

"Free Energy" from subtle Energy: No Perpetual Motion Machines!

Nevertheless, by the application of subtle LENR-processes also "free energy" can be "generated" by the transformation of subtle energy into gross thermic, kinetic or electric energy under special technical circumstances (**SP-50**). From a point of view of present-day physics such a process of generation of "free energy" is usually interpreted as a ridiculously non-scientific attempt of establishing a "perpetual motion machine", violating the first law of thermodynamics, the law of conservation of energy, as well as the second law of thermodynamics, the law of increasing entropy in spontaneously proceeding gross processes, which both are regarded as holding at the gross level throughout the Universe.

But, from a point of view of research in subtle matter, i.e. from NEW PHYSICS, there exists in such cases (if no hoax is involved, which may happen) no violation of the law of conservation of energy or of the second law of thermodynamics. This is because under the restrictions of extended laws of conservation (see section 2.13 Extension of Thermodynamics), subtle energy can be transformed into "free energy" under the guidance of the fourth law of thermodynamics, see extended thermodynamics, as presented in sections 2.13, 2.14, and Table 29. And in most of such cases of the successful production of "free energy" also LENR-processes are involved as described in the former section, and see below. In general, the hypothesis holds, that in all processes in which successfully "free energy" is generated, the energetic basis of the gained energy is the real subtle energy content of field-quanta of subtle matter. So far speculatively postulated effects of "vacuum fluctuations" or of "zero point energy" are not involved.

"Diesel-Bounding-process": The company "egm international" from Papenburg, Germany, has developed a process to transform liquid water directly into liquid Diesel fuel at ambient temperature and at pressures of about 2 to 3 barg. According to NEW PHYSICS this process implies a LENR-transmutation of an oxygen atom of a water molecule into a carbon atom (cf. Table 29) under the action of a field of subtle matter at high intensity, yielding an unsaturated carbon fragment, i.e. H_2C , which then polymerizes to Diesel fuel, according to the reaction,



where the generated Diesel fuel, i.e. $H_{2n}C_n$, is liquid for $n \geq 5$ and separates from water (**SP-51**). The process comprises a sequence of four steps, see Fig. 135a:

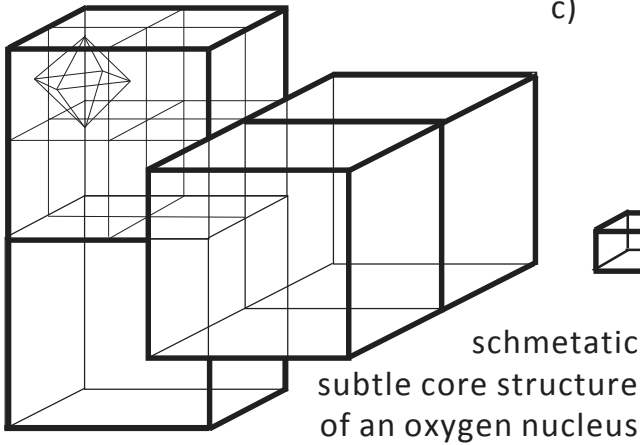
1. Generation of an emulsion by intensive mixing of water and Diesel input in a one to one ratio, thus generating a very large phase boundary.
2. Passing the emulsion with the generated large internal phase boundary through a Schauberger spiral-vortex, so that at the phase boundary a negentropic field of subtle matter with high intensity is build up by the form-

a)



1. Activator to generate a water/diesel emulsion
2. Vortex to accumulate subtle matter within the emulsion by absorption and the emulsion's large phase boundary.
3. Residence pipe
4. Cavitative device

b)



c)

