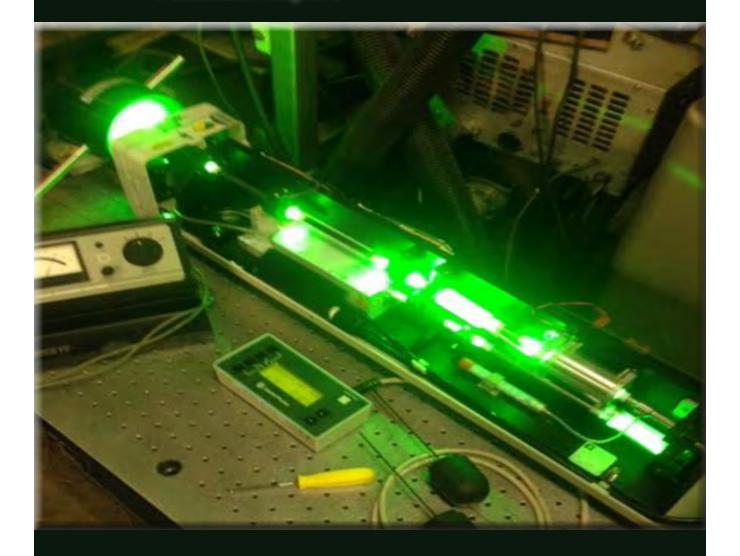


Integrity Research Institute Annual 2014

A Review of IRI's Feature Stories and

Financial Report



Energy, Propulsion, Bioenergetics

Integrity Research Institute Annual 2014

featuring

IRI Program Developments

&

IRI Annual Report for 2014

Thomas Valone, Editor



COVER: In 2014, we acquired a very specialized laser, 280 nm beam with a line of 1-3 MHz that will enable us to move to a new level of precision, single-atom manipulation, thanks to generous contributions.



RIGHT: IRI website homepage barcode – scan with smartphone \rightarrow

NOTE: Full color PDF of this report is on IRI website - About IRI - Related Links

IRI OFFICERS AND DIRECTORS - 2014

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PRESIDENT'S LETTER

It is important to explain to the public and our IRI Members that we take our mission and goals from an urgent need in our world today for honest science that will benefit humanity in the areas of energy, propulsion, and bioenergetics. To be honest is one thing but to have scientific integrity, where the science we research and present is wholesome and fulfilling for the survival of the human race in the face of many environmental threats, is a step above the rest. In downtown DC, the *Center for Science in the Public Interest* also has a similar project called "Integrity in Science" and has held conferences with this title which I have attended. Therefore, IRI can be considered to be a Working Group Member of CSPI in this endeavor.

This year we wanted to give our IRI Members something special in terms of an in-depth look at our institute and its progress toward achieving its mission and goals. IRI is a multifaceted organization trying to accomplish strategic goals that have not been reached by any other individual, company, nor organization in the world. I have a recurring dream that I live in a house that is too big and in need of lots of repair. As I identify with the IRI development, certainly a herculean amount of work remains to be done. However, we are optimistic that our humanitarian effort centered on the greatest good for the greatest number of people in mind will bear fruit, as it has already in so many ways. A lot of synchronistic events have helped pay the rent each month on our office and lab for years and even fund our conferences when we decide to host them, thanks to wonderful individual benefactors, clients, and customers but also due to an apparent higher, universal principle guiding us that is very timely.

Our past year has some great accomplishments for a small nonprofit seeking, for example, to be more sustained from invention royalties. Dr. Jacqueline Panting's first patent was issued, which we hope will be the first of many more to come. We also secured an excellent partnership with TeslaTech, LLC and Steve Elswick for hosting our recurring Conference on Future Energy and started invited confirmed speakers for the event.

However, it is important for us to share our firm commitment to making IRI a *perpetuating* organization, like the Keith Brewer Library and many other successful nonprofit charitable groups. We are working for the future and I have already seen evidence that *we are at least ten and closer to twenty years ahead of our time*. While wearable electric technology is slowly catching on, IRI already has anticipated this future years ago and is still ahead of it with a therapeutic, wearable technology. When MIT slowly has tried to develop big coil-based wireless power, IRI sponsored the <u>only</u> Tesla Energy Conference in the world back in 2003 specifically held to honor and celebrate Tesla's Wardenclyffe Tower Centennial and has since advocated and sponsored many experts in Nikola Tesla's highly efficient but complicated science of wireless power transmission. electrogravitics, zero point energy, spiral permanent magnet motors, and many other futuristic projects graphed on our Google-styled "IRI Universe" two-pager, are all part of our winning portfolio for sustaining the future for humankind. We remind everyone who shops at Amazon to use the <u>www.smile.amazon.com</u> website instead so you can designate IRI for *Amazon's donations* to our nonprofit based on your purchases!

Thomas Valone, PhD, PE President

INTEGRITY RESEARCH INSTITUTE HIGHLIGHTS 2014

Conferences and Appearances As one of the IRS requirements for our nonprofit status,



we continue to perform public service in many ways. One avenue of public education is to sponsor an exhibit booth at a highly trafficked event and answer questions all day long. IRI continued to be very busy in 2013 with radio and television inquiries interviews, email by students, teachers, professors, health professionals and the general public, as well as phone advisory service for those interested in energy, propulsion, and bioenergetics, our three major program areas fulfilling our mission statement.

In March, 2014, IRI exhibited at the Pathways **Natural Living Expo**

in Bethesda MD. Our energy books and bioenergy devices were showcased to thousands who attended. Many of the attendees recognized Dr. Valone and were eager to talk with him about all of the IRI projects and books (photo). The publications on display were conversation pieces for those who came especially to learn more about our research.



Dr. Valone also met with Amardeep Kaleka, CEO of Neverending Light Prod. company in Los Angeles CA in March 2014. Neverending Light produces and markets commercial videos including "Sirius" documentary on disclosure (see poster behind them and left) which features Valone during many interviews on camera. And yes, the DVD is on sale at Sirius-Disclosure.com. They met at his Topanga Canyon



studios and verbally agreed to a television video series consisting of 6 episodes featuring "future energy" themes with Dr. Valone. The idea was sold with examples of each episode

showcasing individual future energy inventors who have never had media exposure but have viable clean energy inventions. These inventors are featured in the books and reports that IRI publishes and who deserve a wider audience. Many were also mentioned in the Breakthrough Energy Movement presentation mentioned further on in this Annual Report.

