

Information document for the general public, scientists, engineers, decision makers, and wealthy and truly benevolent personalities

Presentation of entirely novel and environmentally friendly energy technologies & Funding call for their advancement



Image from previous website <https://ie.energy>



Image source: Screenshot on 8 July 2024 from video <https://www.youtube.com/watch?v=SLJH8Ad2b44>



Image copied on 10 Sept 2023 from <https://ecatthenewfire.com>



Image from www.borderlands.de/net_pdf/NET0516S6-9.pdf



Image source: Screenshot on 7 April 2023 from the website <https://holcombenergysystems.com>

Version 98 from 8 June 2025

Dr. Frank Lichtenberg / Physicist
<https://novam-research.com>

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Image from a screenshot on 21 January 2024 from <https://www.spacefed.com>

This presentation comprises 85 pages, a content overview,
and can be downloaded as pdf via the following link
(file size about 3 MB):

<https://novam-research.com/resources/information-document.pdf>

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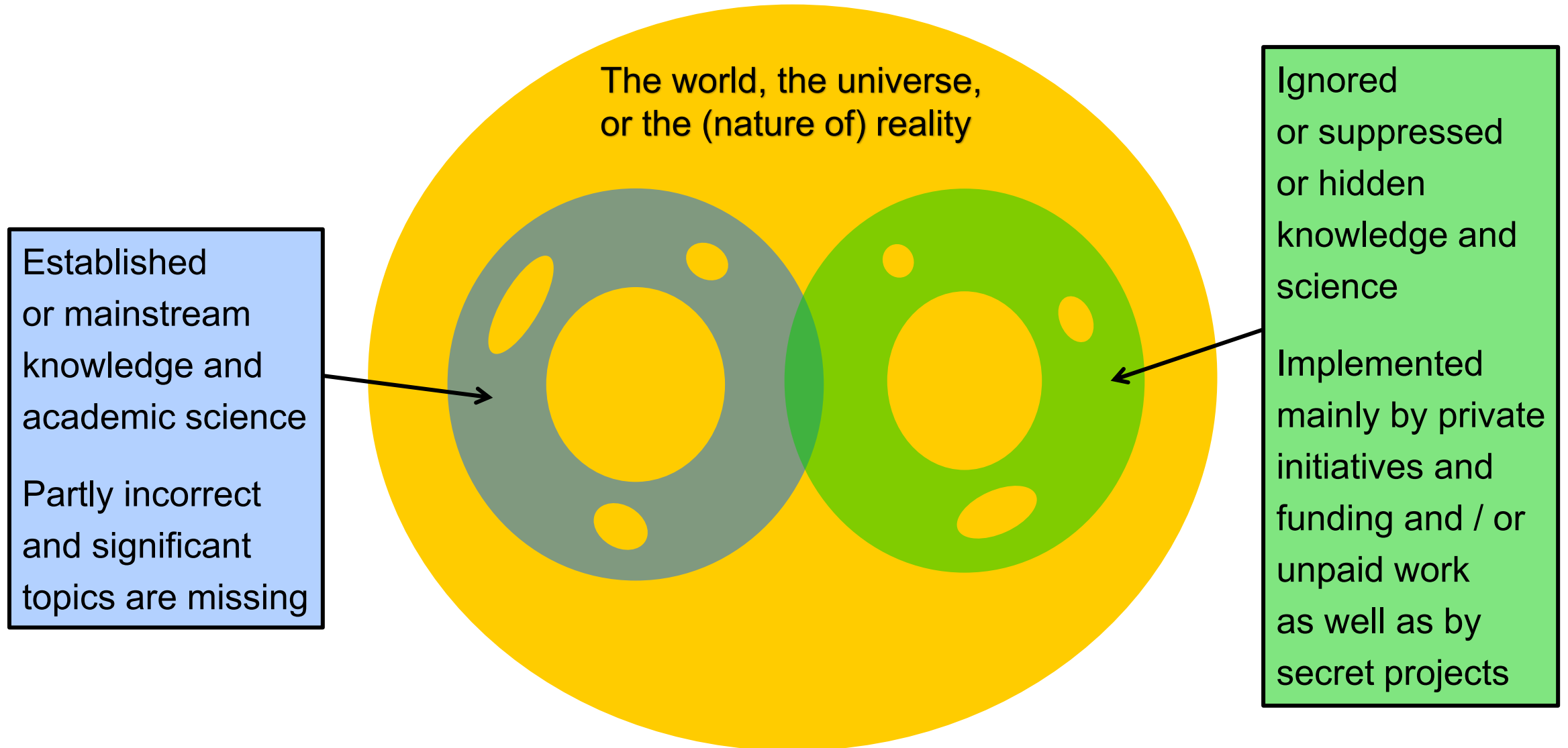
Introduction ...

It has become more and more evident that several non-mainstream scientists, researchers and inventors have achieved significant results which are relevant for an enjoyable evolution of mankind. The frontiers of the established academic science are already crossed and the doors for fundamentally new developments are open, even if this is still little known in public. The situation of knowledge and science is sketched on the following page ...

Introduction

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A sketch of the situation of knowledge and science



There are many remarkable results from non-mainstream science. For example, nowadays we can proceed from the assumption that there are entirely novel and environmentally friendly energy technologies ...

Entirely novel and
environmentally friendly
energy technologies ...

Self-running systems, generators, and power plants

This type of fundamentally new energy technologies does not need anything from the outside and can provide nevertheless permanently usable energy. The existence of these technologies and other considerations indicate that there is a hitherto unexplored form of energy. We can proceed from the assumption that there is everywhere on earth and in the universe an abundant form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. Energy technologies which tap this form of energy do not need any fuels, are emission-free and provide usable energy at any place and time ...

They are able to replace all conventional energy conversion devices like combustion engines, nuclear power plants, wind power, hydroelectric energy, and solar power. The entirely novel energy technologies allow a decentralized and emission-free power supply for dwelling houses, buildings, factories, cities and villages. Thus long transmission lines are not needed anymore and they can be removed from the landscape. Cars, trains, ships, airplanes and space ships, which are equipped with these entirely novel energy or propulsion technologies, do not need any fuels and produce no exhaust gases. Electric trains do not need contact wires anymore ...

The recognition of the existence of these fundamentally new energy technologies and their physical foundations may represent an intellectual or psychological challenge, for laymen as well as for professional scientists and engineers. It represents a paradigm shift in science, technology and consciousness.

To substantiate the statements on this page and the previous pages we present in the following some examples of significant achievements which are emerged from non-mainstream science ...

Entirely novel and
environmentally friendly
energy technologies:
Examples of devices,
systems, and concepts ...

The company Rosch Innovations (<https://rosch.ag>) has developed so-called kinetic or buoyancy power plants which generate usable electric energy. These self-running and zero-emission power plants consist of a water column which contains a chain drive, fillable containers which are attached at the chain drive, a valve system which can fill the containers with air, an electrically-operated compressor which produces compressed air, a generator, and a control unit. Rosch and their distribution partners such as the global engineering, procurment, and construction company Ki-TECH (<https://www.ki-tech.global/home-login>) and the German company E-Cat Deutschland GmbH (<https://e-cat-deutschland.de>) offer industrial size power plants with an output power of 200 kW – 100 MW. Such a power plant does not yet exist at a publicly known and visitable customer site. However, potential industrial customers or potential licensees can visit and inspect an operating 100 kW and 500 kW power plant, provided that they provide a letter of intent and a proof of funds. The 100 kW and 500 kW power plants are located at a Rosch site in Thailand where they power that site and feed electricity into the grid ...



Image from

www.borderlands.de/net_pdf/NET0516S6-9.pdf

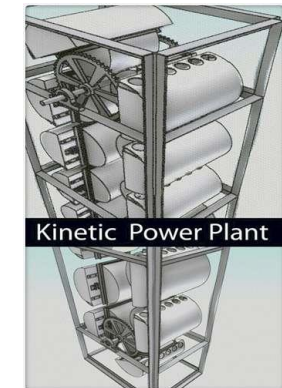


Image from <https://rosch.ag>

Self-running and zero emission power plants from the company Rosch Innovations 2 / 2

... An inspection by an engineer team of the potential customer or potential licensee allows a verification of the genuineness of the power plant and rule out possible objections such as a hidden power source.

As already mentioned, an industrial size power plant at a publicly known and visitable customer site does not yet exist. However, globally there are some power plants under construction and some projects are in the planning stage, see e.g. the website <https://wvge-me.com> which presents projects and a roadmap for Montenegro and other Balkan states.

The author of this presentation assumes that these power plants extract via the earth`s gravitational field and / or via the electromagnetic fields within the generator and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. For further information and references see the following report: <https://novam-research.com/kinetic-power-plants-from-rosch-innovations.php>



Picture from the 100 kW demo plant in Thailand. Image from a screenshot on 6 June 2022 from <https://www.ki-tech.global/home-login> . A similar picture is shown in <https://wvge-me.com>

Self-running and zero emission magnet motor / generator systems from the company Quantum Energy (Inductance Energy) Corporation

The company Inductance Energy Corporation has developed a magnet motor, called Earth Engine, with a mechanical output power up to 25+ kW which can propel a mechanical device or an alternator with a maximal electrical output power in the range from 7 to 25 kW. To control the magnet motor an electrical input power of about 300 W is required. If the magnet motor propels an alternator, then these about 300 W can be provided by the alternator which results in an overall self-running and zero-emission energy technology. In the United States these systems are already in production and use on a small scale. Various interesting information are presented on pages 25 - 53 in a German-language [slide set](#) (61 pages, 5 MB pdf) from a talk by Adolf Schneider about magnet motors on 3 October 2020 at a conference about novel energy technologies in Germany: Meanwhile the activities of the Inductance Energy Corporation are transferred to the company Quantum Energy Corporation. In their website <https://qree.energy> there is under Magnet a webpage called Magnetic Propulsion which displays still (since the beginning of January 2024) the message “Soon to be released”. The former website <https://ie.energy> of the Inductance Energy Corporation is still existing but displays no content. The author of this presentation assumes that these systems extract via electromagnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy or ether energy. For further information and references see the home page of <https://novam-research.com>



Image taken on 6 October 2019 from a video in the previous website <https://ie.energy>

Power-amplifying and zero emission AC generators without moving parts from the company Holcomb Energy Systems

Dr. Robert Holcomb and co-workers from the company Holcomb Energy Systems have developed power-magnifying electromagnetic AC generators without moving parts. They generate at least a doubled output power with respect to the input power. They are called in-line power generators (ILPGs) and the already existing systems generate an output power in the range from 3 kW to 500 kW. The specified input and output power of various Holcomb Energy Systems was confirmed by established certification companies such as SGS. The technology of the Holcomb Energy Systems is protected by several patents and patent applications in many countries. See e.g. [WO2023118149A1](#) (4 MB pdf) which was published on 29 June 2023 and about it a [paper](#) from Adolf Schneider in German but with many citations in English. Before market launch it appears desirable to perform a field test and study in more detail the dependence of the AC power amplification factor and other AC features like idle power, real power, and phase angle on various types of loads. Also potential AC effects on the grid have to be considered. The fundamental operating principle of the ILPG appears related to the patent DE3501076A1 from Dr. Wolfgang Volkrodt which is presented on [pages 40 and 41](#). The author of this presentation assumes that the Holcomb Energy Systems extract via electromagnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. For further information and references see the home page of <https://novam-research.com> and the company website <https://holcombenergysystems.com>



Image source: Screenshot on
7 April 2023 from the website
<https://holcombenergysystems.com>

Self-running and zero emission electromagnetic generators without moving parts (called AISEG) from the company SEMP Research Institute Co. Ltd.

1 / 2

The company SEMP Research Institute Co. Ltd. has developed a self-running electromagnetic generator without moving parts. It is called AISEG which stands for Artificial Intelligence Smart Electromagnetic Generator. SEMP website: <https://www.semp.or.kr/en>
Two short videos (a few minutes) about the AISEG:
<https://www.youtube.com/watch?v=SLJH8Ad2b44>
from December 2023 and
<https://www.youtube.com/watch?v=VgsPcGvLyn4>
from December 2018. The technology of the AISEG is scalable, i.e. generators with an output power from 5 kW to several 100 kW and more can be manufactured. The gravimetric power density of an AISEG is about 28 W / kg. For the AISEG technology more than 70 patents were applied in 60 countries. A patent application which describes the fundamentals is for example the United States patent application publication US20230198368A1 which was published on 22 June 2023 and can it be downloaded e.g. via the following link:
https://novam-research.com/resources/United-States-Patent-Application-Publication-US20230198368A1_2023.pdf



AISEG at the Expo COP28 in Dubai in December 2023. On the right there are overall 60 lamps which can be used as load at the output of the AISEG. Image source: Screenshot on 7 July 2024 from <https://www.semp.or.kr/en>

Self-running and zero emission electromagnetic generators without moving parts (called AISEG) from the company SEMP Research Institute Co. Ltd.

