

A New Method for Fission of Atoms of Elements Using the Resonance Phenomenon 2024

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1. The Calculation of the Frequency of Electrons and Nucleus of Atoms

According to the previous articles, electrons of atoms traverse in their specific, continuous, and closed orbits at speeds close to the speed of light. The nuclei of atoms also rotate around themselves at a speed close to the speed of light.

1.1. Calculating the Frequency of Electron of Hydrogen Atom

Given the helical path of electron motion around the nucleus, the frequency of its motion can be determined using the following equations and a straightforward method:

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}} = \text{Distance} \times \text{Frequency}$$

So, in general, it can be said:

$$\text{Frequency} = \frac{\text{Linear Speed}}{\text{Linear Distance}} = \frac{\text{Wave - Like Speed}}{\text{Wave - Like Distance}} = \frac{\text{Helical Speed}}{\text{Helical Distance}}$$

Therefore, the frequency of a single electron in a hydrogen atom can be calculated as follows:

$$\left. \begin{array}{l} f_{e(H)} = \frac{C}{\lambda} \\ \lambda = 4r \end{array} \right\} \Rightarrow f_{e(H)} = \frac{C}{4r_H} = \frac{3 \times 10^8}{4 \times 1.1 \times 10^{-10}}$$
$$\Rightarrow f_{e(H)} = 6.8 \times 10^{17} \text{ Hz}$$

In this context, λ represents the wavelength, C is the speed of light, and $f_{e(H)}$ denotes the frequency of the electron in the hydrogen atom. The parameter r_H , equivalent to the radius, corresponds to the atomic radius of hydrogen. As another illustrative example, let's calculate the electron frequency for the outermost layer of a **Gold** atom:

$$f_{e(AU)} = \frac{C}{4r_{AU}} = \frac{3 \times 10^8}{4 \times 1.66 \times 10^{-10}}$$
$$\Rightarrow f_{e(AU)} = 4.52 \times 10^{17} \text{ Hz}$$



Calculating the Frequency of Proton of Hydrogen Atom

It is quite clear that the Moon orbits around itself and around the Earth, which is itself rotating around its axis and around the Sun. The Sun, in turn, orbits around itself and around the central black hole of the Milky Way galaxy. The black hole is also in a state of rotation. Additionally, electrons orbit around themselves and around the nuclei of atoms. The nuclei, too, rotate around themselves at the speed of light. Therefore, one can write a repeatable sinusoidal equation for the rotation of a proton around itself:

$$f_{p(H)} = \frac{C}{d} \Rightarrow f_{p(H)} = \frac{C}{2\pi r} = \frac{3 \times 10^8}{2\pi \times 1.20 \times 10^{-15}}$$

$$\Rightarrow f_{p(H)} = 3.98 \times 10^{22} \text{ Hz}$$

In which r is the radius, and $f_{p(H)}$ is the frequency of proton of the hydrogen atom. Now, let's proceed to calculate the frequency of the atomic nucleus of Gold $f_{p(AU)}$:

$$f_{p(AU)} = \frac{C}{d} \Rightarrow f_{p(AU)} = \frac{C}{2\pi r} = \frac{3 \times 10^8}{2\pi \times 6.49 \times 10^{-15}}$$