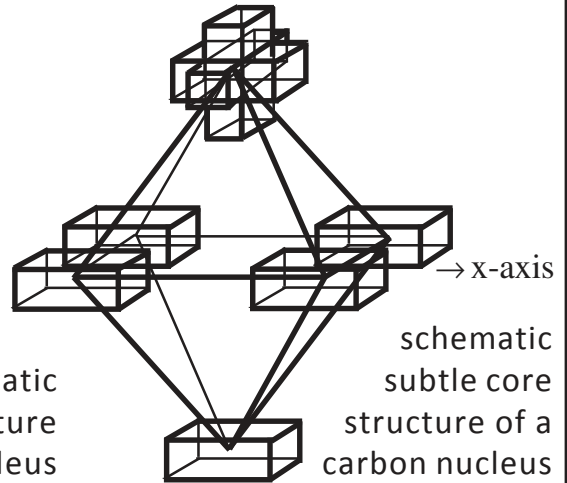


Fig. 135: a) egm's Diesel-Bounding process. b) Sketch of the subtle core structure of the atomic nucleus of oxygen, $^{16}\text{O}_8$. Each of the indicated four cubes in bold contains the subtle core of a $^4\text{He}_2$ atom, see Fig. 131. c) Model of the subtle core of the atomic nucleus of carbon, $^{12}\text{C}_6$. At each of the six corners of the octahedron, the core of a deuteron $^2\text{H}_1$ (cf. Fig. 130) is positioned. Every such $^2\text{H}_1$ -core at the six octahedron's corners can be quantum mechanically delocalized within a cross of elementary lattice cells along the x-, y-, and z-coordinates (see upper corner), similarly as indicated in Fig. 130. - The author has no access to questions about detailed process engineering, and to results of long term operations.

- specific interaction between subtle matter and gross matter, cf. Fig. 48.
3. Passing the reactive mixture through a residence pipe.
 4. Finishing the LENR-reaction within a cavitative device. Further thermodynamic details are given in Table 29. The generation of helium is not yet experimentally confirmed. Fig. 135b,c show model considerations of the respective subtle core structures of oxygen and carbon.

The process has been checked in continuous operation by an independent international engineering company over an operation period of a few hours. As a result of calibrated measurements of the input and output products, a transformation of at least 27 % of the introduced water into liquid Diesel fuel was confirmed, so that from an input of 100 parts of water and 100 parts of Diesel an output of about 127 parts of Diesel product and 73 parts of water was achieved. Under optimized conditions higher conversion rates of water to Diesel can be expected. The obtained Diesel fuel shows very low (or even no) emission products when supplied to Diesel engines, and the fuel consumption can be reduced by about 10 to 15 %, in comparison to an input of normal Diesel fuel. **Thus, the application of the Diesel fuel obtained in egm's Diesel-bounding process can significantly help to overcome the present-day energy crisis by the LENR-conversion of subtle field energy into usable gross energy, and can help in addition to avoid the unwanted environmental and climatic pollutions generated from normal Diesel machines. On the other hand, the confirmed technical transmutation of oxygen to carbon under increased subtle field-intensities gives credit to the existence of LENR-processes as described in NEW PHYSICS.**

As is outlined in Table 29 the energy consumption of the above described transmutation of water into Diesel fuel needs a power supply in the order of magnitude of a nuclear power plant. There exists no electric or other sources of energy in present-day physics and technology to supply such an amount of energy in such a short time at ambient temperature and pressures of about 2 barg, except by applying the real macroscopic field energy of the quanta of subtle matter as energetic source of the transmutation process, see Table 4.

Furthermore, as we will see below, even spontaneously running processes can exist under the influence of high negentropic subtle field intensities which violate the second law of thermodynamics, due to the existence of the so far unknown fourth law of thermodynamics (i.e. the law of negentropy or syntropy, see Table 29), based on physical effects at high field-intensities of subtle negentropic matter, which yield, in addition, no negative side effects. So far "negentropic" driving forces in physics are not known, and their effects in Nature (for example, in living systems or in biological evolution) are usually explained by stochastic processes, especially in non-linear gross systems and selection processes which may generate such effects by chance in a non-reproducible way, again under the dictate of the second law of thermodynamics, see, for example, Fig. 108.