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On the right: Woo Hee Choi, co-founder and CEO of SEMP and main co-inventor of the AISEG, on 23 June 2024 at a German-language conference about novel energy technologies and related topics nearby Stuttgart in Germany. Overall seven staff members from SEMP were there and presented a talk about the AISEG. There was a translation from Korean into English and from English into German. A German-language report about (this conference and) the AISEG is published on pages (4) 21 - 23 (25) in the July / August 2024 issue of the German-language [NET Journal](#) (ISSN 1420-9292).

The fundamental operating principle of the AISEG appears related to the patent DE3501076A1 from Dr. Wolfgang Volkrodt which is presented on [pages 40 and 41](#). The author of this presentation assumes that the AISEG extract via electromagnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy or ether energy. For further information and references see the home page of <https://novam-research.com>



Image source:
Newsletter from
June 2024 from the
[Austrian Association for
Space Energy \(ÖVR\)](#)

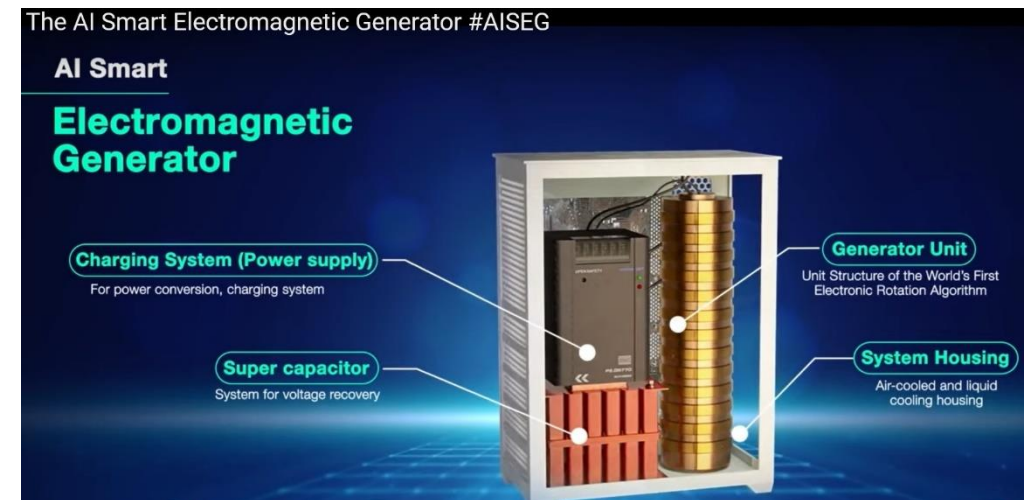


Image source: Screenshot on 8 July 2024 from video
<https://www.youtube.com/watch?v=SLJH8Ad2b44>

Intermediate comment about the term zero emission and electromagnetic pollution

Most systems presented on the previous and following pages are called zero emission devices.

The term zero emission usually means that the system does not generate exhaust gases, small exhaust particles, nuclear radiation, and radioactive waste.

Usually not considered but nevertheless significant are electromagnetic fields and radiation which are generated by most systems. This is also called electromagnetic pollution or electrosmog which is often harmful for humans and other life forms. Harmful are e.g. wireless communication technologies like 5G, smartphones, WLAN / Wifi, Bluetooth, small battery chargers which convert e.g. 230 V AC into a small DC voltage, power saving lamps, fluorescent tubes, and various kinds of converter such as DC / AC (which are e.g. used at photovoltaic systems), AC / DC, and DC / DC. Such converter are sometimes part of the entirely novel energy technologies.

There are several types of mainly non-mainstream technologies which can neutralize or harmonize the negative biological effects of electromagnetic pollution.

For references and further information see for example

- German company Florian König Enterprises GmbH (also available in English): <https://www.fk-e.de>
- Webpage <https://novam-research.com/electrosmog.php>

Various types of self-running and zero emission magnet motors 1 / 3

An example of a self-running magnet motor is that from the Turkish inventor Muammer Yildiz. It comprises a special array of permanent magnets.

A self-running prototype was for example presented in the Netherlands at the Eindhoven University of Technology in April 2009 and at the University of Delft in May 2010: <https://www.youtube.com/watch?v=mHW6b1aFPfU>

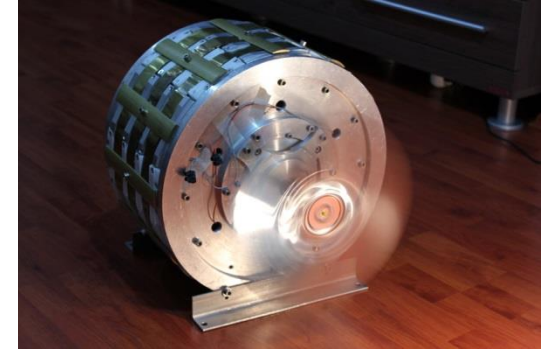


Image:from www.hmsbturk.com

Two papers by Dr. J. L. Duarte from the Department of Electrical Engineering of the Eindhoven University of Technology:

"Introducing the Yildiz Motor" and "Modeling the Yildiz Motor" from 2010 and 2012

https://novam-research.com/resources/Introducing-and-modeling-the-Yildiz-Motor_v01.pdf

The author of this presentation assumes that the Yildiz Motor and other magnet motors extract via magnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy.

There were several attempts to advance the Yildiz Motor concept towards commercial applications. However, they were not successful because discussions between Muammer Yildiz, supporters, and potential investors did not result in mutual agreements.

For further information and references about the Yildiz Motor and other magnet motors see the home page of <https://novam-research.com>

Examples of papers or reports about magnet motor concepts

German-language report by Adolf Schneider about various magnet motor concepts on pages 35 - 38 in the November / December 2022 issue of the NET-Journal (www.borderlands.de/inet.jrnl.php3) (ISSN 1420-9292) (in German)

Paper “Essay on Magnetic-Wind Mills - Part 1: Analysis and Design* from 2019 by Dr. J. L. Duarte from the Department of Electrical Engineering of the Eindhoven University of Technology: <https://doi.org/10.6100/94FC4756-AC0A-4A9C-A1DD-58530E694BB8> . “Part 2: Staying Power from Spacetime” from 15 Nov 2022, can be downloaded via the following link: https://novam-research.com/resources/Essay-on-Magnetic-Wind-Mills_Part2_J-L-Duarte_v4_15-Nov-2022.pdf

Design and Simulation of Self-Running Magnetic Motor from 2017 by Abdul Halim Ali and Ahmad Najmuddin Che Ismail <https://www.researchgate.net/publication/335257538> . Or download it as pdf via the following link: https://novam-research.com/resources/Design-and-Simulation-of-Self-Running-Magnetic-Motor_A-H-Ali-and-A-N-C-Ismail_2017.pdf

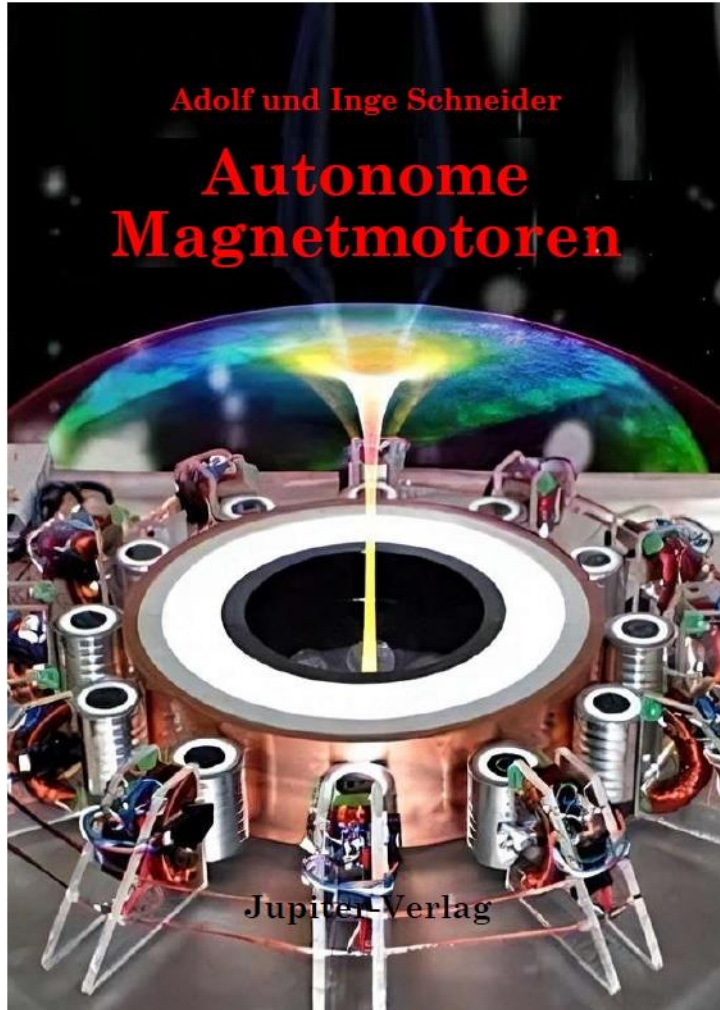
Design and Simulation of Free Energy Permanent Magnet Motor (FEPMM) from 2016 by Amel Ridha: <https://www.researchgate.net/publication/307513635>

The following paper from 2015 presents in its introduction various types of magnet motors and reports about an own concept: Design of open source straight permanent magnet motor, Amel Ridha and Haider H. Jabbe, Kufa Journal of Engineering, Volume 6 (2015), pages 24 - 38: <https://doi.org/10.30572/2018/KJE/621146> . Also published via <https://www.researchgate.net/publication/307513641>

A review on how a Perpetual Motion Machine generates electrical power, M. N. Hidayat, S. P. Chairandy, and F. Ronilaya IOP Conference Series: Materials Science and Engineering 1098 (2021) 042063 <https://doi.org/10.1088/1757-899X/1098/4/042063>

Various types of self-running and zero emission magnet motors 3 / 3

German-language book "Autonome Magnetmotoren" about self-running magnet motors



Authors: Adolf and Inge Schneider

First edition June 2024 , ISBN 978--3-906571-47-8

A5 type format (15 cm x 21 cm) , 470 pages

Publisher: Jupiter-Verlag , <https://www.jupiter-verlag.ch> and
https://www.Jupiter-verlag.ch/shop/detail_neu.php?artikel=160&fromMain=j

See also <https://gehtanders.de/produkt/autonome-magnetmotoren>
(in German)

Presented in this German-language book are more than 20 types of magnet motors and also the self-running magnet motor / generator systems from the company Quantum Energy (Inductance Energy) Corporation, the solid state power amplifiers from the company Holcomb Energy Systems, the self-running solid state electromagnetic generators from the company SEMP Research Institute Co. Ltd., and the self-running kinetic power plants from the company Rosch Innovations / Save The Planet AG which comprise specially modified electromagnetic generators. The four latter systems are also presented in this work.

Self-running and zero emission cryogenic magnet motor of Walter Thurner

The cryogenic magnet motor of the German engineer and inventor Walter Thurner is a nice example of a self-running system because its operation principle is published and comprehensible at the macroscopic scale. It can be understood just by considering the acting forces which operate in its design. The author of this presentation assumes that this magnet motor extracts at the microscopic scale via magnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. The magnet motor of Walter Thurner is described in the **Appendix**. It is called cryogenic magnet motor because its design comprises besides permanent magnets also superconductors which have to be cooled with liquid nitrogen. Walter Thurner died on 12 February 2021.



Images from

https://novam-research.com/resources/Walter-Thurner_Kryo-Magnet-Motor.pdf



Reactionless electromagnetic generator of Paramahansa Tewari

The Indian engineer and researcher Paramahansa Tewari has developed a reactionless electromagnetic generator, the Space Vortex Theory, and has written several papers and books.

Website about him and his work: <https://www.tewari.org>

Paramahansa Tewari passed away on 27 November 2017 in India.

An obituary is published in <https://www.tewari.org>

and by the Austrian association GAIA:

<https://gaia-energy.org/obituary-paramahansa-tewari/#more-110681>

So far a generator with 1,7 kW input power and 4,4 kW output power was constructed and tested (3 phase 220 V AC, 50 Hz). The next intended step was the development of a self-running 10 kW or 15 kW generator and / or a commercial 50 kW machine starting with 250 % efficiency.

Presentation from Paramahansa Tewari and Toby Grotz, lectured by Toby Grotz in 2016 in Germany (file size 4 MB pdf): https://novam-research.com/resources/Tewari-generator_Physics_Teslas-prophecy_P-Tewari-and-T-Grotz_2016_v2.pdf

The author of this presentation assumes that the Tewari generators extract via electromagnetic fields usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. For further information, references, and links see <https://novam-research.com/tewari.php>



Image from <https://www.tewari.org>

After December 2017 the former EBM website gammamanager.com was no longer available. In January 2024 it was noticed it is online again and in May 2025 it was noticed it is no longer available again.