$$\Rightarrow f_{p(AU)} = 7.36 \times 10^{21} \text{ Hz}$$

Saleh Comprehensive Frequency Table

Period	GROUP 1 IA	2 IIA	3 IIIB	4 IVB	5 VB	6 VIB	7 VIIB	8 VIII	9 VIII	10 VIII	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA	18 VIIIA	
1	H Hydrogen 110 1.00794 3.98E+22																	He Helium 140 4.00260 2.91E+22	
2	Li Lithium 102 6.941 2.19E+22	Be Beryllium 104 9.01218 1.99E+22											B Boron 106 10.811 1.85E+22	C Carbon 108 12.011 1.74E+22	N Nitrogen 114 14.006 1.65E+22	O Oxygen 116 15.999 1.58E+22	F Fluorine 118 18.998 1.52E+22	Ne Neon 118 20.179 1.47E+22	
3	Na Sodium 110 22.989 1.42E+22	Mg Magnesium 112 24.305 1.38E+22											Al Aluminum 119 26.981 1.36E+22	Si Silicon 120 28.086 1.30E+22	P Phosphorus 122 30.974 1.26E+22	S Sulfur 123 32.065 1.20E+22	Cl Chlorine 126 35.453 1.23E+22	Ar Argon 127 39.948 1.20E+22	
4	K Potassium 190 39.098 1.19E+22	Ca Calcium 200 40.078 1.16E+22	Sc Scandium 210 44.956 1.12E+22	Ti Titanium 220 47.88 1.10E+22	V Vanadium 230 50.942 1.08E+22	Cr Chromium 240 51.996 1.06E+22	Mn Manganese 250 54.938 1.04E+22	Fe Iron 260 55.845 1.02E+22	Co Cobalt 270 58.933 1.00E+22	Ni Nickel 280 58.693 9.8E-22	Cu Copper 290 63.546 9.6E-22	Zn Zinc 300 65.38 9.4E-22	Ga Gallium 310 69.723 9.2E-22	Ge Germanium 320 72.64 9.0E-22	As Arsenic 330 74.922 8.8E-22	Se Selenium 340 78.96 8.6E-22	Br Bromine 350 79.904 8.4E-22	Kr Krypton 360 83.798 8.2E-22	
5	Rb Rubidium 370 85.468 9.4E-22	Sr Strontium 380 87.62 9.2E-22	Y Yttrium 390 88.906 9.0E-22	Zr Zirconium 400 91.224 8.8E-22	Nb Niobium 410 92.906 8.6E-22	Mo Molybdenum 420 95.94 8.4E-22	Tc Technetium 430 98.906 8.2E-22	Ru Ruthenium 440 101.07 8.0E-22	Rh Rhodium 450 102.905 7.8E-22	Pd Palladium 460 106.42 7.6E-22	Ag Silver 470 107.868 7.4E-22	Cd Cadmium 480 112.411 7.2E-22	In Indium 490 114.818 7.0E-22	Sn Tin 500 118.710 6.8E-22	Sb Antimony 510 121.760 6.6E-22	Te Tellurium 520 127.60 6.4E-22	I Iodine 530 126.904 6.2E-22	Xe Xenon 540 131.29 6.0E-22	
6	Cs Cesium 550 132.905 6.0E-22	Ba Barium 560 137.327 5.8E-22	Lanthanide Series		Hf Hafnium 720 178.49 5.4E-22	Ta Tantalum 730 180.948 5.2E-22	W Tungsten 740 183.84 5.0E-22	Re Rhenium 750 186.207 4.8E-22	Os Osmium 760 190.23 4.6E-22	Ir Iridium 770 192.222 4.4E-22	Pt Platinum 780 195.084 4.2E-22	Au Gold 790 196.967 4.0E-22	Hg Mercury 800 200.59 3.8E-22	Tl Thallium 810 204.383 3.6E-22	Pb Lead 820 207.2 3.4E-22	Bi Bismuth 830 208.980 3.2E-22	Po Polonium 840 209 3.0E-22	At Astatine 850 210 2.8E-22	Rn Radon 860 222 2.6E-22
7	Fr Francium 870 223 2.6E-22	Ra Radium 880 226 2.5E-22	Actinide Series		Rf Rutherfordium 1040 261 7.2E-22	Db Dubnium 1050 262 7.0E-22	Sg Seaborgium 1060 263 6.8E-22	Bh Bohrium 1070 264 6.6E-22	Hs Hassium 1080 265 6.4E-22	Mt Meitnerium 1090 266 6.2E-22	Ds Darmstadtium 1100 267 6.0E-22	Rg Roentgenium 1110 268 5.8E-22	Cn Copernicium 1120 269 5.6E-22	Nh Nihonium 1130 270 5.4E-22	Uuq Ununquadium 1140 271 5.2E-22	Mc Moscovium 1150 272 5.0E-22	Lv Livermorium 1160 273 4.8E-22	Ts Tennessine 1170 274 4.6E-22	Og Oganesson 1180 275 4.4E-22
Lanthanides	La Lanthanum 570 138.905 8.2E-22	Ce Cerium 580 140.116 8.0E-22	Pr Praseodymium 590 140.908 7.8E-22	Nd Neodymium 600 144.24 7.6E-22	Pm Promethium 610 144.913 7.4E-22	Sm Samarium 620 150.36 7.2E-22	Eu Europium 630 151.964 7.0E-22	Gd Gadolinium 640 157.25 6.8E-22	Tb Terbium 650 158.925 6.6E-22	Dy Dysprosium 660 162.501 6.4E-22	Ho Holmium 670 164.930 6.2E-22	Er Erbium 680 167.259 6.0E-22	Tm Thulium 690 168.934 5.8E-22	Yb Ytterbium 700 173.04 5.6E-22	Lu Lutetium 710 174.967 5.4E-22				
Actinides	Ac Actinium 890 227 3.8E-22	Th Thorium 900 232 3.6E-22	Pa Protactinium 910 231.036 3.4E-22	U Uranium 920 238.029 3.2E-22	Np Neptunium 930 237.048 3.0E-22	Pu Plutonium 940 244 2.8E-22	Am Americium 950 243 2.6E-22	Cm Curium 960 247 2.4E-22	Bk Berkelium 970 247 2.2E-22	Cf Californium 980 251 2.0E-22	Es Einsteinium 990 252 1.8E-22	Fm Fermium 1000 257 1.6E-22	Md Mendelevium 1010 258 1.4E-22	No Nobelium 1020 259 1.2E-22	Lr Lawrencium 1030 260 1.0E-22				