Here follows a short list of present-day known technical processes to convert subtle field-energy under the restriction of an extended first law of thermodynamics and

by the fourth law of thermodynamics (see Table 29), without violation of the conservation of energy, and were no "perpetual mobile machines" are being involved (see https://en.wikipedia.org/wiki/Perpetual_motion) into usable free energy in the form of heat, mechanical motion, electric energy or by LENR-transmutations. However, this review is not complete, because around the World new bench scale and technical designs are popping up with increasing velocity.

"KPP, Kinetic Power Plant": Fig. 136 shows a sketch of a KPP plant and a description is given of how it technically works to continuously transform subtle field-energy into usable free energy, i.e. electric power, see also Table 31. The energetic basis of its functioning is described in Table 29, in agreement with, and thus confirming the extension of Newton's law of gravitation as given in Table 3 (**SP-52**). A similar explanation as given in Fig. 136, and Table 29 for the KPP-technology holds also for another converter of subtle energy into free electric energy, see Fig. 137.

"E-Cat Process": Andrea Rossi and Sergio Focardi presented in 2011 an apparatus to generate free energy in a pumped cold fusion device to obtain excess heat, and as he claimed, from exothermal transmutational reactions, in particular from nickel and hydrogen used as "fuel" (see http://en.wikipedia.org/wiki/Energy_catalyzer). The device has been subject of several demonstrations and tests by Rossi and by various academics, see below.

The system's reactor, named E-Cat, is charged with a small amount of hydrogen-loaded nickel powder plus some additives, mainly lithium. The reaction is primarily initiated by heat from resistor coils around the reactor tube, which is embedded within a pumped high voltage electric field, thus implying also an oscillating highly increased subtle 8-D_{III}-intensity, see section 4.8.2. In tests the repeatedly measured energy balance between input and output heat yielded a total net energy which was far more than can be obtained from any known chemical sources in the small reactor volume. Analyses of the metallic catalyst, i.e. the fuel, showed that the initial isotope composition had changed substantially, similarly as in cold fusion reactions. Thus, nuclear reactions took place in the run process as can be seen from a comparison of the initial and final isotope compositions of nickel:

Initial: ⁵⁸Ni (68.1%), ⁶⁰Ni (26.2%), ⁶¹Ni (3.6%), ⁶²Ni (3.6%), and ⁶⁴Ni (0.9%), normal.

Final: ⁵⁸Ni (0.8%), ⁶⁰Ni (0.5%), ⁶¹Ni (0%), ⁶²Ni (98.7%), and ⁶⁴Ni (0%).

Initial: ⁷Li₃ (93%); Final ⁷Li₃ (42.5%).

(see the so called "Lugano Report" from G. Levi et al. http://www.elforsk.se/Global/Omv%C3%A4rld_system/filter/LuganoReportSubmit.pdf).

However, the detected nuclear reactions are hard to reconcile with the facts that no radioactive radiations were detected outside the reactor during the run, no nuclear radioactive waste was detectable in the fuel after the run, and the expected high energy conditions for nuclear reactions were not given in the system. The spent fuel was found inactive after the E-Cat run was stopped. But all imaginable nuclear reactions in the reactor should be followed by some radioactive radiation, and at least some of that radiation, for example gamma radiation, should penetrate the

