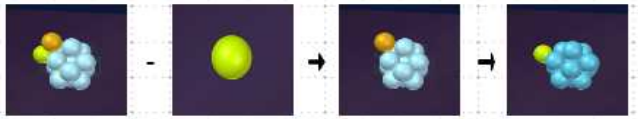
The committee is aware of recent positive developments in developing low-energy nuclear reactions (LENR), which produce ultraclean, low-cost renewable energy that have strong national security implications. For example, according to the Defense Intelligence Agency (DIA), if LENR works it will be a ‘‘disruptive technology that could revolutionize energy production and storage.’’

Nuclear Reactions & SAM

Electron and Proton Capture

Nitrogen N(14) – neutron n(1) → Nitrogen N(13) → Carbon C (13)

Electron capture



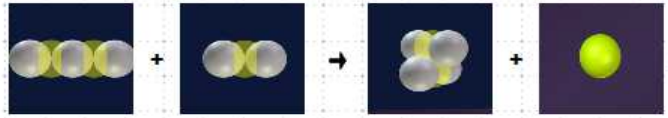
Potassium K(39) + Hydrogen H(1) → Calcium Ca(40)

Proton capture

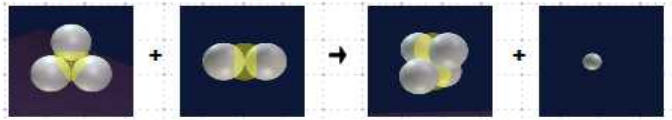
Hot fusion

Electron state change (inner ↔ outer electron)

Tritium T(3) + Deuterium D(2) → Helium He(4) + free neutron (1)



Helium He(3) + Deuterium D(2) → Helium He(4) + proton (1)

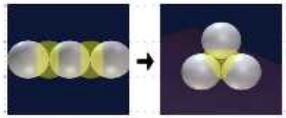


Radioactive Decay

Electron emission from the nucleus

Tritium T(3) decay to Helium He(4)

Tritium decay, a change in inner / outer electron ratio



Carbon C(14) decay to Nitrogen N(14)

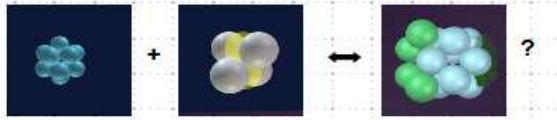
Carbon 14 decay, a change in inner / outer electron ratio

Cold Fusion - LENR

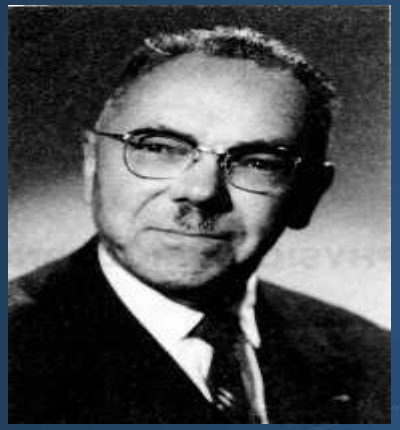
Combining the Deuterium nuclets – (No change of inner or outer electron ratio)

Deuterium H(2) + Deuterium H(2) → Helium He(4)

Carbon C(12) + Helium He(4) ↔ Oxygen O(16)