In the period from 1980 to 2005 overall 108 different generators with an unconventional design were constructed and tested (see also [page 73](#)).

Finally it was discovered that a specific type of design resulted in an electric plus thermal output power which was larger than the electric input power.

A scaling law was found which predicts the ratio electric output power / electric input power versus the size of the generator. That scaling law indicated that

self-running systems were only possible for big and heavy machines with an output power in the MW range. Then it was intended together with customers

to establish such self-running industrial size generators. In February 2007 the author of this presentation was a member of a group who visited for 2 days the main inventor of this technology, Leslie I. Szabo, at his laboratory and company in Budapest in Hungary. There several models of generators were available but no self-running system. The assessment from the author of this presentation is that the research and development, the testing of the generators, and the obtained scaling law are sound and genuine.

At the same time the author of this presentation had in Budapest in February 2007 and in the following years the impression that the overall project should have been communicated in another way. Potential customers wanted to see a self-running generator before they finance or co-fund a self-running power plant in the MW range.



Image from previous website
gammamanager.com

Later (concepts for) smaller self-running generators were developed. In the previous content of the EBM website self-running generators with an output power from 50 kW to 20 MW were offered and it was mentioned that smaller / larger systems down to 2 kW / up to 75 MW are under development. In January 2024 EBM units with a projected size from 25 kW to 1 MW are specified in the EBM website. The author of this presentation assumes that the EBM generators extract via electromagnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy or ether energy. Refs. and further information:



Image from previous website
gammamanager.com

- Report on pages 4 - 14 in the issue January / February 2007 of the NET-Journal (in German): www.borderlands.de/net_pdf/NET0107S4-14.pdf
- Report in German on pages 25 and 26 in the issue November / December 2009 of the German-language NET-Journal (www.borderlands.de/inet.jrnl.php3) (ISSN 1420-9292)
- Abstract of a talk by Leslie Szabo at the congress “Neue Technologien im Einsatz“ in November 2009 (in German): <https://novam-research.com/resources/EBM2.pdf>
- Report in German on pages 23 and 24 in the issue March / April 2010 of the NET-Journal
- The EBM website gammamanager.com is cited in the following paper: <https://aias.institute/documents/miscellaneous/SpaceEnergy.pdf>

ECAT - Self-running and zero emission electricity generators

Websites: <https://ecatthenewfire.com> (official ECAT website) and <https://e-catworld.com>

The image on the right displays a small and self-running electricity generator which is called E-Cat SKL NGU 10 W. Some of its specifications:

DC output power / voltage 10 W / 12 V, diameter 6 cm, height 3 cm, weight 100 g, and expected operational lifespan more than 11 years. This and also generators with the following output power can be pre-ordered: 100 W, 1 kW, 2 kW, 3 kW, 5 kW, 10 kW, 1 MW, and custom size. The 5 kW generator, for example, has the dimensions 15 x 25 x 50 cm and a weight of 6 kg. Datasheet of the generators:

<https://ecatthenewfire.com/wp-content/uploads/2025/01/E-Cat-Power-NGU-DataSheet-2024-12-3.pdf>

The production and delivery of some of the pre-ordered generators starts presumably in 2025, see also the two following videos from May 2025: <https://www.youtube.com/watch?v=Cx3vw2hJLWs> and <https://www.youtube.com/watch?v=lvXhwMOdYlc> . Some of the essential components of the ECAT electricity generators are a (small) vacuum tube which is filled with a low pressure inert gas, a magnet which influences the motion and spatial arrangement of electrons in the vacuum tube, and a special electronic control. It allows the extraction of usable energy from an everywhere present form of energy which is called zero-point energy, vacuum energy, space energy, or ether energy. Click [here](#) to view a Japanese patent application JP2022188336A (abstract also in English) from the inventor Andrea Rossi which was published on 21 December 2022.

For further information see the report <https://novam-research.com/ecat.php>



Image from
<https://ecatthenewfire.com>

So-called neutrino voltaic - Self-running and zero emission electricity generators 1 / 2

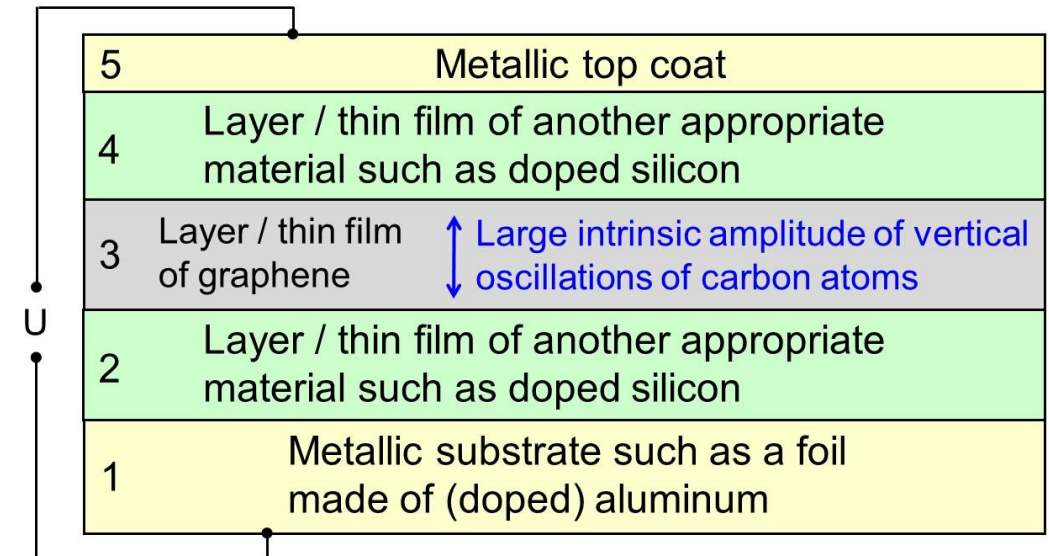
The foundation of the so-called neutrino voltaic is a special physical phenomenon which is observed by several researchers and inventors, namely that a proper metal foil with an appropriate coating generates a small and permanent DC voltage and power, see e.g. a German-language report on pages 4 - 6 in the March / April 2023 issue of the [NET-Journal](#) (ISSN 1420-9292) (in German).

An example which can be manually prepared is the layered arrangement

Appropriate metal (e.g. aluminum) foil | Special silicone tape | Fine graphite powder

Its manual manufacturing is shown in a video without sound in a German-language webpage from the Austrian society GAIA about the so-called neutrino voltaic: <https://gaia-energy.org/neutrino-energy-neutrinovoltaik-waver-manuell-vs-industriell> . There it is the left video under "Videos zur Veranschaulichung".

The company Neutrino (<https://neutrino-energy.com>) is focussed on research, development, and advancement of the sketched arrangement of materials. The currently achieved power density of such a layered arrangement is 50 W per square meter and several of them can be stacked. The stacking requires the presence of a high mechanical pressure, otherwise the unit does not work properly.



The company Neutrino and their partners are working on the development of a self-running and zero emission propulsion for electric cars and self-running and zero emission electrical generators which can power a home for example. In Austria a field test of 5 kW generators is currently in the planning stage, see the following German-language website from the Austrian society GAIA: <https://gaia-energy.org/neutrinovoltaik-feldtest>

The author of this presentation assumes that neutrinos do not play a role in the underlying physics how the electricity is generated. Instead the author of this presentation assumes that the sketched arrangement of materials (see previous page) extracts via electromagnetic fields and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. For further information and references see the report <https://novam-research.com/neutrino-inc.php>



So-called Neutrino Power Cube, a self-running and zero emission generator with an output power of 5 kW. Image source: Some videos which are posted in <https://neutrino-energy.com> and <https://www.youtube.com/@neutrinoenergy> such as <https://www.youtube.com/watch?v=JQN4escE6t4> and <https://www.youtube.com/watch?v=LiswrRR8H2Q>

Reid Cell or Crystal Cell – Low power electricity generators 1 / 2

The Reid Cell or Crystal Cell provides a small amount of electrical DC power of about 1 mW over a very long period of time, so far since 1998. This and some other features cannot be explained solely by conventional electrochemical effects. The Reid Cell or Crystal Cell and the results of various studies of their properties is presented in the following video from 2023 by Eckhard Kantz and Marcus Reid:

<https://www.dailymotion.com/video/x93j7o4> . Websites:

<https://vakuumenergie.de> and <https://quantumpowermunich.de>

For comments on the Reid Cell or Crystal Cell see

<https://quantumpowermunich.de/wp-content/uploads/2023/12/Comments-Reid-Cell.pdf>

and / or <https://vakuumenergie.de/wp-content/uploads/2023/12/Comments-Reid-Cell.pdf> . The Reid Cell or Crystal Cell represents an interesting topic for further research, development, and advancement, especially with respect to the origin of the electrical power and how the power can be increased.



Image source: See for example
<https://vakuumenergie.de>



Image source: Screenshot from former video
dailymotion.com/video/x8lkslc
from March 2024

A book about the Reid Cell or Crystal Cell is already available or coming soon

Title: Reid Cell

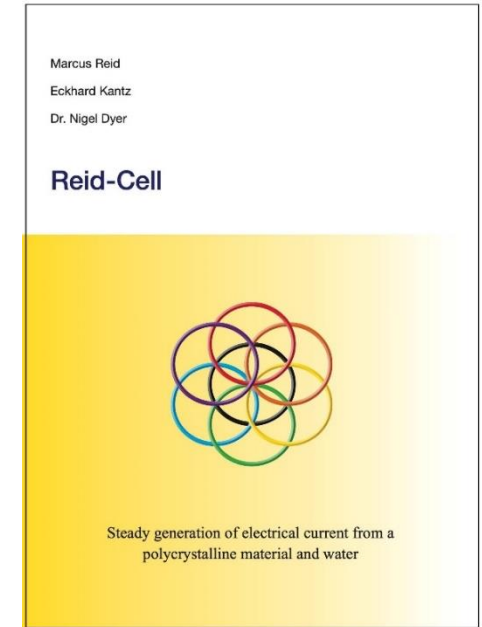
Authors: Marcus Reid, Eckhard Kantz, and Dr. Nigel Deyer

<https://vakuumenergie.de>

<https://vakuumenergie.de/book>

<https://www.kulturkaufhaus.de/en/detail/ISBN-9783982213729/Reid-Marcus/Reid-Cell>

For further information like front cover, back cover, foreword, and contents see <https://quantumpowermunch.de/wp-content/uploads/2024/04/Marcus-CC-Innenseiten-Eriks-Edits.pdf> and / or <https://vakuumenergie.de/wp-content/uploads/2025/03/Marcus-CC-Innenseiten-book-prev.pdf>



This self-running and zero emission energy technology is based on specific type of constructions which are operated with water or another fluid, or under water, or under a high internal water / fluid and gas pressure. These systems are also called self-running ram pumps and generate usable mechanical, electric and / or thermal energy via autonomous hydraulic oscillations. The self-running ram pumps mentioned here were constructed and advanced by the Russian inventor Dr. V. Marukhin and his co-workers. There are various kinds of constructions and sizes. For example, a steel tube design with a height and diameter of 42 cm and 15 cm that is operated with an internal fluid and gas pressure and oscillation frequency of about 3000 bar and 3000 Hz, respectively, generates a permanent electric output power up to 1 MW. The mechanical energy of the hydraulic water / fluid and gas oscillations is converted into electric energy by piezoelectric transducers. The transformation of the generated DC electricity into a convenient form of AC electricity requires a DC / DC and a DC / AC converter. The author of this presentation assumes that these generators extract via the earth's gravitational field and / or the electromagnetic fields in and between the fluid / gas / steel atoms and the spin of the electrons usable energy from an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy.

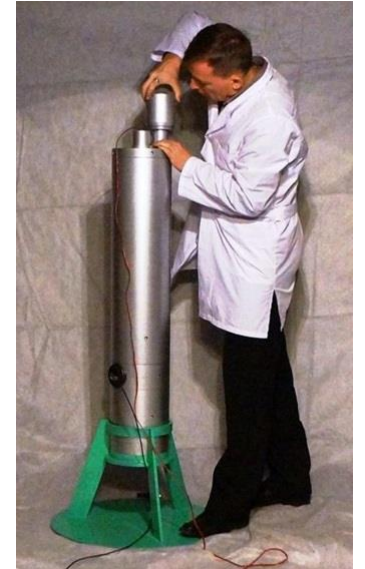


Image from Ref. 1 which is provided on the next page

These types of generators are already in use at some undisclosed industrial customers. Demonstration generators which can be viewed and inspected on request do so far not exist and attempts to make such devices available are stuck because of the imposed sanctions against Russia. So far there are only undisclosed customers and they have not reported their experiences with their generator and their associated DC / DC converter and DC / AC converter. Therefore several items are not yet concretely known, namely the design of an appropriate DC / DC converter, the behavior of the generators and converters under various conditions such as a resistive, capacitive, and / or inductive load, and the power stability and safety over a long period of time.