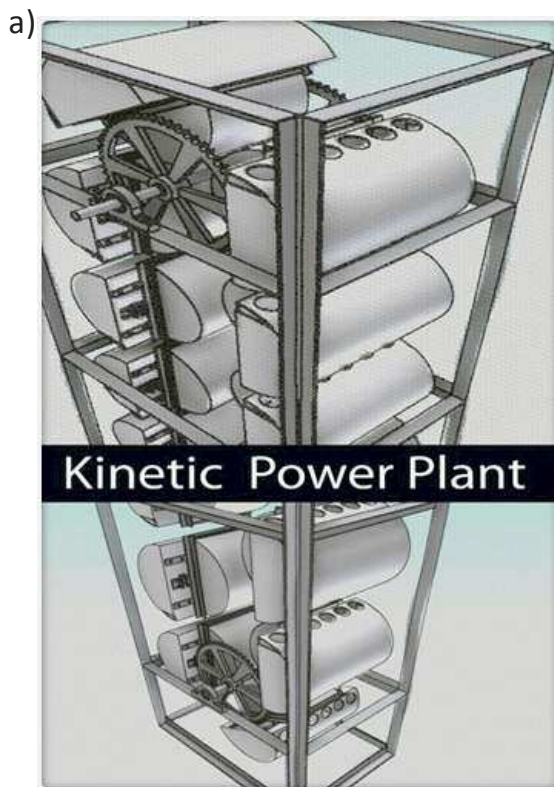


Fig. 136: a) Sketch of the Kinetic Power Plant (KPP) of the company Rosch Innovations® GmbH, Amriswil, Switzerland. b) Picture of a kinetic power plant from the association Gaia, Austria. The Rosch thrust kinetic generator consists of a well (6 m depth) filled with water wherein plastic chambers are submerged and connected to a vertical transport system. The transport system to which the chambers are connected serves to direct their movement from the top to the bottom of the well and back, in circle. The chambers contain an automatic valve that connects to a pipe valve that brings air from a compressor at the bottom of the well into every bypassing chamber, and on the top of the well the compressed air discharges to the atmosphere and every chamber is again automatically floated completely with water. By filling every chamber at the bottom, under the influence of Archimedes Law, the air-filled chambers gain thrust towards the top, making the conveyor belt rotate in a clockwise circle. Within several minutes after start up, as the system with the transported chambers slowly speeds up, the maximum rotation of the system is obtained. The gained kinetic energy is further transferred via belts and gears onto an electric generator which starts to generate so much electric energy that the compressor can be connected to the electric generator, without any further energy input from outside. In addition a surplus of electric energy (i.e. "free energy") is obtained which is further distributed to outside consumers. The gained free energy is obtained by conversion of subtle field-energy to kinetic energy of the conveyor belt and its transformation finally into electric energy, see Table 31. Standard KPP-units can be delivered from Rosch to generate continuously 5 MW, 40 MW, 100 MW oder 200 MW electric power. The author has no detailed access to test results, and results about long term operation about some weeks or months are missing.