In May, 2014, Dr. Valone was filmed by the History Channel (H2) for the show "Ancient Aliens" showcasing Nikola Tesla and his wireless transmission of power. The very educational segment including the Valone interview (photo screenshot) has been posted on the IRI website "News." under It is worth understand reviewing to the



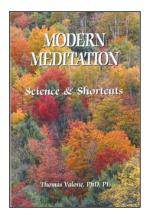
significance of Tesla's knowledge and capability for this technology that is still being pursued by scientists around the world one hundred years later. This is the third time the History channel has sent a film crew to the IRI Laboratory to obtain an expert opinion for one of their featured series.

Then on August 28, 2014, Dr Valone participated in the **Whole Person Healing** conference in Washington DC. He reviewed his slideshow on "Electrotherapy Devices" to a crowd of over 100 also included an exhibit booth for the public. He also met Dr. Carol McMakin, the author of *Frequency Specific Microcurrent for Pain Management* (Elsevier Churchill Livingston) who may become a speaker at the next IRI conference (COFE7).



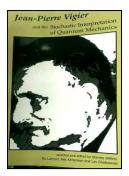
On October 4th, Dr. Valone was interviewed at the IRI Lab by a film crew on "The Integratron," which is the topic of a documentary including its founder, George Van Tassel. The Integratron is located just east of Los Angeles and was designed and built as an acoustic resonating chamber for healing and rejuvenation. It also features a large pancake coil under the floor so it apparently was intended to be a bioelectromagnetic device on a large scale by Van Tassel. Valone has previously visited the acoustically reflective building for research purposes (standing in left photo) and has continued to propose technological solutions for its electromagnetic completion as an "healing chamber" to create rejuvenating effects on the human body, as Van Tassel envisioned. Professor Jonathan Berman from the Visual and Performing

Arts Department, California State University, San Marcos, is releasing a full length film on the Integratron in 2016.



On October 5, Dr Valone presented at the *Natural Living Expo* in Falls Church Virginia the "*Modern Meditation, Science and Shortcuts*" to an audience of 100+. This bioenergy program outreach presentation has been a popular one over the years in the Washington DC area. Especially since *Scientific American* produced a cover story on "The Neuroscience of Meditation" (Nov. 2014) and Time magazine has had several articles about its benefits, especially for students, it is a wonderful experience to share such powerful information and the simple three-step technique with a receptive audience to make them more effective human beings.

Finally on November 16th, 2014, Dr. Valone presented at "The **Vigier Conference**" at Morgan State University in Baltimore, MD, on **spiral magnetic motors**. The conference was held in honor of Jean Pierre Vigier, a famous physicist who Valone met in Switzerland at another energy conference years ago. Vigier was in favor of many advanced energy concepts for producing power and authored hundreds of papers. There is much more that IRI has designed into the Spiral Magnetic Motor Project which is reviewed later in this Annual Report.



Bioenergetics Program

We are deeply involved with this program that includes research on physical equipment that has connections with bioenergy, development of various therapy machines, and providers of electrotherapy.

Single Electron Spin in a Magnetic Field Experiment Project

Veden

which

space,

equipment

This is an exciting project that we are doing together with Veden Academie, a charitable

Akademie,

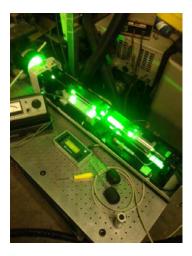
vacuum

an

and

has

adequate laboratory



voltage sources. The Ion Trap has been machined and set up in Kolberg, Germany. An

acquired a very specialized laser, 280 nm beam with a line of 1-3 MHz that will enable us to move to a new level. The experiment aims to study single quantum events with a single electron spin under different influences. It is suitable to discover new interactions with energy fields. In order to make experiments with a single electron spin, a Magnesium-Ion is stored in a linear Paul Trap. All this has been done in cooperation with

research institute like IRI, in Kränzlin, Germany. In 2014, we

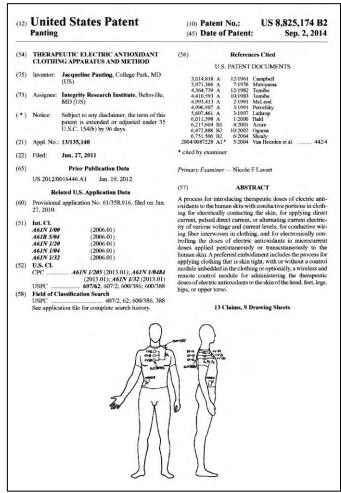
ultra high vacuum chamber was purchased in December as well and is being used to study the energy state of the electron spin via fluorescence. A UV-camera is taking pictures of the stored ions in the energetic higher spin state. When external influences changes the spin state of the electron the ion should disappear on the picture and then be seen again when the state is flipped back to the higher state. The purpose of the experiment is to test what circumstances can affect the atom at a distance.

Wearable Electric Antioxidant Clothes. This exciting new project is moving forward and we are thrilled that it was finally granted U.S. Patent #8,825,174 by the US Patent and Trademark Office on September 2, 2014 (photo).

The newly designed **EM PULSER** which is based on Dr. Gordon's EMPulse machine, has greater efficacy and battery improvements but we continue to make more improvements with the new Model 102 which will be available in the Spring of 2015. This model allows the use of a wall adapter, so that the batteries do not need to be used all of the time.

The preserving of the invaluable, Puharich Laboratory Notes by Dr. Andrija Puharich, MD will continue through 2016 and their transfer to the "Origin of Life Experiments" CD.

And last but not least our line of **PREMIER** electrotherapy devices



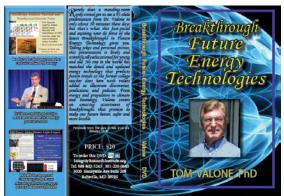
continues to be sold. We also are working and researching Mark Bean's, "Carcinotron" High Voltage System for Energetic Healing and documenting its effects on the human body, along with the PREMIER 2000.