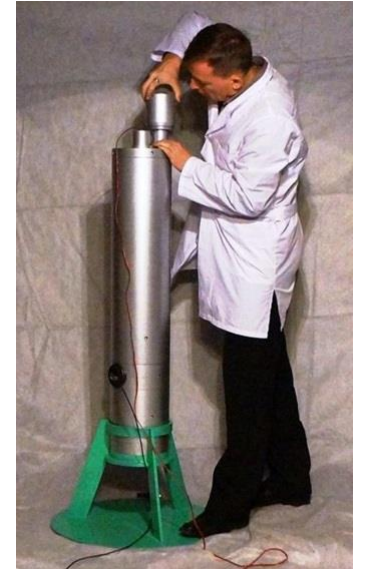


Image from Ref. 1

For further information see

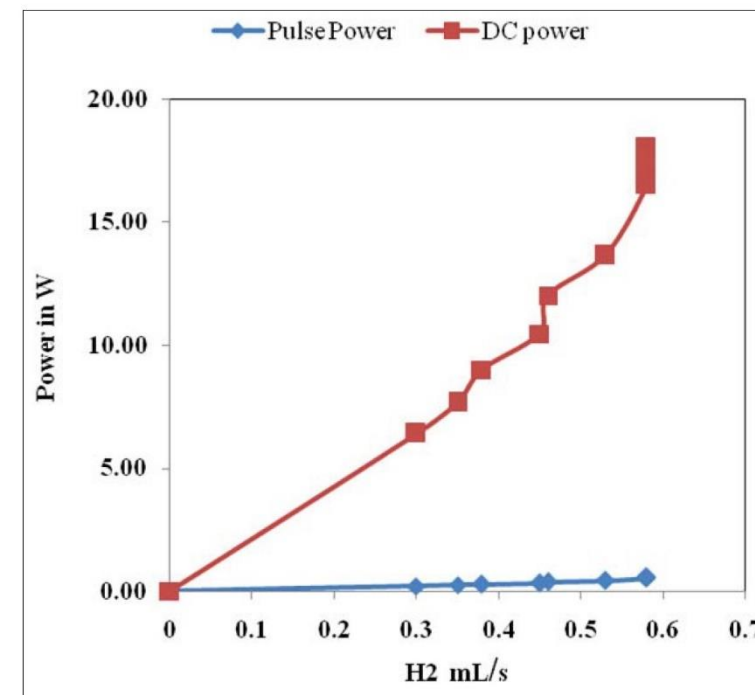
[1] Presentation by Adolf Schneider from May 2021 (40 pages, 3 MB pdf):

https://novam-research.com/resources/HEG-Presentation-English_May-2021.pdf

[2] Report <https://novam-research.com/ram-pumps.php>

Water splitting by pulsed electrolysis 1 / 3

In established physics / chemistry / science it is assumed that the modulus of the energy which is required to split a water molecule (electrolytically) into hydrogen and oxygen is always equal to the modulus of the energy which is released when hydrogen and oxygen recombine into a water molecule. This is because the two hydrogen atoms and the one oxygen atom in a water molecule are bound together by electric or electromagnetic forces which are considered as so-called conservative force fields, i.e. a closed loop motion of a particle in such a force field can never result in a gain of usable energy. However, many researchers and inventors have claimed that under specific conditions it is possible to split water into hydrogen and oxygen with much less energy than usual. In this case usable energy can be generated when the created hydrogen and oxygen recombine into water with a release of the usual amount of energy.



This figure displays the effect of a conventional DC electrolysis and a pulsed electrolysis on the hydrogen production rate.

Image source: Figure 6 in a paper by C. H. Dharmaraj and S. AdishKumar, International Journal of Energy and Environment 3 (2012) 129 - 136

Water splitting by pulsed electrolysis 2 / 3

The following work is a published example how water can be split into hydrogen and oxygen with much less energy than usual, namely by a special pulsed electrolysis:

Economical hydrogen production by electrolysis using nano pulsed DC

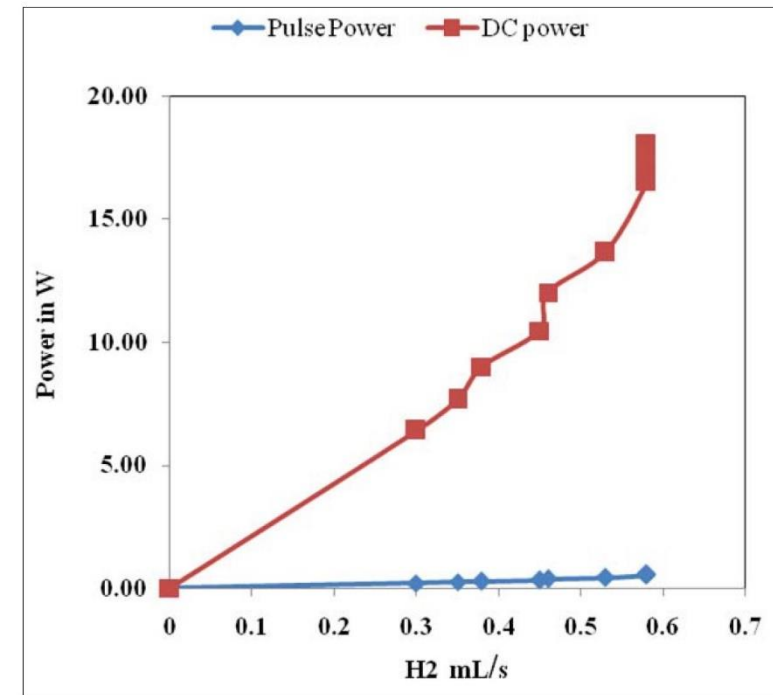
C. H. Dharmaraj and S. AdishKumar

International Journal of Energy and Environment 3 (2012)
129 - 136

www.ijee.ieefoundation.org/vol3/issue1/IJEE_13_v3n1.pdf

or

https://novam-research.com/resources/Water-splitting-by-pulsed-electrolysis_2012.pdf

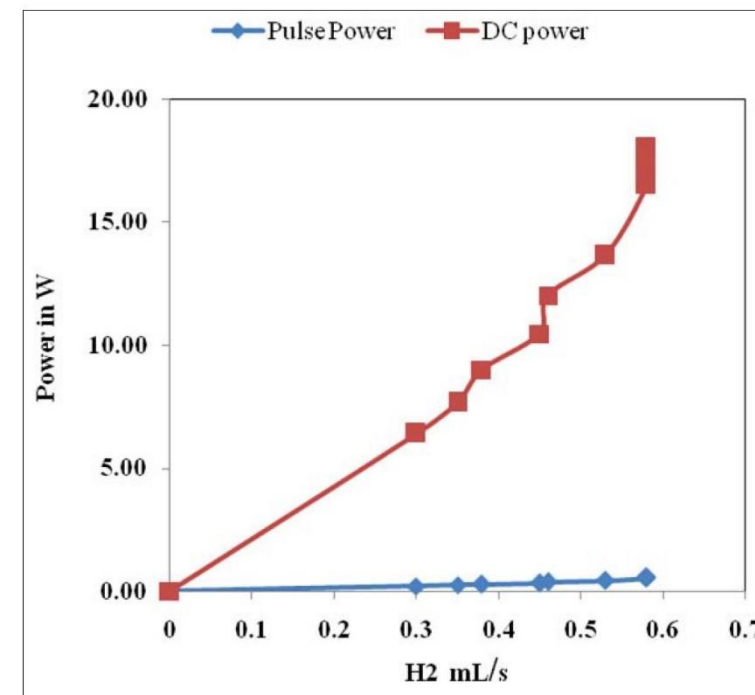


This figure displays the effect of a conventional DC electrolysis and a pulsed electrolysis on the hydrogen production rate.

Image source: Figure 6 in a paper by C. H. Dharmaraj and S. AdishKumar, International Journal of Energy and Environment 3 (2012) 129 - 136

Water splitting by pulsed electrolysis 3 / 3

The authors of this paper have not discussed the potential physics behind this remarkable phenomenon. The author of this website assumes that any physical process can be performed / modified / designed in such a way that it taps an everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. From this perspective it is assumed that a specifically pulsed electrolysis results somehow in an assisted water splitting, i.e. a large part of the required splitting energy is via electromagnetic fields and the spin of the electrons provided by the space energy, vacuum energy, zero-point energy, or ether energy.



This figure displays the effect of a conventional DC electrolysis and a pulsed electrolysis on the hydrogen production rate.

Image source: Figure 6 in a paper by C. H. Dharmaraj and S. AdishKumar, International Journal of Energy and Environment 3 (2012) 129 - 136

Patent DE3501076A1 from 1986 by Dr. Wolfgang Volkrodt: Energy converter having a magnetic-core intermediate store

1 / 2

See e.g. <https://patents.google.com/patent/DE3501076A1/en>

Original German-language patent specification including figures:
<https://novam-research.com/resources/Patent-DE3501076A1.pdf>

According to the description the energy which is stored in a ferromagnetic material after its magnetization is significantly larger than the energy which is necessary to magnetize the ferromagnetic material, at least under certain conditions. This phenomenon can be used to construct an electromagnetic device which provides at its output an amount of usable electric energy or power which is significantly larger than the energy or power which is fed into its input.

Citations from the patent specification (Note from the author of this website: The text in the patent specification is a translation from German into English and there are sometimes translation errors) ...

Patent DE3501076A1 from 1986 by Dr. Wolfgang Volkrodt:
Energy converter having a magnetic-core intermediate store

2 / 2

" ... Let us briefly summarize the current state of knowledge: The necessary energy to magnetize or reverse magnetize a magnetic core store is considerably smaller than the energy content that can be measured afterwards in the permanent magnet ... Those to be expected according to previous theories of energy technology Alternating hysteresis losses are a multiple of what is actually required for reversal of magnetization supplied electrical energy. The theory does not agree with either the law of conservation of energy still match experimental experience ...

... Up to now, conventional physics has only known the real components of electricity, magnetism and gravity. In order to interactions between the aforementioned quantities To be able to describe it in terms of vibrations and eddies, however, is more complex Sizes. According to more recent theories, imaginary quantities must also be in our space as are assumed to be present, from which, under certain conditions, a transformation is possible in forms of energy known to us ...

... According to the above hyperenergy theory, one understands by ferromagnetism the alignment of unpaired electrons (they are small hyperspace vortices) around it to establish the resulting magnetic vector field ...

... Apparatus and machines that use hyperspace as an energy source use are not perpetual motion machines, but rather energy converters in the conventional sense ...“

International Space Federation (ISF)

Website <https://www.spacefed.com>

YouTube Channel

<https://www.youtube.com/@intlspacefed>

Swiss corporation with headquarters in Geneva and laboratories in France

Research and development in the field of (quantum) vacuum, gravity and unified physics which also includes entirely novel and environmentally friendly energy technologies. Research director is Nassim Hamein

Significant paper "The Origin of Mass and the Nature of Gravity" by Nassim Hamein, Cyprien Guermontprez, and Olivier Alirol - published on 26 September 2023 via zenodo.org:
<https://doi.org/10.5281/zenodo.10125315>

The ISF did arise from a previous history comprising 30 years research, publications, and designs as well as the Resonance Science Foundation, education, and a few related smaller companies

Possibility to invest into the ISF / support the ISF via a participatory perpetual bond. The ISF issues in two stages maximal 200 Million notes denominated at 1 CHF per note. The minimum investment is 1000 CHF

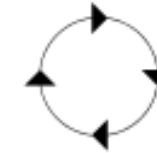


Image from a screenshot on 21 January 2024
of <https://www.spacefed.com>

ECE Theory and the Alpha Institute for Advanced Studies (AIAS)

The AIAS is an affiliation of several physicists who have created a large number of papers and books about the so-called ECE Theory which provides evidence for energy technologies which extract usable energy from space-time. The ECE Theory and the AIAS was established by the British Civil List physicist Prof. M. W. Evans. The ECE Theory represents an unified field theory which was and is advanced by him and other scientists on a mainly voluntary basis. Among others, the ECE Theory implies

- that gravitation is related to the curvature of space-time
- that electromagnetism is related to the torsion of space-time
- a coupling between gravitation and electromagnetism
- an extended or advanced electrodynamics which involves the possibility to extract usable energy from space-time



$$R q_{\mu}^a = -k T q_{\mu}^a$$

Evans Field Equation

Images from former
website aias.us

For further information see

- an introduction into the ECE Theory H. Eckardt and L. G. Felker:
https://aias.institute/documents/eceArticle/ECE-Article_EN.pdf
- Paper “How Do Space Energy Devices Work” by Dr. Horst Eckardt:
<https://aias.institute/documents/miscellaneous/SpaceEnergy.pdf>
- the official AIAS website: <https://aias.institute>

An abstract / summary
of these both papers is
presented on **pages 47
and 48**

Tom Bearden: His website, his Motionless Electromagnetic Generator (MEG), and his book *Energy from the Vacuum – Concepts and Principles*

Tom Bearden passed away on 3 February 2022 and an obituary is published in the following link: <https://obits.al.com/us/obituaries/huntsville/name/thomas-bearden-obituary?id=32759244>

A German-language obituary is published on pages 50 - 52 in the March / April 2022 issue of the German-language journal [NET-Journal](#) (ISSN 1420-9292)

Tom Bearden's former website [cheniere.org](http://www.cheniere.org) no longer exists but is still available via the website web.archive.org:

<https://web.archive.org/web/20220428030850/http://www.cheniere.org>

It contains comprehensive information such as "A Partial List of Successful Documented EM Over-Unity and Negative Resistor Devices and Processes":

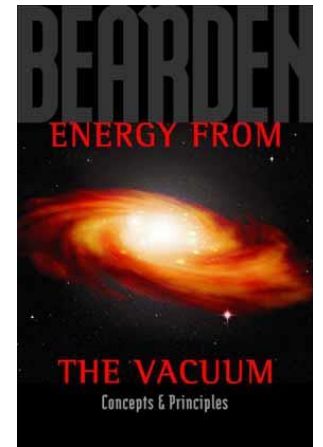
<https://web.archive.org/web/20220429004028/http://www.cheniere.org/misc/oulist.htm>

The Motionless Electromagnetic Generator (MEG) of Tom Bearden is presented in

<https://web.archive.org/web/20220301131053/https://www.cheniere.org/megstatus.htm> . In an e-mail to a professional electronics engineer from April 2003 he explains how the MEG works:

<https://web.archive.org/web/20220301131053/https://www.cheniere.org/correspondence/041303.htm> or download it as pdf via the following link: https://novam-research.com/resources/MEG_How-it-works_e-mail-from-Tom-Bearden-to-a-professional-electronics-engineer-from-April-2003.pdf

A paper about an explanation of the MEG is presented on the following page ...