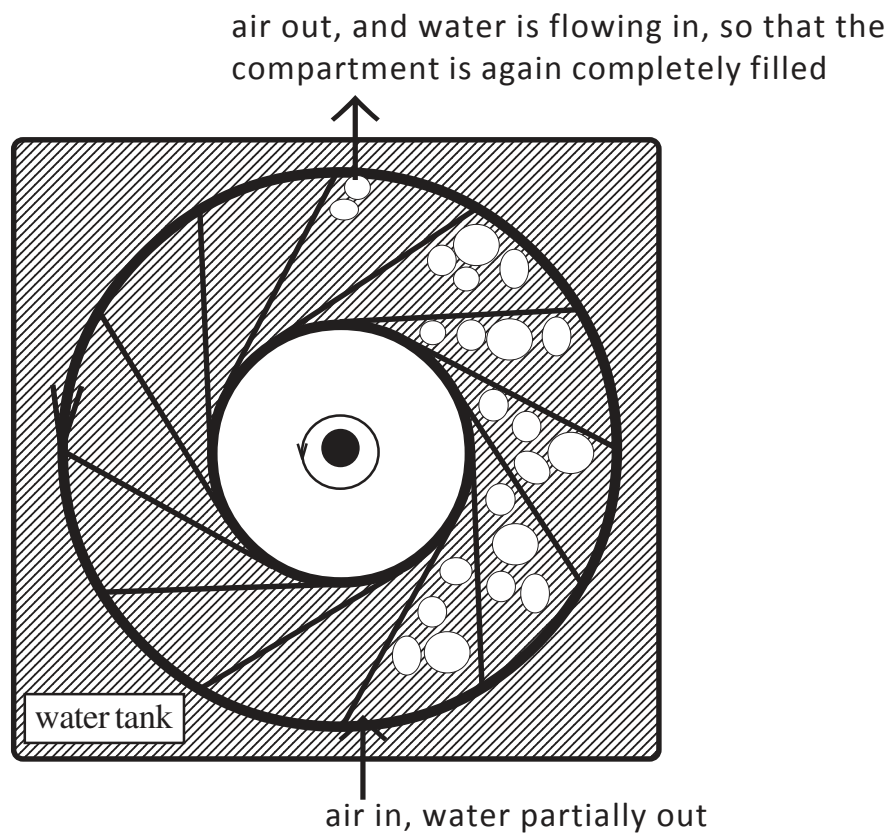


Fig. 137: Principle sketch of a "Water Bessel". Via conversion of the gained rotational energy into electric power, subtle energy, the driving force of the system, is transformed into free energy. Similar principles apply to modern designs of the "hydraulic ram" to generate free energy from subtle energy (see NET-Journal **20** (11/12), November/December 2015, pp. 17, and http://en.wikipedia.org/wiki/Hydraulic_ram). The author has no detailed access to test results.

reactor wall and be possible to detect. Thus, the conclusion was that the absence of any nuclear radiation from the burning process is presently an open question, and has to be understood.

As pointed out in section 4.7.6, in transmutative LENR-processes no emissions of radioactive α -, β -, or γ -radiations at the UI-level occur because all energetic changes take place at the UII-level of the nuclei being involved, see section 4.7.6. The observation of nuclear transmutations in the absence of radioactive emissions indicates clearly, that under the influence of a subtle $8-D_{UII}$ -field with increased intensity (as a by-product, due to the applied high voltage electric field) the nuclear transmutative reactions have taken place and that the registered excess heat was due to a conversion of real subtle $8-D_{UII}$ -field-energy into gross thermal $4-D_{UI}$ -energy (cf. Fig. 6) in the fuel under the guidance of the extended thermodynamics, see section 2.13, and Table 29. Furthermore, the increased subtle field-intensity was generated within the pumped electric resistor coils, because, as we will see below (cf. section 4.8), any electromagnetic $4-D_{UI}$ -field is accompanied by a scientifically so far unknown $8-D_{UII}$ -field of subtle matter with macroscopic energy, which is able to trigger LENR-processes. The conversion of energy from subtle field-quanta to heat implies the consequences presented in Fig. 138. Thus, NEW PHYSICS scientifically explains Rossi's E-Cat-process (**SP-53**).

"Maxii Energii": The company "maxii Energii GmbH" in Germany has developed a static system of quartz tubes (i.e. "MAXiiMUS") which reduces in long term operation electric power consumption between 30 to 60 % if installed in the electric power supply (see <http://www.maxii-energii.de>). Weight measurements with a roll-detector which was carrying a field of subtle matter, and which was suspended to one arm of the two pan balance (supplied with a reference system at the other arm, shown in Fig. 1a, revealed that the MAXiiMUS-quartz pipes emit a macroscopic field of subtle matter. This indicates that the effect of reduced electric power consumption may be due to a (subtle field/electric field)-interaction as already detected in weighing experiments, cf. Fig. 5b. However, this hypothesis needs further theoretical investigation by subtle extension of Maxwell's equations from $4-D_{UI}$ to $8-D_{UII}$ or $12-D_{UII}$ dimensions. Biological tests with sprouting cress seeds revealed that the subtle field, emitted by the MAXiiMUS-system, has negentropic $-m_p$ -properties.

Electric "Space Power Generator" (SPG): Electric power is usually based on energy conversion from other sources of primary energy. In 2015 a "Space Power Generator" was presented, see <http://www.tewari.org>, which generates electric energy from a scientifically so far unknown form of "space energy", see Fig. 139. The hypothesis is obvious, that, as in the former examples of subtle energy conversion, also here subtle energy from the subtle global M_{\pm} -fields, see Fig. 41, is directly transformed into electric power. While in the E-Cat process the increased intensity of subtle field-energy generated in coils is transformed into heat energy, in the SPG-device this subtle field-energy, again generated in coils, is obviously converted directly into mechanical and then electric power. However, this hypothesis needs further investigation, see the above paragraph.