• Energy Program

Projects in this area are many and include a focus on *clean, green energy innovations* which will free us from the stranglehold of fossil fuel burning. Even if anyone is skeptical about global warming, the buildup of carbon dioxide in the atmosphere is incontrovertible. In fact, on NPR recently, a PhD expert was interviewed and projected the possible level of CO2 reaching 1000 ppm by 2100. Since we are at 400 ppm now and were breathing 300 ppm only a few decades ago, this exponential increase is frightening for one very good

reason: "cognitive impairment." Schools were studied in the past few years which experience 1000 ppm buildup of CO2 in the classroom due to poor air circulation and the detrimental effects were called cognitive impairment which was reversible if less CO2 poisoned air was available elsewhere. However, if the world's atmosphere reaches such drastic levels of CO2 in just a few decades due to its exponential increase, there will be no alternative breathing space available. More information is available on the IRI homepage, regarding the earth's past 400,000 year history of CO2, sea level, and world average temperature. Therefore, IRI treats our Energy Program in the highest regard. Its work with zero bias diodes, spiral magnetic motors, and advocacy for new alternative energy is reflected in the conferences, books, DVDs, interviews, articles, student education efforts, and the monthly Future Energy eNews broadcast. We believe IRI is having a major impact in many sectors of our society as a result of such a multifaceted approach.

IRI Energy Publications



We are very happy to report that we have published the DVD: now new "Breakthrough Future Energy Technologies". This special DVD was professionally edited and duplicated and contains Dr. Valone's presentation at the Global Breakthrough Energy Movement Conference in Boulder, Colorado and was mass produced in 2014 for every IRI Member as a bonus gift for membership. This entertaining slideshow presents the latest

future energy findings.

IRI also is announcing the securing of the reproduction rights to sell the educational poster "**Patent Progress**" issued by Gary Kunz (photo) of the PTO. As an advocate for energy inventors, IRI sees this poster project as a fascinating summary of the entire patent process in a single image. It will be available for purchase in 2015 from the IP Today.

"Future Energy Annual 2013" was also published and mailed free to our membership. Includes our latest papers on Energy, including Zero Point Energy, Electrogravitics, Energy generation, latest

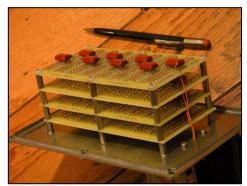


developments in Bioelectromagnetics, as well as the IRI Annual Report for 2013 and financials.

Zero Point Energy Project

The research continues on the possibility of tapping zero point energy through zero biased diodes. In our lab, we are currently researching this ability and many journal papers are being prepared for submission to several physics journals including one for the

Institute of Physics Journal which will propose the use of zero biased diodes arrays as thermal electric noise rectifiers and non-thermal energy harvesters. We are currently working with several <u>graduate</u> <u>students</u> who are designing ways to harvest energy with zero-biased diodes that access the quantum vacuum fluctuations as well as thermal energy fluctuations. The goal of this project is to produce a prototype of a solid state generator that can harvest ambient energy and produce electricity.



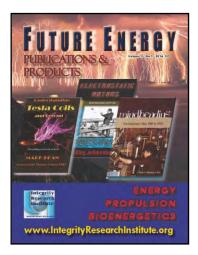
Spiral Magnetic Motor Project



The Spiral Magnetic Motor (SMM) has been the topic of a peer-reviewed journal article publication by Valone in 2010 (American Institute of Physics, SPESIF Proceedings online) and in 2014 (Proceedings of the Vigier Symposium, World Scientific Publishers). Once the energy harvesting design is completed for the prototype in the IRI Laboratory, the operation of the permanent magnet motor will be autonomous. This goal has been elusive for hundreds of years since energy harvesting was not available for the

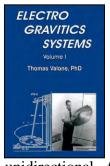
magnetic switching process that is essential for the motor to recover from a single cycle. Then, electric cars may be recharged on the road while driving, stand-alone electric generators will be produced, and perhaps the SMM will provide enough torque to be a prime mover for vehicles or industrial application.

Future Energy News Project

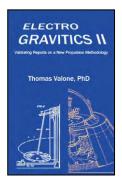


Research of new emerging technologies; public appearances, free newsletters, brochures, and reports that include the latest news on energy developments, discoveries and research given to the public. The *Future Energy Publications Catalog* was printed in 2014 for the first time in six years, carefully edited, reprinted and mailed it to all of the IRI Members, as well as all those who are continuously calling or mailing in reply postcards for the free catalog. New books and reports were added to the new edition of the catalog, such as the new *Mindbending* book by George Hathaway, as well as a listing of DVDs that are available to the public from our past conferences and lectures, such as Valone's "Breakthrough Future Energy Technologies."

• Propulsion Program

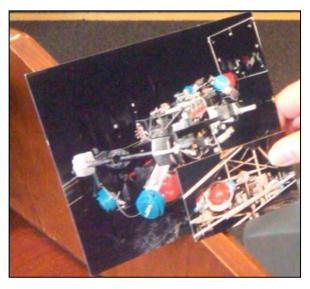


It is worth noting that the original *Electrogravitics* Systems Volume I, published in 1994 by IRI, is still selling today, along with the most popular Volume II. The expanded Electrogravitics Propulsion project envisions a cooperative laboratory testing of the multilayer solid state actuator which has been corroborated with three (3) sources as to its viability authenticity and for producing unidirectional force under RF excitation. While the Jefimenko



Electrokinetics equation (see Vol. II) remains the main source of a theoretical foundation for the effect, research by Valone has uncovered several experimental versions which include similar phenomenal force production. T. Townsend Brown, the original promoter and engineer who designed and patented electrokinetic and electrogravitic saucers, believed that such research could lead to a new form of propulsion for space travel. Dr. Paul LaViolette also has written a well-known article explaining how the principle is an auxiliary propulsion system on the B-2 bomber.

propulsion project Another that has advanced in 2014 is the Inertial **Propulsion** project with engineer Mike Gamble describing Boeing's use of a scissoring gyroscopic mechanism on its satellites to prevent them from decaying in their orbits. This confirmation of a controversial method of force production is a first for any major corporation and was reported on in the March 2012 Future Energy eNews. (IRI recommends our "Inertial Propulsion Patent Collection" and other related reports for those unacquainted with this simple but effective way to produce a unidirectional force.)



Mike also mentioned that it was so old by now that Boeing didn't mind if he mentioned it to the public. He even let the photograph of the company's test model be copied (above photo). It is now clear from Gamble's presentation that the physics and mechanical engineering textbooks need to be rewritten to include this amazing breakthrough, which has quietly ushered in an alternate method for force production, even in space, that can be solar-powered and electrically driven. This project was advanced in 2014 since our IRI advocacy secured Mike Gamble as a speaker for the next COFE7 in 2015 for further updates on inertial propulsion. IRI may be able to tutor a few graduate students to pursue this subject for research projects which will advance the dissemination of this breakthrough, unidirectional force-production discovery. In the 1980s, Thornson and Cook allowed Valone to reprint their work and now this science has finally been vindicated!