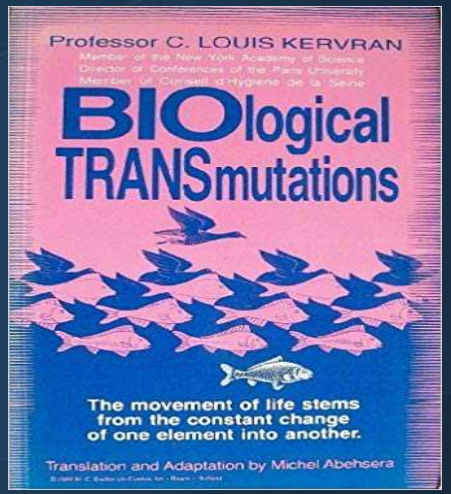
Transmutations of Elements in Nature



Biological Transmutations

Corentin Louis Kervran

1901-1983



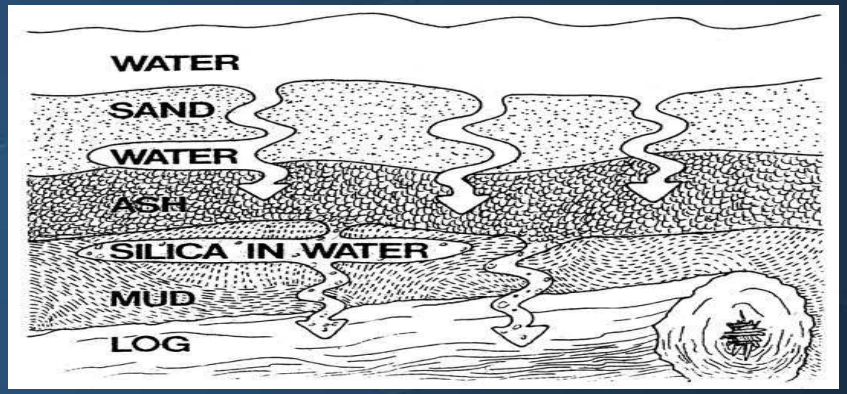
- Chickens transmute Potassium-39 to Calcium-40 to make egg shells.
- Desert workers transmute Sodium into Potassium to help cool themselves – an endothermic nuclear reaction.
- Seeds have different elements after they sprout.
- Animals transmute nitrogen into carbon and oxygen - carbohydrates or food.

Peter Mungo Jupp – Instant Fossilization

www.ancientdestructions.com

Instant Petrification

Petrified forest in
Yellowstone National park

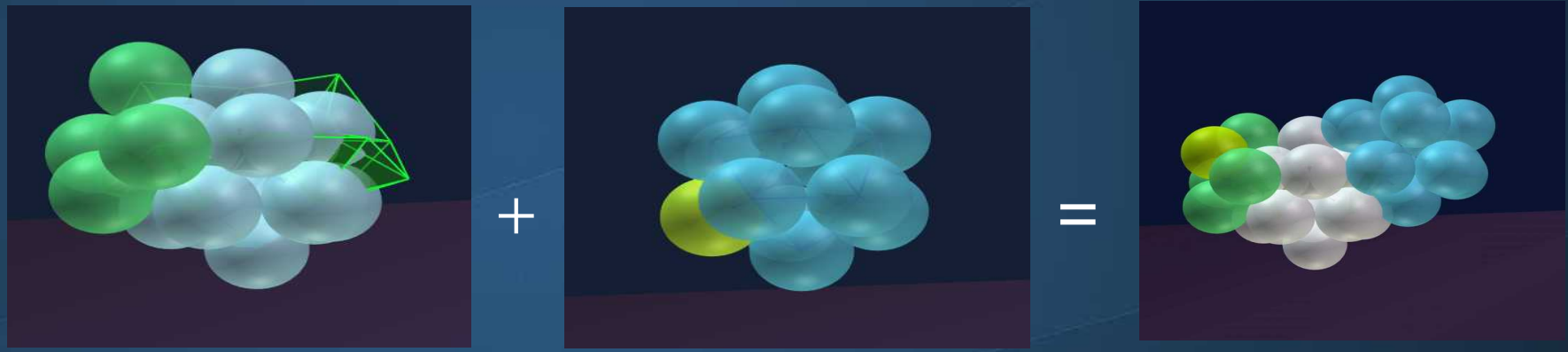


Power line induced petrification

- Reported by Eric Milton – Alberta Canada
- In rainstorm a power line falls on tree stump for 2 hours until the power is shut off.
- 5 years later they dig up the stumps and roots which contacted the broken power line were fossilized.

"The (root) piece was pure clear silica inside,
it was coated with a rougher opaque crust of partially fused sand."

Transmuting Oxygen and Carbon into Silicon



Oxygen-16 Carbon-12 Silicon-28

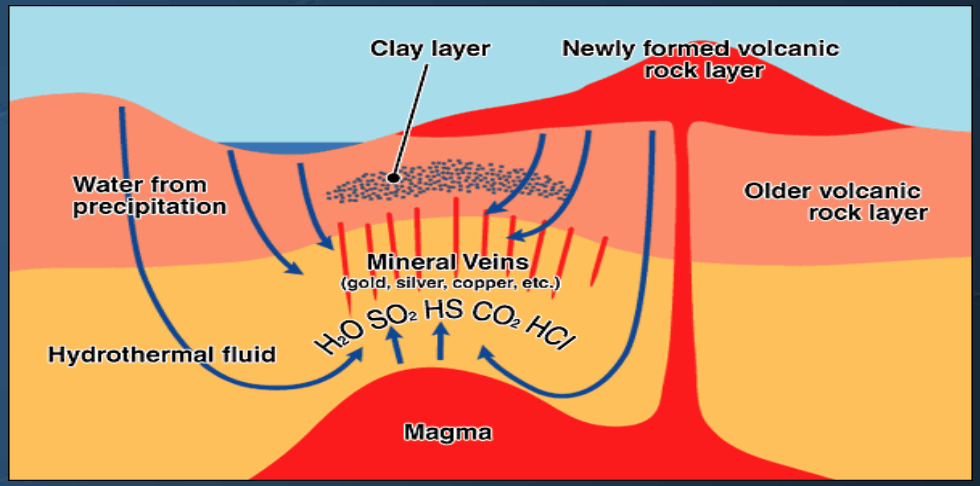
When combined the nuclets share one proton. It is thought that the yellow-green proton shown on the carbon is moved over to the neutral ending of the oxygen.