The conversion of the energy of subtle UII-quanta with a positive sign (cf. Table 4) into heat at the UI-level implies the quantized generation of heat at the UI-level with the following energies, because only quanta at a whole can be transformed into heat and not fractions of a quantum.

masses of subtle UII-quanta transformed into heat yield		UI-heat generation in quantized form
$m_p = (h \cdot c / (2 \cdot \pi \cdot G))^{0.5} = \pm 21.7 \mu\text{g}$	=>	$m_p \cdot c^2 = 1.96 \cdot 10^9 \text{ J}$
$m_s = (e^2 / (4 \cdot \pi \cdot \epsilon_0 \cdot G))^{0.5} = \pm 1.86 \mu\text{g}$	=>	$m_s \cdot c^2 = 1.67 \cdot 10^8 \text{ J}$
$m_{ES} = m_p \cdot (\alpha / (8 \cdot \pi))^{0.5} = \pm 0.37 \mu\text{g}$	=>	$m_{ES} \cdot c^2 = 3.33 \cdot 10^7 \text{ J}$

Because more subtle quanta may exist than those given in Table 4, also further quantized amounts of heat generation may result. The fact that only quantized amounts of heat may be generated in the E-Cat process may lead to a problem of continuous heat transfer in steam production under avoidance of "heat peaks" which can cause melting of the nickel catalyst resulting in its destruction.

Fig. 138: Generation of quantized amounts of heat from subtle "+m_p"-quanta.



Fig. 139: Tewari's Reactionless Generator (RLN), also termed Space Powered Generator (SPG) to convert subtle energy directly into electric energy. The author has no detailed access to test results.

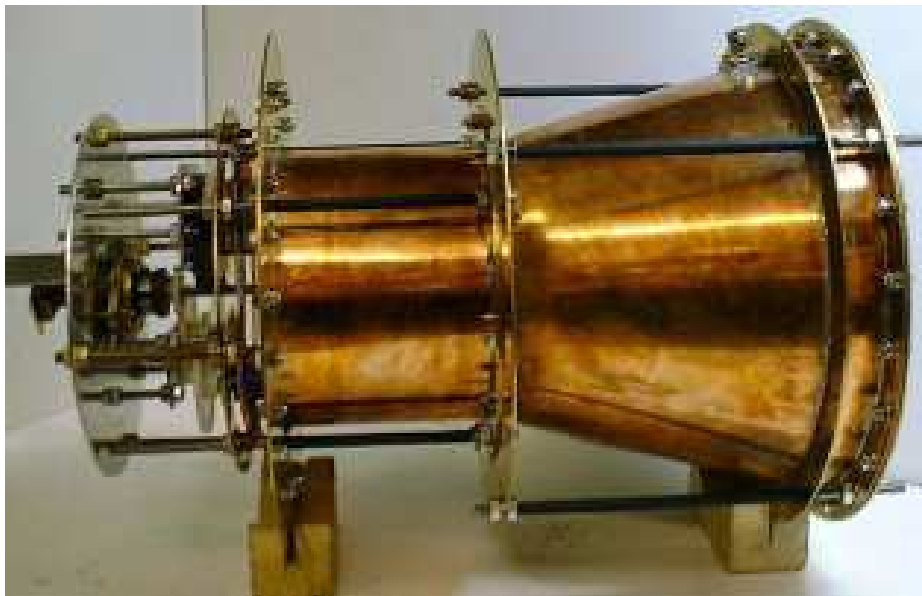


Fig. 140: "EmDrive" or "RF resonator cavity thruster" is an engine designed to generate propulsion from a resonant cavity without propellant. Several types of such thrusters have been proposed. The author has no detailed access to test results.

