

GENERAL INTRODUCTION:

- In the seventies the author had a number of questions that could not be answered:
 -) how is the biochemistry of living matter on Earth structured?
 -) why is the biochemistry of living matter based on carbon chemistry?
 -) why is water the only liquid suitable as reaction medium?
 -) does the Periodical System theoretically allow space for structurally different biochemical systems for living matter than may be found on Earth?

- On Earth there appears to be only one basic biochemical system. Its structure is depicted in the biochemical schema's of Gerhard Michal and co's Biochemical Pathways (BP). As from 1985 the author first worked 15 years on the deduction of the basic biochemical principles of living matter by:
 - 1) analysing Biochemical Pathways (BP),
 - 2) deducing all possible biochemical systems for living matter on the basis of all molecules that may be formed with the Periodical System, and
 - 3) deducing the logic and the basic structures in the biochemistry of living matter.

- Around the year 2000, only one biochemical system such as BP appeared indeed possible based on the analysis, the deduction and the Periodical System. So the biochemistry for all forms of living matter in the universe is unavoidably based on exactly the same biochemical principles as on Earth.

The author also deduced the universal biochemically valid basic principles of living matter in the 6 Laws of biochemistry: (B1), shortened (B2), essentials (B3).

- Proving the uniqueness of BP required the author to systematically deduce all forces on the atom. For this it appeared to be necessary to first simplify the Bohr's atom model by substituting all neutrons in the atom core by one proton and one electron: (C1).

From this simplified atom the 5 autonomous forces have been deduced; as well as the most fundamental forces of the atom and of all forms of normal, black hole and anti atoms/ matter. These 5 autonomous forces of the atom substitute the current system of 4 fundamental forces (C1) by:

 - 1) the strong core force,
 - 2) the weak core force,
 - 3) the electromagnetic force and
 - 4) gravitation.

- At the same time the author deduced the start of this universe and how matter/ the atom emerged from the proton/ electron. This led to the Little Bang (G3) and the deduction of the universe cycle (G4, G5).

During the universe cycle it appeared how the H atom/ the H₂ molecule emerged and why this H₂ at the supernova's later resulted in the forming of all higher atoms classified according to the Periodical System of elements and nothing else.

How, and when during the universe cycle the emergence of the physical and chemical forces on atoms was traced and the consequences of those forces on the movements in the universe of matter present at that time.

■ Besides these 5 autonomous forces the author has systematically deduced all other fundamental forces of all forms of atoms/ matter:

-) the 17 fundamental forces of normal atoms/ matter (C2),
-) the 11 fundamental forces of black hole atoms/ matter (C3),
-) the 14 fundamental forces of anti atoms/ anti matter (C4).

Several forces are being generated by the atom core. However, most physical and chemical forces are generated by the electrons/ electron pairs in the electron shells of the atom. This will only happen if this atom is subjected to a movement in the universe or a rotating movement. Almost all forces in our daily lives are the consequence of the atom's movements in the universe.

The author distinguishes 8 to 10 separate movements in the universe that generate their own speed vector on their physical and/or chemical forces which also results in its own speed related bonding vector/ vectors (D). There are as many speeds of an atom in the universe as there are separate force vectors on forces and separate combination vectors. This varies between minimally 4 and maximally 10.

■ The origin of gravitation/ gravity has been deduced. Gravitation is exclusively generated by electrons inside the electron shells and not from the atom core: (E1, E2 and E3). *So the graviton is not in the atom core.*

The gravitation in/decreases linearly with the speed of the atom in the universe!

■ The author's explanation for the origin of gravitation also means that Einstein made serious mistakes during the deduction of the Theory of Relativity.

Not the mass of the atom core of that atom increases or decreases but the *gravitation* generated by the electrons of that atom with the speed of an atom in the universe.

Einstein mistook the notions of gravitation and mass. But in technical respect *the same measurement result is almost the same!*

■ The formula $E = mc^2$ is not generally valid anymore but only with annihilation. The Big Bang theory is not valid anymore either. The qualities of black hole matter and black holes have been explained (G1, G2).

■ As an alternative for the Big Bang the author developed the super cold Little Bang (G3) which is totally without explosions. Based on the Little Bang the author deduced and explained the 25 steps of the universe cycle (G4) and the development of the velocity dimensions in the universe (G5). At the same time 7 laws of the universe have been formulated (G6).

■ As from 1995 the author determined several essential mistakes in the basis of exact science: (I3).

-) Einstein's Theory of Relativity of and the common usage of the formula $E = mc^2$,
-) the Big Bang theory and everything around it,
-) Bohr's atom model,
-) the system with 4 fundamental forces: 1) strong core force, 2) weak core force, 3) electromagnetic force and 4) gravitation,
-) Newton's Law of Gravitation,
-) black holes possess different characteristics than assumed,
-) the Standard Model 2007.