The inner electron count (neutrons) remains the same therefore no radiation is produced.

What Creates Quartz, Silver and Gold veins?

Conventional theory

1) Rain water seeps down into Earth
2) Heated by magma the water dissolves sulfur, chlorine, oxygen, etc. and becomes acidic.
3) Acidic water then dissolves gold|silver|etc. into solution.
4) Water coming through top clay layer is alkaline and mixes with acidic water from below.
5) Minerals precipitate out into cracks in the rock.



What explains the separation of elements? Why are some veins primarily silver, some are gold, others are quartz, etc.?

EU explanation

Large electrical currents (from mega-lightning, telluric currents, underground lightning?) instantaneously transmute the rock in-situ into heavier elements.

Black Canyon of the Gunnison
Painted Wall

Gold from Beer Bottles

2012 TeslaTech Conference – Albuquerque, NM

John Milewski melts beer bottles (SiO_2) in a microwave and gets small gold beads

This is very similar to nature creating gold veins from granite (SiO_4).

PitchBlend – PechBlende, The Unlucky Rock

- Pech means unlucky in German.
- Minors knew finding increasing amounts of Pechblende meant the silver vein was running out.
- Contains:
  - 50% Uranium
  - 50% copper, bismuth, barium, lead
- Thought to be useless, big piles were accumulated in 1800's in Eastern Europe
- In the 1940's nuclear power was discovered and the 'unlucky' rock became highly valuable.

Why do the tips of silver veins end in heavier elements?

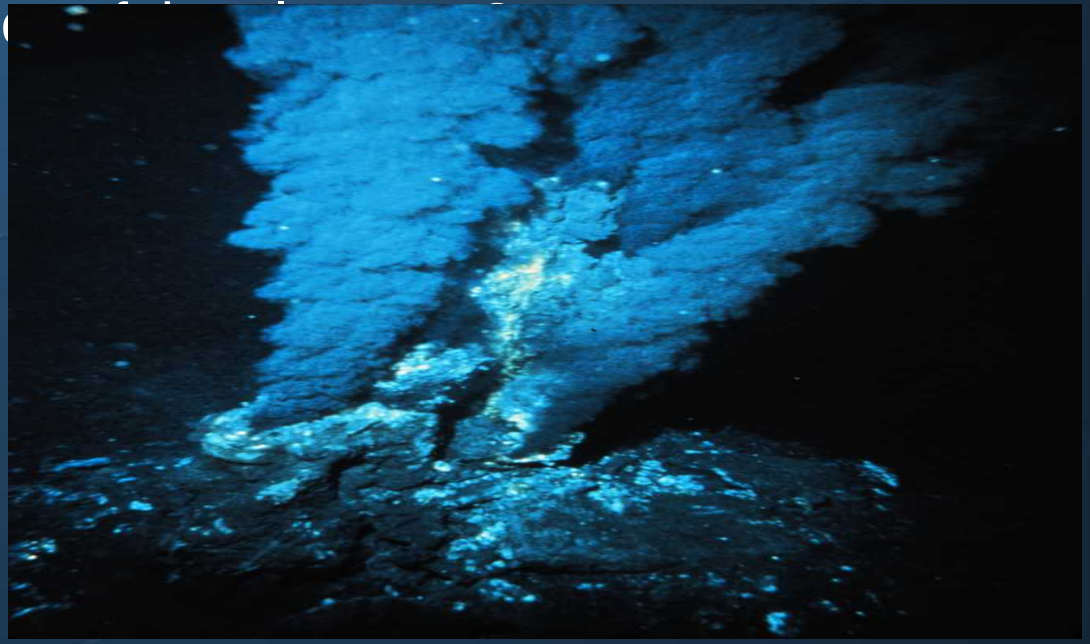
Hypothesis

Could it be that, the (heavier) elements are created in situ here on earth through LENR, both in biological and geological processes.

Are these processes the cause for volcanoes and an expanding earth?

Can they explain the abundan

black smoker



Conclusions

- In Nature, transmutations are happening everywhere, we just haven't been looking for it.
- These reactions can be both endothermic and exothermic.
- What we are missing is an **understanding**, this will bring both predictability and controllability.
- A new understanding opens the doors for exciting new research, I believe we are on the verge of creating a new science.

The SAM model can help us fill in this missing piece of the puzzle.

With an understanding of the nucleus we will be able to generate cheap energy, create the elements needed for agriculture, clean up radio-active waste, and propel ourselves to the stars.

The internet provides a place for users from all over the world to collaborate. People are hungry for the truth, through the internet we can bring about a New Science.

Thank You on Behalf of the Ethereal Matters Team

Edo Kaal

James Sorensen

Jan Emming

With special thanks to!

Steven Elswick

For more information and background visit the page https://etherealmatters.org/sam

And a special thanks to all that have helped in their own way to advance the model