Book "Energy from the Vacuum – Concepts and Principles"

Published in 2004

Author:
Tom Bearden

977 pages

ISBN 0972514600

[Preview Table of Contents](#)

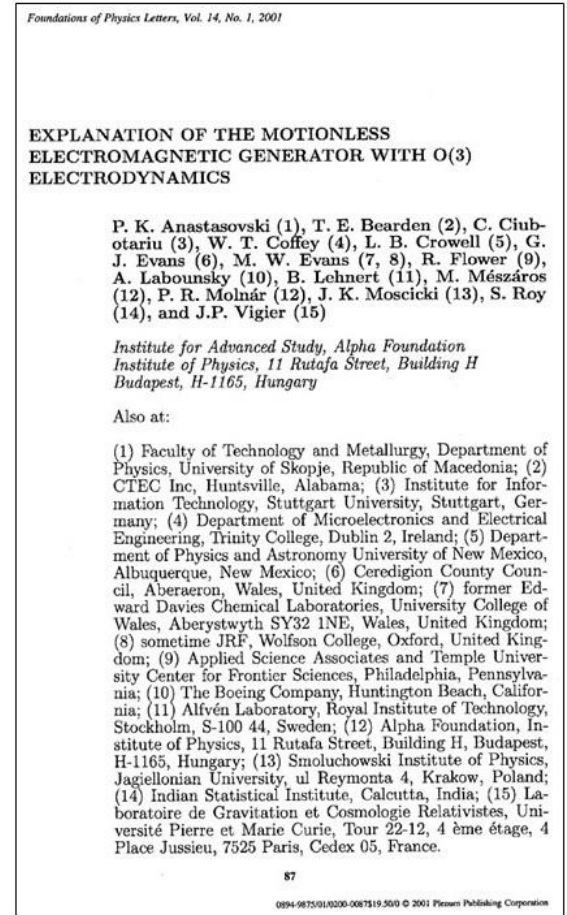
Explanation of the motionless electromagnetic generator with $O(3)$ electrodynamics

P. K. Anastasovski, T. E. Bearden et al.

Foundation of Physics Letters 14 (2001) 87 - 94

<https://doi.org/10.1023/A:1012085429802>

Abstract: Recently, Bearden et al. developed a device which is known as a motionless electromagnetic generator (MEG) and which produces a coefficient of performance (COP) far in excess of unity. The device has been independently replicated by Naudin. In this communication, the fundamental operational principle of the MEG is explained using a version of higher symmetry electrodynamics known as $O(3)$ electrodynamics, which is based on the empirical existence of two circular polarization states of electromagnetic radiation, and which has been developed extensively in the literature. The theoretical explanation of the MEG with $O(3)$ electrodynamics is straightforward: Magnetic energy is taken directly ex vacua and used to replenish the permanent magnets of the MEG device, which therefore produces a source of energy that, in theory, can be replenished indefinitely from the vacuum. Such a result is incomprehensible in $U(1)$ Maxwell-Heaviside electrodynamics.



Classical Electrodynamics without the Lorentz Condition: Extracting Energy from the Vacuum

P. K. Anastasovski, T. E. Bearden, et al.

Physica Scripta 61 (2000) 513 - 517

<https://doi.org/10.1238/Physica.Regular.061a00513>

Published also via www.aias.us/documents/mwe/omniaOpera/omnia-opera-563.pdf

Abstract: It is shown that if the Lorentz condition is discarded, the Maxwell–Heaviside field equations become the Lehnert equations, indicating the presence of charge density and current density in the vacuum. The Lehnert equations are a subset of the O(3) Yang–Mills field equations. Charge and current density in the vacuum are defined straightforwardly in terms of the vector potential and scalar potential, and are conceptually similar to Maxwell's displacement current, which also occurs in the classical vacuum. A demonstration is made of the existence of a time dependent classical vacuum polarization which appears if the Lorentz condition is discarded. Vacuum charge and current appear phenomenologically in the Lehnert equations but fundamentally in the O(3) Yang–Mills theory of classical electrodynamics. The latter also allows for the possibility of the existence of vacuum topological magnetic charge density and topological magnetic current density. Both O(3) and Lehnert equations are superior to the Maxwell–Heaviside equations in being able to describe phenomena not amenable to the latter. In theory, devices can be made to extract the energy associated with vacuum charge and current.



How Do Space Energy Devices Work ?

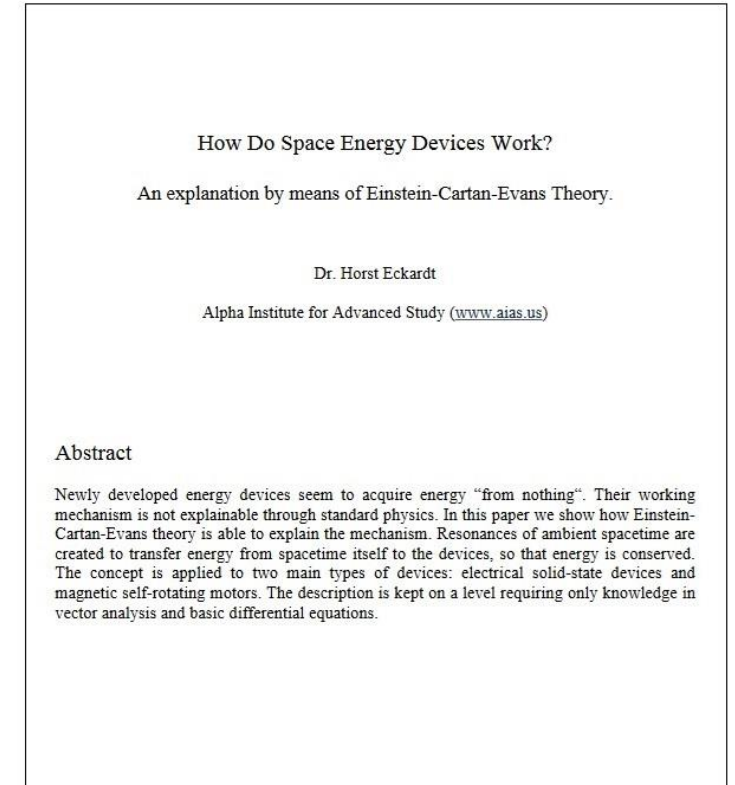
An explanation by means of Einstein-Cartan-Evans (ECE) Theory

Horst Eckardt

Published via the website aias.institute of the
Alpha Institute for Advanced Studies (AIAS):

<https://aias.institute/documents/miscellaneous/SpaceEnergy.pdf>

Abstract: Newly developed energy devices seem to acquire energy “from nothing“. Their working mechanism is not explainable through standard physics. In this paper we show how Einstein-Cartan-Evans (ECE) theory is able to explain the mechanism. Resonances of ambient spacetime are created to transfer energy from spacetime itself to the devices, so that energy is conserved. The concept is applied to two main types of devices: electrical solid-state devices and magnetic self-rotating motors. The description is kept on a level requiring only knowledge in vector analysis and basic differential equations.



This paper presents an introduction into the Einstein-Cartan-Evans (ECE) theory

Einstein, Cartan and Evans – Start of a New Age in Physics?

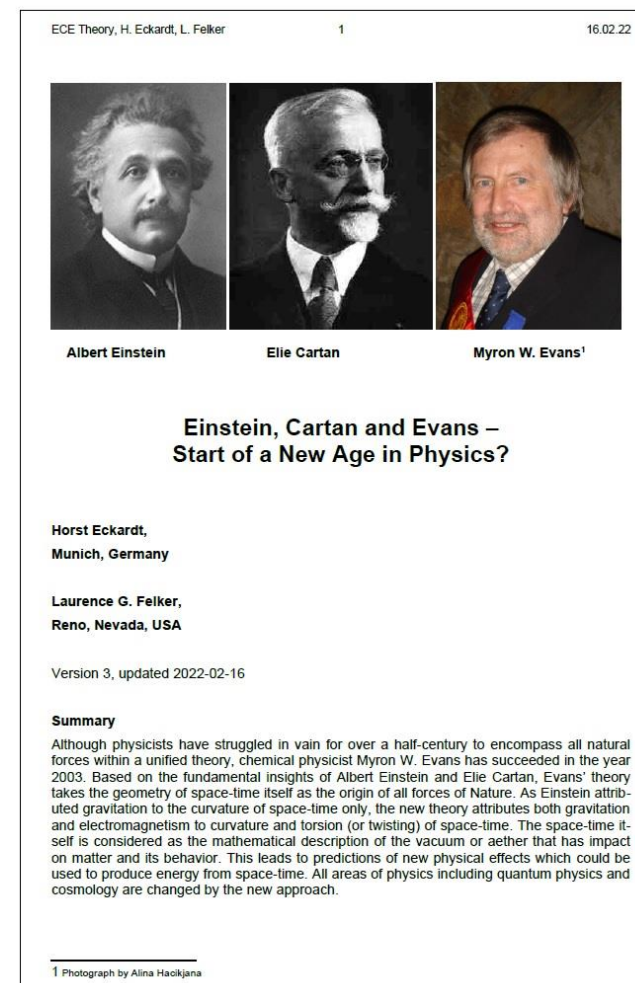
Horst Eckardt and Laurence G. Felker

At least version 3 from February 2022

Published via the website aias.institute of the AIAS:

https://aias.institute/documents/eceArticle/ECE-Article_EN.pdf

Summary: Although physicists have struggled in vain for over a half-century to encompass all natural forces within a unified theory, chemical physicist Myron W. Evans has succeeded in the year 2003. Based on the fundamental insights of Albert Einstein and Elie Cartan, Evans' theory takes the geometry of space-time itself as the origin of all forces of Nature. As Einstein attributed gravitation to the curvature of space-time only, the new theory attributes both gravitation and electromagnetism to curvature and torsion (or twisting) of space-time. The space-time itself is considered as the mathematical description of the vacuum or ether that has impact on matter and its behavior. This leads to predictions of new physical effects which could be used to produce energy from space-time. All areas of physics including quantum physics and cosmology are changed by the new approach.



Paper about a discussion of the calculation of magnetic fields of permanent magnets and arrangements of permanent magnets which lead to a self-running motion

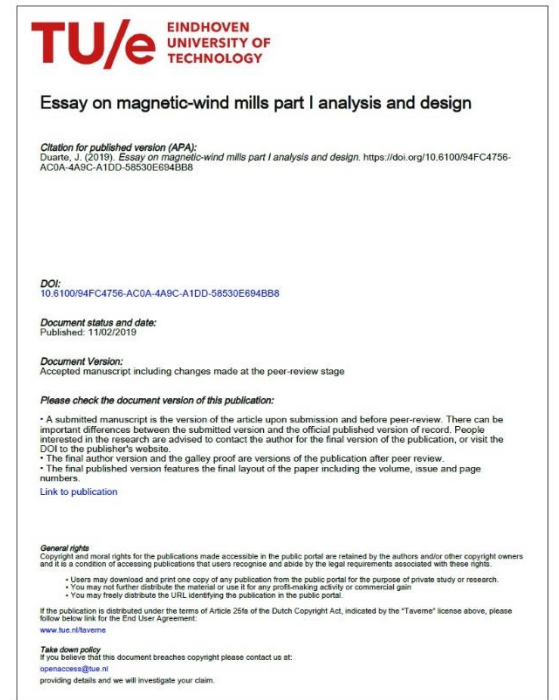
Essay on Magnetic-Wind Mills - Part 1: Analysis and Design

J. L. Duarte (2019)

<https://doi.org/10.6100/94FC4756-AC0A-4A9C-A1DD-58530E694BB8>

Abstract: A methodology for the synthesis of a prime mover is presented, based only on attraction / repulsion of permanent magnets. The design example is given for a demonstration prototype that has the potential to unfold, in theory, the sustainable generation of 22 W mechanical power at 1000 rpm and beyond.