"EmDrive": Searching for low- or even zero-propellant space drives has been a goal of space exploration for much of this time. The EmDrive is such a device, and a few variations on such thrusters have been proposed (see http://en.wikipedia.org/wiki/RF_resonant_cavity_thruster). In its central engine a plasma is generated from an intense source of microwave or other radio-frequency (RF) energy, in combination with a resonant closed cavity tuned to resonate at such a frequency. The design principles of such thrusters are not supported by prevailing scientific theories, and they apparently violate the law of conservation of momentum.

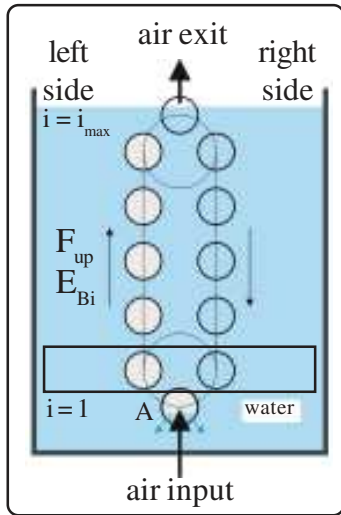
Nevertheless successful test reports about an EmDrive-design as depicted in Fig. 140 have been published by NASA (see <http://www.grenzwissenschaft-aktuell.de/emdrive-weitere-erfolgreiche-nasa-tests20151104>). Also a research group of advanced space propulsion systems at the Dresden University of Technology in Germany (and others) reported positive results about thrusts tested in a hard vacuum (see, for example the paper of M. Tajmar and G. Fiedler "Direct Thrust Measurements of an EM Drive and Evaluation of Possible Side-Effects" in the internet).

Research in subtle matter may provide an explanation of the observed thrust of EmDrives, again by extension of Maxwell's equations. As will be shown in the following section 4.8, any emission of electromagnetic radiation is accompanied by a scientifically so far unknown emission of a flux of quanta of subtle matter. Because this form of subtle radiation exhibits gross macroscopic mass and momentum, it can be expected that a measurable thrust can be generated if the subtle flux with macroscopic momentum can be directed in a predominant direction, which obviously can be achieved in an EmDrive. While the gross law of conservation of momentum seems to be violated, an extended law of conservation of momentum remains fulfilled, however. But again, this hypothetical explanation needs further investigation, see above.

Brown's Gas: When a cell of a Brown's gas generator (see <https://en.wikipedia.org/wiki/Oxyhydrogen>) was brought in a weighing test near to a roll-detector suspended to the micro-balance (without mechanical or electromagnetic disturbance of the detector), and was after some minutes removed again, a significant reversible and negative mass change of the detector was found. This indicates that in Brown's gas devices increased fields of subtle matter are involved. Thus, the unusual energetic properties of such devices may be at least to some extent due to energetic effects of subtle matter. This can also explain why in technical machines on the basis of Brown's gas unusual isotopes of metals were found, generated by transmutative nuclear reactions within the cells.

Physical Explanation of the Functioning of Rosch's KPP-process to convert subtle Energy into usable free Energy:

From a point of view of present-day physics, the total energy input $E_{i=1} = P \cdot V$ to fill the volume V of each chamber at position A ($i = 1$) partially by the volume V_0 of air, under pressure P , should equal the total kinetic energy E_E gained by buoyancy-conversion of the total potential energy $\Sigma E_{Bi} = \Sigma_i (V - V_0)_i \cdot \rho \cdot g \cdot h_i$ at all positions i , where ρ is the density of the water, and $h_{i=\max}$ is the height of the circular conveyor belt, see the sketch below. Thus, $\Sigma E_{Bi} = i_{\max} \cdot E_1$ should follow, and by considering additional energy losses $E_f > 0$, due to unavoidable friction in the system, no generation of excess of free energy $E_E = \Sigma E_{Bi} - i_{\max} \cdot E_1 - E_f < 0$ may be expectable. This consideration is based on the assumption of a force of buoyancy $F_i = (V_i - V_0)_i \cdot \rho \cdot g \cdot h_i$ (i.e. gravity $g = G \cdot M/R^2 = 9.81 \text{ m/s}^2$, M and R are Earth's gross mass and radius) acting on each chamber at the left side, according to Newton's law of gravitation, where V_i is the volume of a partially air-filled chamber at