FUTURE ENERGY eNEWS

"Future Energy eNews" is sent via email, monthly, to over 8000 recipients worldwide, free of charge through Constant Contact email service. This electronic newsletter showcases all the latest emerging eco-friendly technologies that are being developed worldwide and published in Journals, Magazines and Newspapers. In 2014, we published the *Future Energy Quarterly Magazine*, and mailed it to all members for free. This magazine contains all the latest papers and articles relating to emerging energy technologies. We also continue to upgrade our IRI website including more information on emerging energy technologies, climate change, and video uploads and press releases. The conversion of many publications to a PDF format for instant downloading is also a project that is ongoing, with the help of the New Energy Foundation.

The *Future Energy eNews* is a very popular service of IRI with thousands of people benefitting from this unique information news service of only the most progressive and innovative developments in energy, propulsion and bioenergetics included each month. We receive new requests to be added to this FREE email service on almost a daily basis. In this Annual Report, we are initiating a new feature: "Best Future Energy Story," "Best Future Propulsion Story" and "Best Future Bioenergetics Story" of 2014.

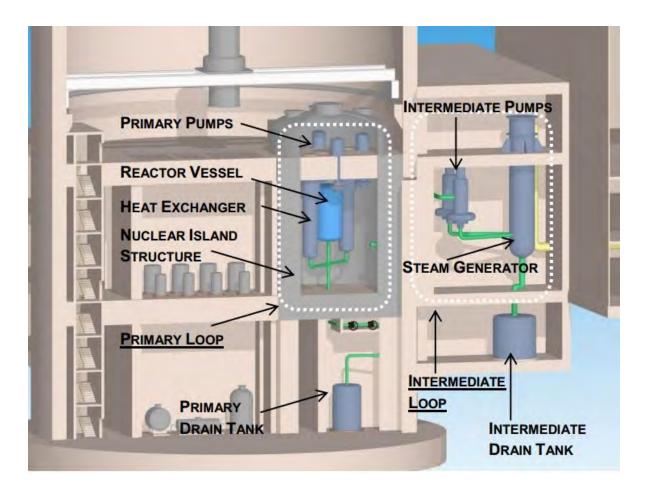
• Best Future Energy Story of 2014

<u>Ed. Note</u>: This story was chosen for accomplishing for the first time what the USDOE has been unable to do...dispose of nuclear waste and create carbon-free alternative energy on a large scale. The Molten Salt Reactor does both and is from MIT PhD nuclear engineers.

Molten Salt Reactor Eats Nuclear Waste

Jun 21, 2014 by <u>Nancy Owano</u> Phys.org <u>http://phys.org/news/2014-06-molten-salt-reactor-concept-transatomic.html#jCp</u>

Transatomic Power has been in the news this month in its ambition to build a better reactor. The Cambridge, Massachusetts-based **Transatomic Power** has proposed a safer reactor that "eats nuclear waste," as Bloomberg.com put it. The company sees potential in an innovative nuclear reactor that can turn nuclear waste into a safe, clean, and scalable source of electricity. A detailed report on their company goals in IEEE Spectrum described how cofounders Leslie Dewan, now Chief Science Officer, and Mark Massie, Chief Technology Officer, thought of the idea in 2010, while working on their PhDs in nuclear engineering at MIT; namely, they were thinking of a better reactor addressing the nuclear industry's big headaches, waste and safety.



Dewan and Massie met Russ Wilcox, now CEO, and the company Transatomic Power became a reality in 2011. Transatomic Power has focused on an innovative molten salt reactor, which, they said, can safely burn <u>nuclear waste</u> to deliver affordable clean energy. Molten salt reactors are not a new discovery. They were originally developed and tested at the Oak Ridge National Laboratory in the 1950s, 1960s, and 1970s. In a white paper prepared in March this year, the team discussed the story of molten salt reactors, also noting that advocates of thorium and increasing demand for small modular reactors drove renewed examination of molten salt in the 1990s. In 2002, the Generation IV International Forum (GIF) reviewed about100 of the latest reactor concepts and chose molten salt reactors as one of the six advanced reactor types most likely to shape the future of nuclear energy, "due to advances in sustainability, economics, safety, reliability and proliferation-resistance."

What's new here? They said Transatomic Power improved the molten salt concept, while retaining its safety benefits. "The main technical change we make is to change the moderator and fuel salt used in previous molten salt reactors to a zirconium hydride moderator, with a LiF-based fuel salt. During operation the fuel in the salt is primarily uranium. Together, these components generate a neutron spectrum that allows the reactor to run using fresh uranium fuel with enrichment levels as low as 1.8% U-235, or using the entire actinide component of spent nuclear fuel (SNF). Previous molten salt reactors such as

the ORNL Molten Salt Reactor Experiment (MSRE) relied on high-enriched uranium, with 33% U-235. Enrichments that high would raise proliferation concerns if used in commercial nuclear power plants."

Dewan said their reactor would be "walk-away safe," <u>according</u> to IEEE Spectrum. "If you don't have electric power, or if you don't have any operators on site, the reactor will just coast to a stop, and the salt will freeze solid in the course of a few hours," she said. Eric Roston, sustainability editor for Bloomberg.com, discussed more advantages. "Molten salt reactors can tap more energy in fuel and use it for decades, compared with four or five years in reactors today. That means they need <u>less</u> enriched uranium, reducing the risk of fuel being stolen to make bombs. Transatomic's reactor would cost half as much per gigawatt of electricity as conventional reactors, Dewan says."

Overall, according to the company, "Transatomic Power's advanced molten salt <u>reactor</u> ... solves four of the most pressing problems facing the nuclear industry: ecological stewardship, public safety, non-proliferation, and cost-efficiency."

• Best Future Propulsion Story of 2014

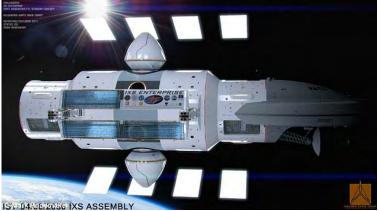
<u>Ed. Note</u>: This story is a winner because it was clicked on more than any other one we ran. It also gives everyone hope for human space travel since the discovery unveiled here is the size of the mass that can be transported by a warp drive, which is reasonable in size.