A version of Part 2, namely “Staying Power from Spacetime” from 15 Nov 2022, can be downloaded via the following link: https://novam-research.com/resources/Essay-on-Magnetic-Wind-Mills_Part2_J-L-Duarte_v4_15-Nov-2022.pdf . Abstract: One of the missing links in support of the allegation that devices with only magnets seemingly generate useful energy ”out of thin air” could be Spacetime twisting. This discussion paper applies the concept to self-rotating machines previously claimed in patents.



This paper presents in its introduction various types of magnet motors and reports about an own concept

Design of open source straight permanent magnet motor

Amel Ridha and Haider H. Jabbe

Kufa Journal of Engineering 6 (2015) 24 - 38

<https://doi.org/10.30572/2018/KJE/621146>

Published also via <https://www.researchgate.net/publication/307513641>

Abstract: This paper deals with the attraction and repulsion properties of the magnetic field of permanent magnets in order to produce reciprocating motion in a member of magnetizing material. The essential idea of this work have started by putting a string of eight magnets type (Nd Fe 35) spaced by equal spaces placed on the axis between two series of same magnet type each string consists of nine magnets pieces spaced apart vacuum. Series of internal and external were organized with different opposite polarity north and south that created a series of free movement of internal series between the two external strings. First of all, designed magnetic motor rectal movement consisting of two fixed (for external strings) and one moving part (Series Interior) analysis was done and its operation was analyzed. In addition, equations that describe the magnetic field arising from the moving part were modified by using two-dimensional computer model. The (femm) program was used for modeling the distribution of density, and DS Solid Works program to study and calculate the magnetic flux density, field strength and torque generated.



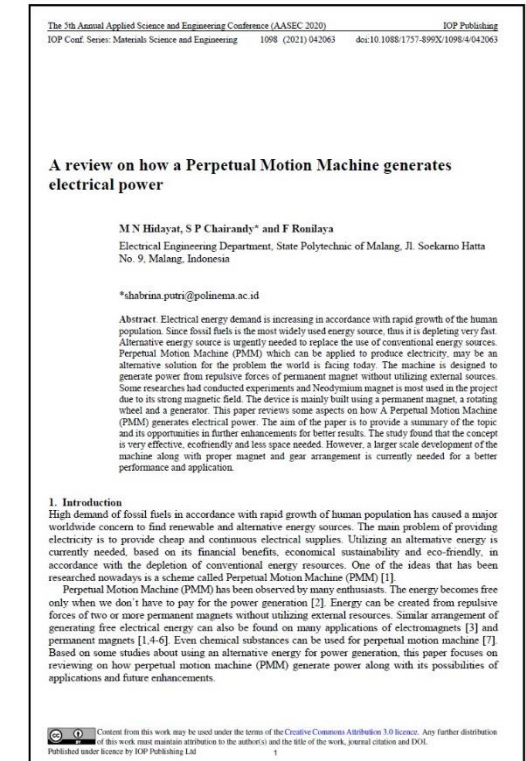
A review on how a Perpetual Motion Machine generates electrical power

M. N. Hidayat, S. P. Chairandy, and F. Ronilaya

IOP Conference Series: Materials Science and Engineering 1098 (2021) 042063 (1 - 7)

<https://doi.org/10.1088/1757-899X/1098/4/042063>

Abstract: Electrical energy demand is increasing in accordance with rapid growth of the human population. Since fossil fuels is the most widely used energy source, thus it is depleting very fast. Alternative energy source is urgently needed to replace the use of conventional energy sources. Perpetual Motion Machine (PMM) which can be applied to produce electricity, may be an alternative solution for the problem the world is facing today. The machine is designed to generate power from repulsive forces of permanent magnet without utilizing external sources. Some researches had conducted experiments and Neodymium magnet is most used in the project due to its strong magnetic field. The device is mainly built using a permanent magnet, a rotating wheel and a generator. This paper reviews some aspects on how A Perpetual Motion Machine (PMM) generates electrical power. The aim of the paper is to provide a summary of the topic and its opportunities in further enhancements for better results. The study found that the concept is very effective, ecofriendly and less space needed. However, a larger scale development of the machine along with proper magnet and gear arrangement is currently needed for a better performance and application



Increased voltage phenomenon in a resonance circuit with unconventional magnetic configuration

Osamu Ide

Journal of Applied Physics 77 (1995) 6015 - 6020

<https://doi.org/10.1063/1.359520>

Published also via www.intalek.com/Index/Projects/Research/jap77.pdf

Abstract: The behavior of an LCR (inductance-capacitance-resistance) circuit with a movable ferromagnetic core is discussed. The core is attracted by a magnetic field generated by an electric current resulting from the discharge of a capacitor in the closed LCR circuit. An unusual increase in recharge voltage, which was dependent on the magnetic configuration of the coil, was observed. This voltage increase does not conform to the mathematical simulation of the system. The possibility that a positive electromotive force was involved in this effect is discussed.



Extracting Energy and Heat from the Vacuum

D. C. Cole and H. E. Puthoff

Physical Review E 48 (1993) 1562 - 1565

<https://doi.org/10.1103/PhysRevE.48.1562>

Published also via

www.earthtech.org/publications/PREv48_1562.pdf

Abstract: Relatively recent proposals have been made in the literature for extracting energy and heat from electromagnetic zero-point radiation via the use of the Casimir force. The basic thermodynamics involved in these proposals is analyzed and clarified here, with the conclusion that, yes, in principle, these proposals are correct. Technological considerations for actual application and use are not examined here, however.



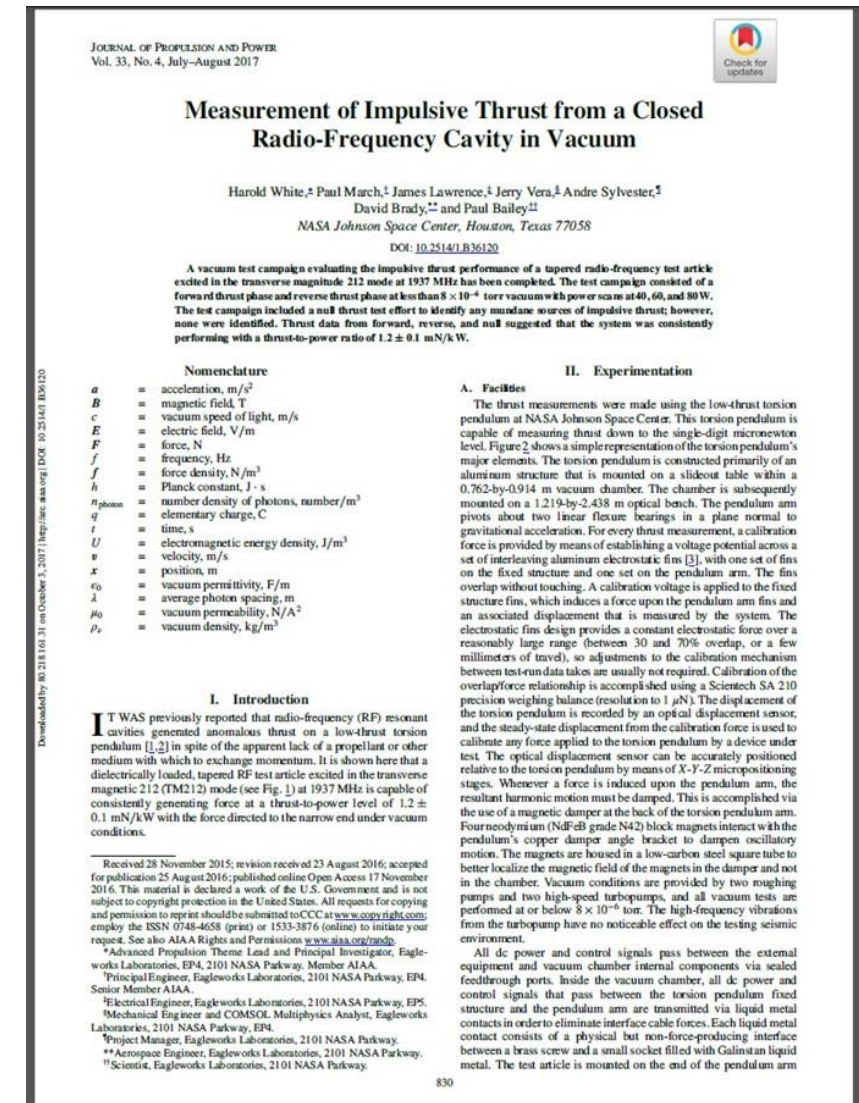
Measurement of Impulsive Thrust from a Closed Radio-Frequency Cavity in Vacuum

H. White et al.

Journal of Propulsion and Power 33 (2017) 830 - 841

<https://doi.org/10.2514/1.B36120>

Citation from page 840: "... This suggests that the idea of treating the quantum vacuum as a dynamic medium capable of supporting oscillations might be valid. If a medium is capable of supporting acoustic oscillations, this means that the internal constituents were capable of interacting and exchanging momentum. If the vacuum is indeed mutable and degradable as was explored, then it might be possible to do / extract work on / from the vacuum, and thereby be possible to push off of the quantum vacuum and preserve the laws of conservation of energy and conservation of momentum ..."



The so-called ECAT technology was / is considered as a LENR-based technology. LENR means Low Energy Nuclear Reactions which usually imply no harmful and radioactive byproducts. Broadly speaking it was assumed that hydrogen H (1) and nickel Ni (28) merge via LENR to copper Cu (29) which releases a large amount of energy. Meanwhile Andrea Rossi considers the underlying physics in terms of dense electron clusters, electron-proton aggregates at the picometer scale, and their formation via vacuum polarization and zero point energy.

E-Cat SK and long-range particle interactions

Andrea Rossi (2019) (last update 21 October 2022)

<https://dx.doi.org/10.13140/RG.2.2.28382.48966/11>



Significant paper about the physics
of the (quantum) vacuum

The Origin of Mass and the Nature of Gravity

Nassim Hamein, Cyprien Guernonprez,
and Olivier Alirol

Published on 26 September 2023 via zenodo.org
52 pages

<https://doi.org/10.5281/zenodo.10125315>

Until July 2024 more than 50 k = 50000 downloads

The Origin of Mass and the Nature of Gravity

Nassim Hamein[†], Cyprien Guernonprez[†], Olivier Alirol[†]

Abstract

From the early explorations of thermodynamics and characterization of black body radiation, Max Planck predicted the existence of a non-zero expectation value for the electromagnetic quantum vacuum energy density or zero-point energy (ZPE). From the mechanics of a quantum oscillator, Planck derived the black body spectrum, which satisfied the Stefan-Boltzmann law with a non-vanishing term remaining where the summation of all modes of oscillations diverged to infinity in each point of the field. In modern derivation, correlation functions are utilized to derive the coherent behavior of the creation and annihilation operators. Although a common approach is to normalize the Hamiltonian so that all ground state modes cancel out, setting artificially ZPE to zero, zero-point energy is essential for the mathematical consistency of quantum mechanics as it maintains the non-commutativity of the creation and annihilation operators resulting in the Heisenberg uncertainty principle. From our computation, we demonstrate that coherent modes of the correlation functions at the characteristic time of the proton correctly result in the emergence of its mass directly from quantum vacuum fluctuation modes. We find as well that this energy value is consistent with a Casimir cavity of the same characteristic distance. As a result, we developed an analytical solution describing both the structure of quantum spacetime as vacuum fluctuations and extrapolate this structure to the surface dynamics of the proton to define a screening mechanism of the electromagnetic fluctuations at a given scale. From an initial screening at the reduced Compton wavelength of the proton, we find a direct relation to Einstein field equations and the Schwarzschild solution describing a source term for the internal energy of the proton emerging from zero-point electromagnetic fluctuations. A second screening of the vacuum fluctuations is found at the proton charge radius, which accurately results in the rest mass. Considering the initial screening, we compute the Hawking radiation value of the core Schwarzschild structure and find it to be equivalent to the rest mass energy diffusing in the internal structure of the proton. The resulting pressure gradient or pressure forces are calculated and found to be a very good fit to all the measured values of the color force and residual strong force typically associated to quark-antiquark and gluon flux tubes confinement. As a result, we are able to unify all confining forces with the gravitational force emerging from the curvature of spacetime induced by quantum electromagnetic vacuum fluctuations. Finally, we applied the quantum vacuum energy density screening mechanism to the observable universe and compute the correct critical energy density typically given for the total mass-energy of the universe.