position i (and where integration, i.e. $\Sigma E_{Bi} = \rho \cdot g \cdot \int (V - V_0)_h \cdot dh$, has to be applied instead of summation $\Sigma E_{Bi} = \Sigma_i (V - V_0)_i \cdot \rho \cdot g \cdot h_i$).

However, research in subtle matter has revealed, that Newton's law of gravitation has to be modified (see Table 3), according to:

$$\begin{aligned}
 F &= G \cdot m_1 \cdot m_2 / r^2 && \text{(classical gross/gross term)} \\
 &\pm G \cdot m_1 \cdot \Sigma_i (\int m_{if} \cdot dr) / r_i^2 && \text{(No. 1. gross/subtle term)} \\
 &\pm G' \cdot \Sigma_{ij} (\int m_{lif} \cdot m_{2jf} \cdot dr) / (r_i - r_j)^2 && \text{(No. 2. subtle/subtle term)} \\
 &\pm \text{quantum mechanical term} && \text{(No. 3. QM term, neglectable).}
 \end{aligned}$$

Applying this to the KPP-process, and taking into account that Earth has bound a subtle field M_+ (see Fig. 41), and that the water m_i within each chamber i of the KPP-process has also absorbed a subtle field m_{+i} , leads to (1), with indices cf = completely filled, and pf = partly filled:

$$E_E = +[(G \cdot M + G' \cdot M'_{ft}) / R^2] \cdot [\Sigma(m_{i,pf-left} + m_{+i,cf-right}) - \Sigma(m_{i,cf-right} + m_{+i,pf-left})] \cdot h_{i=\max} - E_f > 0 \quad (1)$$

$E_E > 0$ results, because of the gross buoyancy difference $[(G \cdot M/R^2) \cdot (\Sigma m_{i,pf-left} - \Sigma m_{i,cf-right}) \cdot h_{i=\max} > 0$, **and in addition**, due to the gravitational action of the global subtle M'_{ft} -field which is encapsulated within Earth (with $M'_{ft} \approx +10^{16} \text{ kg}$ from $M_+ = 3.125 \cdot 10^{17} \text{ kg}$, cf. Fig. 41), acting with $G' \approx G \cdot 10^9$ on the water-bound subtle fields within the completely ($m_{+i,cf-right}$) and only partly ($m_{+i,pf-left}$) filled chambers at the right and left side, where the completely field-filled chambers at the right side exhibit a stronger gravitational attraction than the partly filled chambers at the left side. Thus, due to the asymmetrical gravitational subtle field-actions finally $E_E = E_{right} - E_{left} - E_f > 0$ follows, resulting in an ongoing generation of free energy E_E by transformation of subtle $+m_p$ -energy into free energy, mainly due to the subtle terms No. 1 and 2, i.e. $[(G \cdot M + G' \cdot M'_{ft}) / R^2] \cdot (\Sigma m_{+i,cf-right} - \Sigma m_{+i,pf-left}) \cdot h_{i=\max}$. Additional terms in (1), due to gravitational effects of the negentropic global M'_f -field encapsulated within Earth ($|M'_f| \approx |-10^{15} \text{ kg}|$, from $M_- = |-10^{18} \text{ kg}|$, cf. Fig. 41) can be neglected. To increase KPP's efficiency, the intensity of the subtle $+m_p$ -field within the water of the KPP-process can be uphold at a high level by a left-handedly operated water vortex which is connected outside to the KPP-tower, supplying it in a circular process continuously with $+m_p$ -loaded water.

Table 31: Explanation of the KPP-technology of Rosch to generate free energy from subtle field-energy from a point of view of NEW PHYSICS.