Warp Drive By NASA Making Interstellar Travel a Reality

Mark Rademaker MailOnline. June 2014

http://www.dailymail.co.uk/sciencetech /article-2655105/Engage-warp-drive-Nasa-reveals-latest-designs-

Engage warp drive! NASA reveals latest designs for a Star Trek-style spacecraft that could make interstellar travel a reality



- A NASA scientist in Houston worked with an artist to create the concept
- The interstellar spacecraft builds on previous designs that theoretically allow distant travel by bending space-time
- Called IXS Enterprise, it is similar to the Star Trek ship of the same name
- Dr Harold White said the spacecraft could reach Alpha Centauri in two weeks
- Warp travel is the focus of Christopher Nolan's 2014 movie "Interstellar"



Last month, Dark Knight director Christopher Nolan unveiled his next science-fiction blockbuster. Called Interstellar, it envisages a future where travel to other stars is not only a possibility but a necessity, and tasks actor Matthew McConaughey with leading the main mission.

But a NASA scientist claims such a mission isn't necessarily just something reserved for science fiction - and has revealed a Star Trek-style ship that could make interstellar travel a reality. Dr Harold White is famous for suggesting that faster than light (FTL) travel is possible.

THE 100-YEAR STARSHIP PROJECT

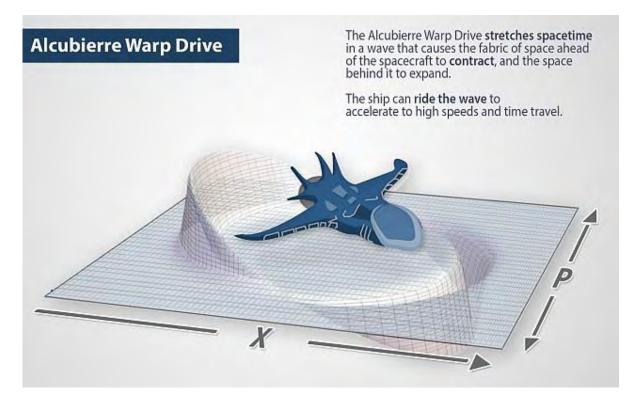
The 100-year Starship Project is a joint endeavour run by DARPA, NASA, Icarus Interstellar and the Foundation for Enterprise Development. Announced in January 2012, the project has an overall goal of achieving manned interstellar travel by 2112. To do so it is evaluating a number of different technologies, including 'warping' space time to travel great distances in short time frames at faster-than-light speeds. The project is also considering building 'generation ships' that move slowly but have a self-sustainable long-term population. To date NASA has contributed \$100,000 (£60,000) to the project and DARPA \$1 million (£600,000).

Using something known as an Alcubierre drive, named after a Mexican theoretical physicist of the same name, Dr White said it is possible to 'bend' space-time, and cover large distances almost instantly. This, in essence, would allow a spaceship to travel almost anywhere in a tiny fraction of the time it would take a conventional spacecraft.

The ship in Nolan's Interstellar movie, as well as those in Star Trek, employ a warp engine. And, in a series of new renders, Dr White reveals how a real spacecraft dubbed the IXS Enterprise could do the same thing. The images are based on the artist who created the original look for the famous USS Enterprise ship from Star Trek - Matthew Jeffries.

To make the latest renders Dr White employed the help of artist **Mark Rademaker** and graphic designer Mike Okuda. Although the speed of light is seen as an absolute, Dr White was inspired

by Miguel Alcubierre, who postulated a theory that allowed for faster than light travel but without contradicting Einstein.



Alcubierre's theory was published in 1994 and involved enormous amounts of energy being used to expand and contract space itself - thereby generating a 'warp bubble' in which a spacecraft would travel. Allowing space and time to act as the propellant by pulling the craft through the bubble would be like stepping on an escalator.

Despite Dr Alcubierre stating his theory was simply conjecture, Dr White thinks he and his team are edging towards making the realm of warp speed attainable. According to **Gizmodo**, their engine could get to Alpha Centauri in two weeks as measured by clocks on Earth. The process of going to warp is also one that is smooth, rather than using a massive amount of acceleration in a short amount of time.

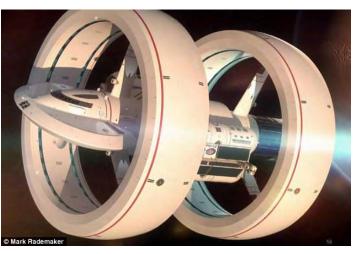


the way to achieving true interstellar travel.

When you turn the field on, everybody doesn't go slamming against the bulkhead, which would be a very short and sad trip,' Dr White said. However, Dr White admits his research is still small-scale and is light years away from any type of engine that could be constructed into a spaceship like the USS Enterprise.

To make the dream a reality Dr White has laid out a road map with important milestones that will need to be met along This begins with tests on Earth to prove the technology is possible. These initial experiments are very crude and very basic - but, if proven, there is, in theory, no limit to how it can be applied. The next step will be to use the warp technology on a spacecraft and complete a short trip to the moon, followed by a trip to Mars.

This would ultimately test the technologies that would be necessary to complete 'jumps' beyond the solar system and reach destinations in a matter of months, weeks or even days. The main limitation is energy - previously it was thought mass equivalent to a planet



would be necessary to provide the energy required for a warp jump.

But revised suggestions suggest mass similar in size to a car might be more realistic. The research has done enough to pique the interest of NASA and other agencies. The Defense Advanced Research Projects Agency (DARPA), for instance, is currently carrying out the 100-year-starship project with a view to sending humans outside the solar system at the turn of the next century.

• Best Future Bioenergetics Story of 2014

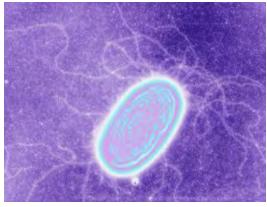
<u>Ed. Note:</u> This story was chosen because, as *Popular Science* said, it appears that alien life has been discovered and it's here on earth. Where there is no chance for light or air, nor sugars or any other nutrient to consume, these bacteria look for electrons and even congregate around battery terminals. Many think the question of alien life has been solved.