Introduction

General relativity clearly demonstrates a relationship between mass-energy and the structure of spacetime that has real physical effects we call gravity where massive objects made of elementary particles producing their mass curve spacetime resulting in a gravitational force. However, application of the same principles at the particles level yields gravitational forces that are so infinitely small that they are found to be insignificant. Yet, at the proton nuclear scale, extremely large confining forces are found which would require extremely high energy levels (or masses) to be produced in the context of general relativity. In fact, those very high levels of energy were actually predicted by early quantum field theory (QFT) resulting in the so-called 'bare mass' of particles but renormalized by modern quantum electrodynamics (QED) and quantum chromodynamics

[†] International Space Federation laboratory
Email: research@spacefed.com

Are entirely novel energy technologies and self-running systems really genuine and why does it take so long to make them tangible and commercially available ? ...

Are entirely novel energy technologies and self-running systems really genuine ?

Some are really genuine and some are not. The author of this presentation assumes to the best of his knowledge and belief that the previously presented systems are real.

In case of systems which are not really genuine there are two cases:

- Fraud – i.e. the communicated or presented specifications of the system were never achieved and are intentionally wrong
- The researchers / developers / inventors were convinced that the created system is really working, e.g. because the measured electric output power is larger than the electric input power. Later it was revealed that this was a fallacy and the previous conclusion had to be withdrawn, e.g. because the power measurement was not correct

Often it requires intuition, an ability to discriminate, or a careful and time-consuming inspection in order to decide if a system works really as specified or assumed.

Why does it take so long to make entirely novel energy technologies and self-running systems tangible and commercially available ?

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Examples of reasons why it takes so long or longer than expected

- The number of people who are aware of / work in the area of / support / believe in these technologies is still relatively small - but constantly growing
- Lack of appropriate or continuous support and funding and no official teaching in schools, universities, and other academic institutions
- Specific lobbies and the global political power structure have suppressed the emergence of these technologies
- Disagreement between researchers / inventors and investors
- Sometimes inventors do not want to spread their invention (for various reasons) or have unrealistic financial expectations
- Inappropriate communication of the invention or project

Why does it take so long to make entirely novel energy technologies and self-running systems tangible and commercially available ?

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Another examples of reasons why it takes so long or longer than expected

- The time needed for
 - research and development
 - the development of a prototype which is suitable for serial production
 - establishing a serial productionis often underestimated
- Long-term performance and safety tests may reveal some issues which require some modifications of the system or even may reveal its non-suitability for commercial applications
- In several cases the customer, facility, or company where an entirely novel energy technology is installed does not communicate that publicly (for various reasons)
- In several cases the customer does not want to purchase but wants to lease a power plant. Then it has to be discussed if the manufacturer is willing and able to establish such an option

About the potential physics
behind entirely novel
energy technologies and
self-running systems ...

About the potential physics behind entirely novel energy technologies and self-running systems

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Maybe the following model considerations are helpful to gain a better understanding of this type of entirely novel energy technologies.

We assume that the so-called empty space or vacuum is by no means empty but comprises a huge amount of energy and potentialities. It should be noted that all manifestations of matter, such as the earth or the human body, consists more than 99,9 % of vacuum. This because the atoms, the building blocks of all material manifestations, are constituted more than 99,9 % of vacuum. The building blocks of the atoms are particles which are called electrons, protons and neutrons, but they occupy only less than 0,1 % of the atomic volume ...

The features and true nature of the so-called empty space, or vacuum are mainly unexplored by mainstream science. Nevertheless, it seems to be the very basis, source, root, substratum or medium on which our universe or world depends. This substratum or medium was / is also called ether. Let`s assume that the energy content of the space / vacuum / ether is incredible large and that the energy needs of mankind is tiny compared to that.

Let`s suppose that all particles and thus all atoms and manifestations of matter arise from the space / vacuum / ether, i.e. they are special oscillation, resonance, or vortex states of the space / vacuum / ether [1] ...

[1] See for example

- the Space Vortex Theory of Paramahansa Tewari, see [pages 27 and 67](#)
- statements of Noberto Keppe, see [page 68](#)
- papers by Paul A. LaViolette about subquantum kinetics such as <https://doi.org/10.1080/03081070802367457> which is also published via www.starburstfound.org/downloads/physics/nucleon.pdf
- Global Scaling, see <https://novam-research.com/global-scaling.php>
- paper “The Origin of Mass and the Nature of Gravity” by Nassim Hamein, Cyprien Gueronprez, and Olivier Alirol, published on 26 September 2023 via zenodo.org: <https://doi.org/10.5281/zenodo.10125315>

Then all material manifestations such as technical devices are intimately interwoven with the space / vacuum / ether. Also conventional energy technologies are devices which are intimately interwoven with the space / vacuum / ether but in total they do not extract usable energy from it. In total they convert the energy of a supplied fuel (matter, kinetic energy of moving matter, or radiation) into another form of energy.

However, under special conditions, which are realized in some unconventional devices, it is possible to convert or extract usable energy from the space / vacuum / ether. In this case the supply of any fuel is not needed anymore ...

About the potential physics behind entirely novel energy technologies and self-running systems

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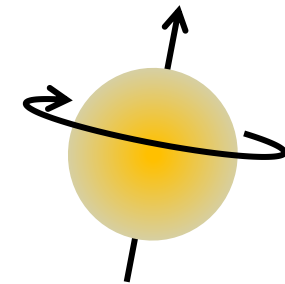
Many or perhaps all physical processes which usually imply in total no gain of energy can be designed or modified in such a way that they provide usable energy from the space / vacuum / ether. Examples of such physical processes are the mutual motion of magnets or magnetic fields, oscillating and rotating mechanical movements of masses within the earth's gravitational field, the splitting of water H_2O into hydrogen H_2 and oxygen O_2 and their recombination into water H_2O , and the splitting of hydrogen molecules H_2 into hydrogen atoms H and their recombination into molecular hydrogen H_2 . For these examples and other physical processes we assume that usable energy can be extracted from the space / vacuum / ether via magnetic, electromagnetic, electric, and / or gravitational fields but not from the fields. In established physics the gravitational, electric, electromagnetic, and magnetic fields are termed as so-called conservative force fields, i.e. a motion in a closed loop does not lead to a gain of energy. An unconventional device which extracts usable energy from the space / vacuum / ether can be considered as a system which implies a closed-loop motion in a non-conservative force field.

About the potential physics behind entirely novel energy technologies and self-running systems

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Probably the intrinsic angular momentum or spin of particles such as the electron plays an important role at the extraction of usable energy from the space / vacuum / ether. Possibly the space / vacuum / ether itself comprises an intrinsic angular momentum or spin so that the spin of particles such as the electron is driven by or associated with the spin of the space / vacuum / ether [2].

Also the so-called ECE Theory [3] implies something like that. It is called torsion of space-time and predicts the possibility of extracting usable energy from space-time ...



[2] See, for example, the following video from The Resonance Science Foundation / Nassim Hamein
https://www.youtube.com/watch?v=QJOBnoqk_0Q

and the following paper from Nassim Hamein and Elizabeth A. Rauscher
<https://www.scribd.com/document/38637585/Nassim-Hamein-The-origin-of-spin>

[3] <https://aias.institute> , see also **page 43**

About the potential physics behind entirely novel energy technologies and self-running systems

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The previous considerations are, for example, supported by Paramahansa Tewari and his Space Vortex Theory (see also [page 27](#)). The following statements are cited from <https://www.tewari.org>

“A century from now, it will be well known that: the vacuum of space which fills the universe is itself the real substratum of the universe; vacuum in a circulating state becomes matter; the electron is the fundamental particle of matter and is a vortex of vacuum with a vacuum-less void at the center and it is dynamically stable; the speed of light relative to vacuum is the maximum speed that nature has provided and is an inherent property of the vacuum; vacuum is a subtle fluid unknown in material media; vacuum is mass-less, continuous, non viscous, and incompressible and is responsible for all the properties of matter; and that vacuum has always existed and will exist forever.

Then scientists, engineers and philosophers will bend their heads in shame knowing that modern science ignored the vacuum in our chase to discover reality for more than a century.”

Paramahansa Tewari

Note: The author of this presentation does not agree with the statement that the speed of light relative to vacuum is the maximum speed that nature has provided

About the potential physics behind entirely novel energy technologies and self-running systems

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Another supporting statements and related considerations are the following, cited from the concepts or new physics of Dr. Noberto R. Keppe, see <https://keppemotor.com> and <https://novam-research.com/keppe.php>

In N. R. Keppe's terminology the space energy is called Essential Energy. It is an organizing energy which forms and keeps the universe on all levels and is constituted of two components, attraction and repulsion. According to N. R. Keppe, energy does not come from matter, the process is actually the opposite, meaning that matter comes from the Essential Energy which is infinite and exists everywhere in the entire universe. Matter is created by a resonance of space energy and atoms are considered as vortices. If electricity is generated by conventional technologies, then this corresponds only to one component of the Essential Energy. This is the cause of the low efficiency and heat losses (entropy) in conventional electric systems. From the perspective of the Essential Energy the common AC current does not represent a real alternating current. Both AC and DC correspond only to one direction or component of the Essential Energy. The "real" AC current is found in a pulsed DC current which comprises two components of the Essential Energy, namely action and complementation (instead of action and reaction).

The concepts of N. R. Keppe lead to the development of a novel, highly efficient, relatively cool running, and brushless electric motor. This so-called Keppe Motor is used in some commercially available fans and has received several awards.

About the potential physics behind entirely novel energy technologies and self-running systems

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So far we have considered the hypothesis that self-running systems are based on an extraction of usable energy from an assumed and everywhere present form of energy which is called space energy, vacuum energy, zero-point energy, or ether energy. The terms vacuum energy and zero point energy are also known and used in established physics. However, in this presentation these terms mean and imply much more than in established science, see for example the considerations on the previous pages.

It is also conceivable that self-running systems are based on a hypothetical internal process that converts matter into energy according to the Einstein`s mass-energy equivalence $E = m c^2$. However, the author of this presentation considers this scenario as less likely.

Entirely novel and environmentally friendly energy technologies

Subpages of novam-research.com with links to further information:

Companies with various technologies and concepts:

<https://novam-research.com/energy3.php>

Associations, institutes, foundations, individuals, specific devices, and projects:

<https://novam-research.com/energy2.php>

Papers, books, and concepts:

<https://novam-research.com/energy1.php>

Electromagnetism / Advanced electromagnetism;

<https://novam-research.com/em.php>

See also the home page of <https://novam-research.com>

Funding call for the advancement of entirely novel and environmentally friendly energy technologies and other topics, concepts, and results of non-mainstream science ...

Funding call for the advancement of entirely novel and environmentally friendly energy technologies and other topics, concepts, and results of non-mainstream science

1 / 2

The topics and results presented in this document and <https://novam-research.com> embody the beginning of a new era in science and technology. To make the entire potential of these little-known areas beneficial for all of humanity, more

- research, development, and manufacturing
- advancement
- education

is required. Until now there is no appropriate support in this field. Furthermore it is desirable

- to support also some existing technologies and initiatives and their advancement
- to make already available technologies tangible. For example, a self-running and zero emission 200 kW power plant from the company Rosch Innovations (see **pages 16 and 17**) should be ordered, paid, and installed at a location / customer where it can be visited and inspected by others and where the generated electricity can be used

Funding call for the advancement of entirely novel and environmentally friendly energy technologies and other topics, concepts, and results of non-mainstream science

2 / 2

For the aims, intentions, and tasks which are described on the previous page any amount of donation / funding is useful. However, to create a significant impact an amount of the order of several 100 Million EUR / CHF / USD seems to be reasonable for the start-up and the first few years.

For comparison:

- 400 Million USD were spent over 20 years for research and development to create and test unconventional electromagnetic generators. This project was directed by Leslie I. Szabo and lead to a novel energy technology called EBM, see [pages 28 and 29](#)
- The Perimeter Institute for Theoretical Physics was founded in 2000 by a donation of 100 Million CAD from Mike Lazaridis. In 2008 he added a further donation of 50 Million Canadian Dollar.

For further information see <https://perimeterinstitute.ca>

Also bestowals of non-monetary things such as properties and buildings are welcome and useful.

Acknowledgement
&
About the author
&
Closing Words ...