Considering that electrons and nuclei of atoms have specific frequencies in their repetitive motion, and the phenomenon of resonance in nature, it is possible to disrupt the order and coordination of their motion with a laser that has the same frequency as the corresponding electron or nucleus of that atom, leading to fission of the nucleus of the atom.

2. Design and Manufacture of Gravitational and Electron Lasers to Bombard Atoms

Consider the frequency of a specific electron or nucleus of a specific atom to be F_1 , if we design a laser with the same frequency F_1 and emit to that atom, the resonance phenomenon will occur, resulting in fission. According to equations ($C = \lambda F$ or $C = \lambda/T$) the same frequencies mean having the same wavelength and equality of the rotational radius of the photons of the laser and the electron or nucleus of the atom.

If the laser has the same frequency as a specific electron in an atom (meaning it has the same wavelength or rotational radius R_{mom}), they could collide at a specific point. If the frequencies differ, the probability of collision decreases, and it may not occur at all. This is because a photon traverses in a helical path similar to a spring. When these photons are shaped into a laser, it is like an array of photons with a specific and defined radius traversing along a helical path, essentially creating a cylindrical shell.

If the radius of the inner cavity of this cylindrical shell does not match the rotational radius of the electron or nucleus of the atom, either no collision will occur or the probability of collision will be extremely low. The bombarded particles will pass through the central empty space or tunnel without collision. In reality, the optimal laser effect is achieved when the particular laser particles and the electron or nuclear particles have the same rotational radius (same frequency).

Given these explanations and the frequency values of electrons and nuclei, we must manufacture a specific laser to achieve the desired fission from the collision of the laser and the atom.

Note: Given the extremely high difference between the rotational radius of electrons (and nuclei) of atoms and the rotational radius of visible lasers, these types of lasers are not suitable for the fission of an atom. We need to develop a laser with a frequency of at least 10^{18} Hz, as common lasers are not applicable. For the fission of a nucleus using this method, we propose using gravitational lasers or electron lasers.