Electric Life Forms that Live On Pure Energy

Catherine Brahic, New Scientist September 2014 <u>http://www.newscientist.com/article/dn25894-meet-the-electric-life-forms-that-live-on-pure-energy.html</u>

Unlike any other life on Earth, these extraordinary bacteria use energy in its purest form they eat and breathe electrons - and they are everywhere. STICK an electrode in the ground, pump electrons down it, and they will come: living cells that eat electricity. We have known bacteria to survive on a variety of energy sources, but none as weird as this. Think of Frankenstein's monster, brought to life by galvanic energy, except these "electric bacteria" are very real and are popping up all over the place.

Unlike any other living thing on Earth, electric bacteria use energy in its purest form - naked electricity in the shape of electrons harvested from rocks and metals. We already



knew about two types, <u>Shewanella and Geobacter</u>. Now, biologists are showing that they can entice many more out of rocks and marine mud by tempting them with a bit of electrical juice. Experiments growing bacteria on battery electrodes demonstrate that these novel, mind-boggling forms of life are essentially eating and excreting electricity.

That should not come as a complete surprise, says <u>Kenneth Nealson</u> at the University of Southern California, Los Angeles. We know that life, when you boil it right down, is a flow of

electrons: "You eat sugars that have excess electrons, and you breathe in oxygen that willingly takes them." Our cells break down the sugars, and the electrons flow through them in a complex set of chemical reactions until they are passed on to *electron-hungry oxygen*.

In the process, cells make ATP, a molecule that acts as an energy storage unit for almost all living things. Moving electrons around is a key part of making ATP. "Life's very clever," says Nealson. "It figures out how to suck electrons out of everything we eat and keep them under control." In most living things, the body packages the electrons up into molecules that can safely carry them through the cells until they are dumped on to oxygen.

"That's the way we make all our energy and it's the same for every organism on this planet," says Nealson. "Electrons must flow in order for energy to be gained. This is why when someone suffocates another person they are dead within minutes. You have stopped the supply of oxygen, so the electrons can no longer flow."

The discovery of electric bacteria shows that some very basic forms of life can do away with sugary middlemen and handle the energy in its purest form - electrons, harvested from the surface of minerals. "It is truly foreign, you know," says Nealson. "In a sense, alien."

Nealson's team is one of a handful that is now growing these bacteria directly on electrodes, keeping them alive with electricity and nothing else - *neither sugars nor any other kind of nutrient*. The highly dangerous equivalent in humans, he says, would be for us to power up by shoving our fingers in a DC electrical socket.

To grow these bacteria, the team collects sediment from the seabed, brings it back to the lab, and inserts electrodes into it.

First they measure the natural voltage across the sediment, before applying a slightly different one. A slightly higher voltage offers an excess of electrons; a slightly lower voltage means the electrode will readily accept electrons from anything willing to pass them off. Bugs in the sediments can either "eat" electrons from the higher voltage, or "breathe" electrons on to the lower-voltage electrode, generating a current. That current is picked up by the researchers as a signal of the type of life they have captured.



Electric bacteria connect to form wires

At the Goldschmidt geoscience conference in Sacramento, California, last month, <u>Shiue-</u> <u>lin Li of Nealson's lab</u> presented results of experiments growing electricity breathers in sediment collected from Santa Catalina harbour in California. Yamini Jangir, also from the University of Southern California, presented separate experiments which grew electricity breathers collected from a well in Death Valley in the Mojave Desert in California.

Over at the University of Minnesota in St Paul, Daniel Bond and his colleagues have published experiments showing that they could grow a type of bacteria that harvested electrons from an iron electrode (<u>mBio, doi.org/tqg</u>). That research, says Jangir's supervisor <u>Moh El-Naggar</u>, may be the most convincing example we have so far of electricity eaters grown on a supply of electrons with no added food.

But Nealson says there is much more to come. His PhD student Annette Rowe has identified up to eight different kinds of bacteria that consume electricity. Those results are being submitted for publication.

Nealson is particularly excited that Rowe has found so many types of electric bacteria, all very different to one another, and none of them anything likeShewanella or Geobacter. "This is huge. What it means is that there's a whole part of the microbial world that we don't know about."

Discovering this hidden biosphere is precisely why Jangir and El-Naggar want to cultivate electric bacteria. "We're using electrodes to mimic their interactions," says El-Naggar. "Culturing the 'unculturables', if you will." The researchers plan to install a battery inside a gold mine in South Dakota to see what they can find living down there.

NASA is also interested in <u>things that live deep underground</u> because such organisms often survive on very little energy and they may suggest modes of life in other parts of the solar system.

Electric bacteria could have practical uses here on Earth, however, such as creating biomachines that do useful things like clean up sewage or contaminated groundwater while drawing their own power from their surroundings. Nealson calls them self-powered

useful devices, or SPUDs.

Practicality aside, another exciting prospect is to use electric bacteria to probe fundamental questions about life, such as what is the bare minimum of energy needed to maintain life. For that we need the next stage of experiments, says <u>Yuri Gorby</u>, a microbiologist at the Rensselaer Polytechnic Institute in Troy, New York: bacteria should be grown not on a single electrode but between two. These bacteria would effectively eat electrons from one electrode, use them as a source of energy, and discard them on to the other electrode.

Gorby believes bacterial cells that both eat and breathe electrons will soon be discovered. "An electric bacterium grown between two electrodes could maintain itself virtually forever," says Gorby. "If nothing is going to eat it or destroy it then, theoretically, we should be able to maintain that organism indefinitely."

It may also be possible to vary the voltage applied to the electrodes, putting the energetic squeeze on cells to the point at which they are just doing the absolute minimum to stay alive. In this state, the cells may not be able to reproduce or grow, but they would still be able to run repairs on cell machinery. "For them, the work that energy does would be maintaining life - maintaining viability," says Gorby. How much juice do you need to keep a living electric bacterium going? Answer that question, and you've answered one of the most fundamental existential questions there is.

Electric bacteria come in all shapes and sizes. A few years ago, biologists discovered that some produce hair-like filaments that act as wires, <u>ferrying electrons back and forth between the cells and their wider environment</u>. They dubbed them microbial nanowires. Lars Peter Nielsen and his colleagues at Aarhus University in Denmark have found that tens of thousands of electric bacteria can join together to form daisy chains that carry electrons over several centimetres - a huge distance for a bacterium only 3 or 4 micrometres long. It means that bacteria living in, say, seabed mud where no oxygen penetrates, can access oxygen dissolved in the seawater simply by holding hands with their friends.