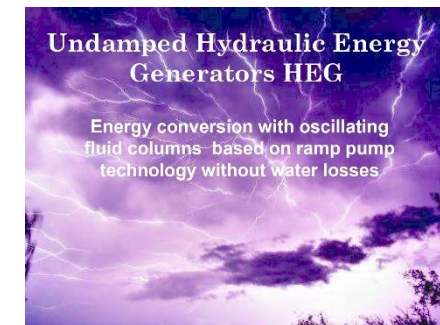
Acknowledgement 1 / 2

The author of this presentation thanks Adolf Schneider and Inge Schneider from the

- [Swiss Association for Space Energy](#) (SVR) (in German)
 - German-language journal [NET-Journal](#) (ISSN 1420-9292)
 - publisher [Jupiter-Verlag](#) (in German)
 - German-language website [Borderlands of Science](#)
- for
- their relentless work in the area of entirely novel and environmentally friendly energy technologies and related topics
 - the organization and implementation of many [conferences](#) , events, and meetings
 - the publishing of the German-language journal [NET-Journal](#) (ISSN 1420-9292) and several books
 - many talks, reports, presentations, and papers
 - several private communications and discussions



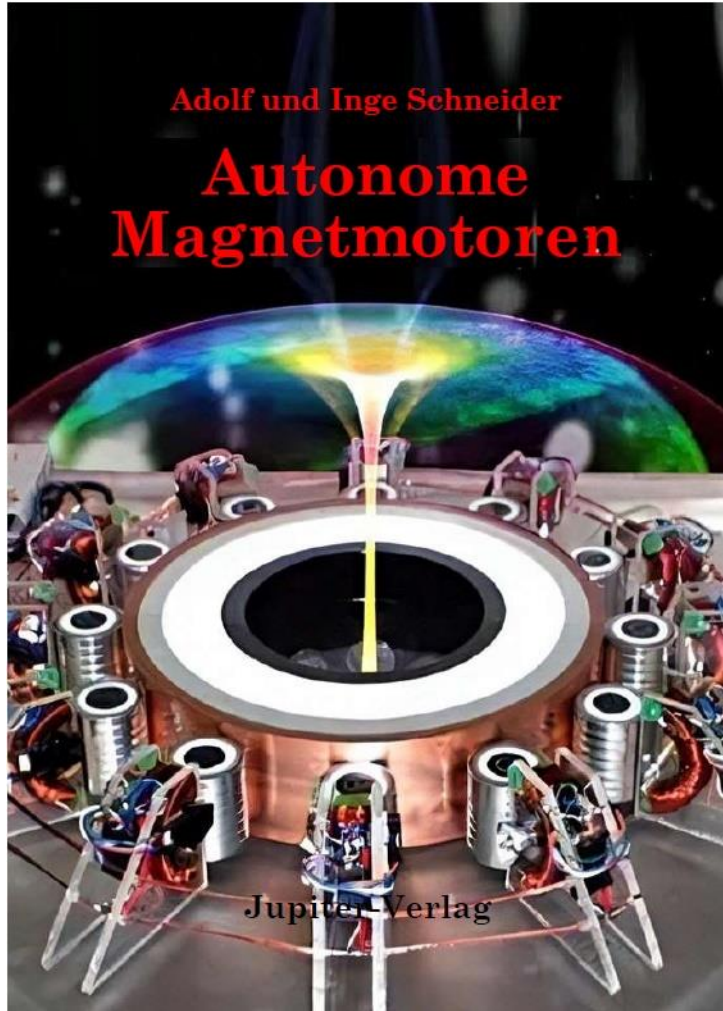
April 2016: Inge Schneider and Adolf Schneider in front of a self-running and zero emission 60 kW power plant / pilot plant at the company Rosch Innovations in Germany. Image from www.borderlands.de/net_pdf/NET0516S6-9.pdf



[Presentation](#) (40 pages, 3 MB pdf) from May 2021 by Adolf Schneider about ram pumps and generators based on self-running hydraulic oscillations

Acknowledgement 2 / 2

German-language book "Autonome Magnetmotoren" about self-running magnet motors



Authors: Adolf and Inge Schneider

First edition June 2024 , ISBN 978--3-906571-47-8

A5 type format (15 cm x 21 cm) , 470 pages

Publisher: Jupiter-Verlag , <https://www.jupiter-verlag.ch> and
https://www.Jupiter-verlag.ch/shop/detail_neu.php?artikel=160&fromMain=j

See also <https://gehtanders.de/produkt/autonome-magnetmotoren>
(in German)

Presented in this German-language book are more than 20 types of magnet motors and also the self-running magnet motor / generator systems from the company Quantum Energy (Inductance Energy) Corporation, the solid state power amplifiers from the company Holcomb Energy Systems, the self-running solid state electromagnetic generators from the company SEMP Research Institute Co. Ltd., and the self-running kinetic power plants from the company Rosch Innovations / Save The Planet AG which comprise specially modified electromagnetic generators. The four latter systems are also presented in this work.

About the author

Name: Frank Lichtenberg

Born **1962** in Bremen (Germany)

1983 – 1989: Study of physics at the University of Heidelberg (Germany)

1989 – 1992: Doctoral thesis in the division of Dr. J. Georg Bednorz at the IBM Zurich Research Laboratory (Switzerland). Doctorate / PhD at the University of Zurich in 1991. **Field of work:** Synthesis of oxides - especially in crystalline form via the melt - and study of their physical and structural properties



1992 – 1997: Research scientist in the nickel metal hydride technology department of Dr. Uwe Koehler at the research center of the battery company VARTA (Germany). Two months stay as guest scientist in Tokyo (Japan) at the TOSHIBA Battery Company within a collaboration between VARTA und TOSHIBA. **Field of work:** Hydrogen storage alloys and nickel metal hydride batteries

1997 – 2007: Research scientist in the department of Prof. Dr. Jochen Mannhart at the Institute of Physics of the University of Augsburg (Germany). **Field of work:** Setting up a new laboratory and synthesis of oxides - especially in crystalline form via the melt - and study of their physical and structural properties

2005: Participation in an 13 - day course in Global Scaling lectured by Hartmut Mueller in Germany

2007 – 2010: Freelance work, autonomous occupation with subjects in the area of physics and science. Creation of several presentations and papers and the website <https://novam-research.com> about entirely novel and environmentally friendly energy technologies and other new or little-known topics of science

Since 2011: Research scientist in the division of Prof. Dr. Nicola Spaldin at the Department of Materials of the ETH Zurich (Switzerland). See [personal ETH webpage](#) and <https://theory.mat.ethz.ch/lab.html> . **Field of work:** Setting up and maintenance of a new laboratory, synthesis of oxides - especially in crystalline form via the melt - and study of their physical and structural properties, and teaching

Since 2015 some consulting activities for the R & D company [Quantum Power Munich](#)

Closing words

An enjoyable evolution of mankind and earth does not come about solely by scientific and technological progress, but requires rather the development of spiritual qualities such as compassion, peace, dignity, freedom, tolerance, wisdom, ...



Appendix

The cryogenic
magnet motor of
Walter Thurner ...

The cryogenic magnet motor of the German engineer and inventor Walter Thurner is a nice example of a self-running system because its operation principle is published and comprehensible at the macroscopic scale. It can be understood by considering the acting forces which operate in its design.

Walter Thurner died on 12 February 2021 and meanwhile his former German-language website www.walter-thurner.de no longer exists and his former German-language pdf document www.walter-thurner.de/magnet.pdf is no longer available via his former website. However, his original pdf document is still available via https://novam-research.com/resources/Walter-Thurner_Kryo-Magnet-Motor.pdf

The author of this presentation thanks Walter Thurner for his remarkable work and his former pdf document whose essential parts are presented in English on the following pages.

A German-language obituary is published on pages 63 and 64 in the May / June 2021 issue of the German-language NET-Journal (www.borderlands.de/inet.jrnl.php3) (ISSN 1420-9292).

Another German-language article about Walter Thurner:

www.borderlands.de/net_pdf/NET0308S4-10 . This article is published on pages 4 - 10 in the March / April 2008 issue of the German-language NET-Journal. The cryogenic magnet motor is described on pages 8 and 9.

An example of an embodiment of Walter Thurner's idea is sketched on the following page in Fig. 1 and Fig. 2. His concept implies a linear or especially a circular array of magnets. One of such a magnet (1) is sketched in Fig. 1 and Fig. 2. Another magnet (3) is attached to a rod (4) which is connected with a shaft (5) so that the magnet (3) can move above (1). The sketched arrangement of the magnets (1) and (3) results in a motion of (3) towards the edge of (1). A repulsion arises between (3) and (1) when (3) approaches the edge of (1) and an attraction occurs when (3) goes away from (1). Thus at the edge of (1) the magnetic forces act against the direction of motion of (3). That corresponds to a conventional or conservative system without any self-running motion.

Sketch of an example of an embodiment of Walter Thurner's idea from https://novam-research.com/resources/Walter-Thurner_Kryo-Magnet-Motor.pdf (in German)

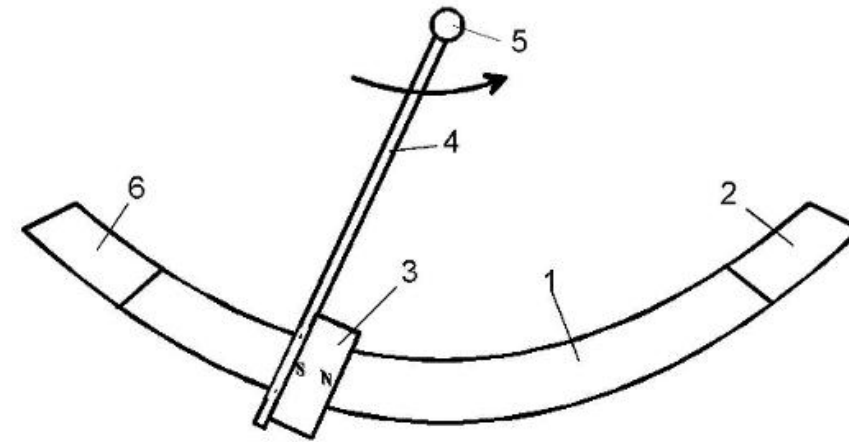


Fig. 1

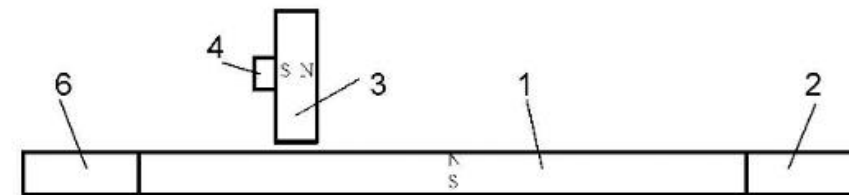


Fig. 2

Image from https://novam-research.com/resources/Walter-Thurner_Kryo-Magnet-Motor.pdf

Walter Thurner's concept enables a self-running motion of the movable magnet (3) because strong diamagnets (6,2) are placed at the edges of the magnet (1). The strong diamagnets (6,2) are realized by high- T_c superconductors such as $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ which is superconducting at the temperature of liquid nitrogen (77 K). Thus Walter Thurner's device requires a cooling by liquid nitrogen. The strong diamagnet, for example (2), generates an induced magnetic field whose direction is opposite to the external field of the magnets (1) and (3) and thus it attenuates / shields / modifies the magnetic fields / forces of and between (1) and (3) at the edge of (1). Therefore (3) can leave the edge of (1) in a non-decelerated way. If (3) approaches then the edge of another magnet of the type (1), then the strong diamagnet (6) attenuates or shields the repulsive force between (3) and (1) so that (3) crosses the edge of (1) in a non-decelerated manner. Thus a circular array of several units of the type (6)(1)(2) leads to a self-running and self-accelerating motion of the movable magnet (3) from one magnet (1) to another. An increase of the effect can be achieved when not only one but more movable magnets of the type (3) are used. For example, several magnets of the type (3) can be placed on or in a rotating disc. The self-running and self-accelerating motion implies a generation of usable energy. For example, the rotating shaft (5) can propel an electric generator.

Important safety note: If the described device is constructed properly, then it is self-running and self-accelerating. Without appropriate measures the speed of rotation can increase continuously until the device does fly apart ! That is of course very dangerous and indeed it did happen with a constructed prototype ! Fortunately nobody was injured during that event. Pictures from components of the prototype before its self-destruction are shown on the right. The visible holes in the lower picture allow a supply of liquid nitrogen. A renewed construction of this device requires the development of appropriate measures which limit and control the speed of rotation !



Images from https://novam-research.com/resources/Walter-Thurner_Kryo-Magnet-Motor.pdf



The cryogenic magnet motor of Walter Thurner represents a nice example of a self-running system which can generate usable energy. Its operation principle appears comprehensible. Once it is understood one has an idea how a self-running system can work concretely, at least at the macroscopic scale. Devising a self-running system by considering the existing macroscopic forces does not require to know the source of the generated energy. Nevertheless, it is of course an interesting question from where the generated energy comes from. The author of this presentation assumes that self-running devices imply at the subatomic level an extraction of usable energy from the everywhere present space energy, vacuum energy or ether energy via physical fields such as magnetic fields