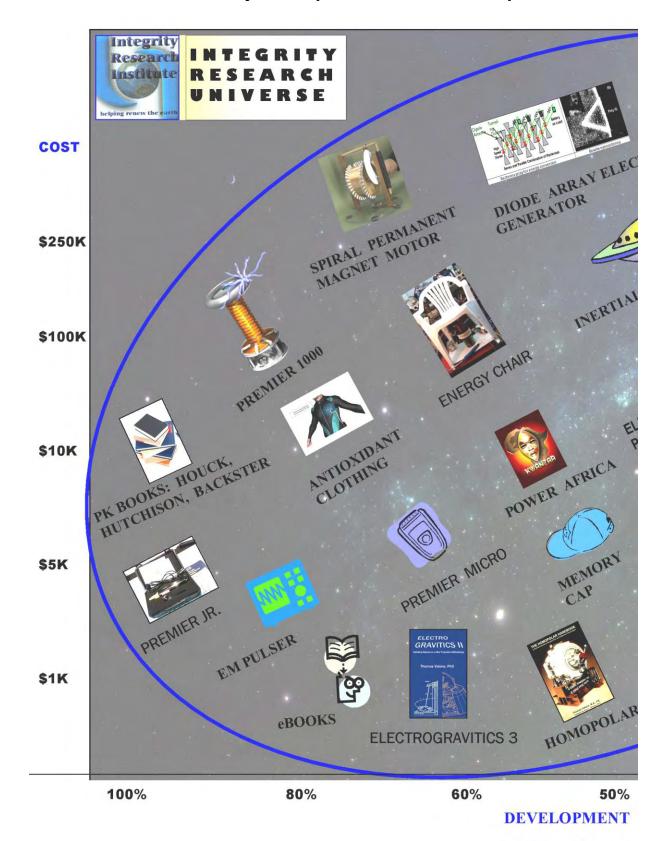
Such bacteria are showing up everywhere we look, says Nielsen. One way to find out if you're in the presence of these electron munchers is to put clumps of dirt in a shallow dish full of water, and gently swirl it. The dirt should fall apart. If it doesn't, it's likely that cables made of bacteria are holding it together. Nielsen can spot the glimmer of the cables when he pulls soil apart and holds it up to sunlight. It's more than just a bit of fun. Early work shows that such cables conduct electricity about as well as the wires that connect your toaster to the mains. That could open up interesting research avenues involving flexible, lab-grown biocables.

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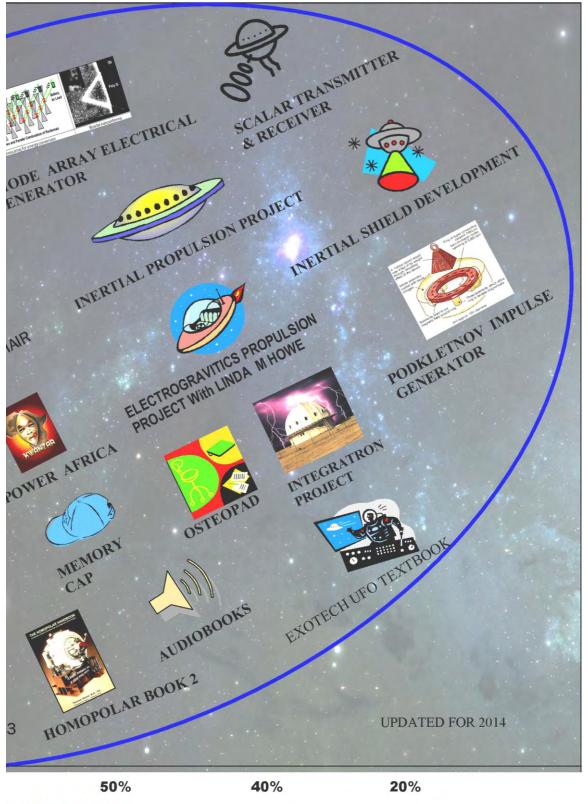
<u>Spark of life revisited thanks to electric bacteria</u> The discovery and culturing of bacteria that eat and excrete electrons means we may soon find out just how little electricity fundamental life requires

<u>Power plants: Grow your own electricity</u> Imagine charging your cellphone from a meadow or harvesting electricity from rice paddies. The technology works, but can we make plant power a staple crop?

Modified bacteria could get electricity from sewage Using genetically engineered bacteria to capture energy stored in waste water could make treatment cheap and energy-efficient



IRI Universe – Project Graph of Cost vs. % Completion



DEVELOPMENT

Integrity Research Institute's Universe ENERGY – PROPULSION – BIOENERGETICS

We invite you to join the conversation at IRI concerning the most exciting and promising projects available today. The centerfold graph shows an arrangement by % Development vs. \$ Cost.

100%-80% Developed:

 Premier Jr., EM Pulser, both on our BioEnergyDevice.org page, Premier 1000 – powerful HV Tesla electrotherapy, PK bioenergy biography books one of which by George Hathaway will be donated to IRI for publishing

80%-60% Developed:

 Spiral Magnetic Motor w/energy harvesting and permanent magnet power will run w/o electricity, IRI conversion to Kindle PDF ebooks, Dr. Panting's patented Electric Antioxidant Clothing to improve performance and stamina

60%-40% Developed:

 Premier Micro, Energy Chair, both smaller HV Tesla electrotherapy devices, Electrogravitics 3 and Homopolar 2 books, Power Africa Homes Light Project for solar rechargeable LED light system, Zero Bias Diode electricity generator, Memory Cap cranial electric memory stimulator, IRI audiobook conversion 40%-20% Developed:

 OsteoPad big demand product on BioEnergyDevice.org, Electrogravitics Propulsion with RF fields, Integratron electrotherapy collaboration project, Scalar Transceiver using scalar waves for superluminal communication (e.g. Mars)

20%-0% Developed:

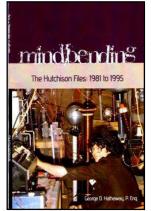
- Inertial Shield for longer range future transportation, Podkletnov impulse gravity generator for directed force beam, Exotech UFO textbook with con-
- tributors for technological analysis of certain historically documented cases

These IRI projects have proposals available upon request. IRI is a nonprofit 501(c)3 charitable organization which may also incorporate a for-profit subsidiary. All will be developed in time but they may have industrial or strategic partners who will also benefit from a cooperative agreement. Inquire within. Watch more in-depth video documentaries by physicist Dr. Tom Valone, explaining each project and the amazing history that many of them have. We have accepted a few unfinished projects by deceased scientists and IRI often prints reports celebrating the collected works of those in the energy, propulsion and bioenergetics arena. Help make the future of humanity more energy secure and consequently more prosperous. Join IRI as a volunteer, member, benefactor or partner.

Integrity Research Institute, 5020 Sunnyside Avenue, Suite 209, Beltsville MD 20705, 301-220-0440, 800-295-7674, Fax: 301-513-5728, iri@starpower.net, www.Integrity-Research.org, www.Futurenergy.org

Update for 2014 IRI Universe

In 2014, we advanced a few of the projects in the IRI Universe graphic toward the



100% graduation level. Most notably the Hutchison book called *Mindbending* by George Hathaway, which finally tells the true story of the anomalous metal manipulations under high voltage achieved by the reclusive John Hutchison, which now will be published for the first time in the U.S. exclusively by IRI. We also advanced the EM Pulser, Premier Junior, and even the OsteoPad to the finish lines in 2014. The Premier Micro and the Energy Chair, both of which depend on a high voltage Tesla coil design, as well as the low voltage, microcurrent Antioxidant Therapeutic Electric Clothing, are still in the works and may be advanced in the near future.

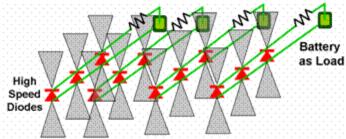
Some of the other exciting projects are explained in the Breakthrough Future

Energy Technologies DVD, including the Electrogravitics Propulsion project which includes documenting the latest developments in a third volume. Other exotic projects in that realm include the futuristic Inertial Shield, which is explained in Valone's 10-minute "Citizen's Hearing" of 2013 which was held at the National Press Club in Washington DC. This is a project that is most advantageously developed together with the Electrogravitics project and the Podkletnov Impulse Gravity Generator. Whether a



textbook of UFO propulsion can ever be scientifically developed for a university level course remains to be seen. As of now, it remains in a proposed state of development.

In 2014, the Zero Bias Diode Project advanced considerably with (1) a student in



Series and Parallel Combination of Rectennas

Portugal named Carlos Henriques receiving а Master's degree in physics experimental advice with from his professor after extensive consultation with Dr. Valone, (2) a student at Ohio State University named Phillip Mobley who is

building a diode rectenna array (see diagram) with the same combination of advice from Dr. Valone and his professor, for a graduate degree in electronic engineering, and (3) extensive zero point energy discussions with Prof. Garret Moddel from Colorado State University and a former COFE presenter.

Bioenergetics at Integrity Research Institute: Sustained Health and Healing Technology for Longevity

Wearable Antioxidant Clothes - In 2014, our team of onsite volunteers and distant collaborators accomplished a series of great activities in bioenergetics that we are proud to summarize for you. To begin with, as mentioned in the Highlights section, Dr. Panting was



awarded a U.S. patent on Antioxidant Electric Clothes which we are very excited about. This offers IRI the opportunity to negotiate licensing rights with sports clothing companies to begin with, in order to improve performance by quenching free radicals with microcurrent electrotherapy imbedded in the clothing. What is also very important about this invention of Dr. Panting's is that athletic exertion causes tissue damage that can be reversed with

antioxidant electrons (the active donor ingredient of every vitamin A, C, K, selenium, CoQ10, etc.). However, in addition, the *strategically located electrodes* at acupuncture points next to the skin also conduct more antioxidant electrons *if the skin becomes moist and salty with perspiration*. IRI regards this as a **synergistic relationship** which takes advantage of a natural phenomenon associated with workouts, marathons, and any athletic achievement. We are planning several solicitation events for negotiations for non-exclusive agreements and we are open to doing a Kickstarter campaign to perfect a number of prototypes that can be used for demonstration, as well as clinical studies. This is the last year of government employment for President Valone so the main push for licensing and prototyping this project will ramp up near the middle of 2016 with a Kickstarter campaign.

EM Pulser - Development was completed and sales began in 2014, which has already

generated testimonials from satisfied customers. As our IRI Members already know, this product was designed to replace the discontinued invention of Glen Gordon, MD, called EMPulse. IRI realized that a rechargeable battery was essential to making the device more user-friendly. We also put everything into one package that is still **pocket-size** but most importantly, we found a bigger and better coil



for the magnetic pulsing field producer which is NOT magnetically shielded. The magnetic pulses now produce a measurable field that anyone can detect with a cheap magnetic compass, while also maintaining the vital "**nanosecond rise time**," which I



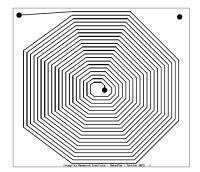
verified on the oscilloscope. Why is this important? Dr. Gordon has several articles which we supply for free with every unit called the "*Collected Works of Glen Gordon MD*". The main point that he makes in each one is (1) the stimulation of antioxidants with magnetic pulses that cause electrical currents to flow, and (2) the verified stimulation of the <u>heat shock</u> <u>protein 70</u> (HSP 70) that is an essential chaperone protein able to reverse tissue damage and

inflammation quickly. In fact, a whole book is in print by Springer Publishers on HSP70¹ since it is that important to the human body's repair. We are happy to report that we have more than one distributor for the EM Pulser and the sales continue along steadily.

OsteoPad - completion is also another major milestone of 2014. Glen told me that he had put a bunch of EMPulse circuit boards together into a pad which he used under his mattress pad. We both agreed that this was a great idea and also is beneficial for reversing osteoporosis and osteopenia by <u>rebuilding and strengthening bone</u>, besides helping arthritis by <u>rebuilding cartilage</u>.



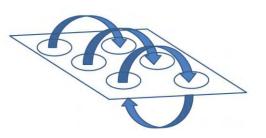
With the OsteoPad in mind ever since the 1980s when the three medical practitioners (Drs. Andy Bassett, Bob Becker, and Art Pilla) invented and patented the magnetic pulse



method for rejoining bone fractures in half the time. All of them knew that their FDA-approved devices would be great for the three ailments listed above besides broken bones but, as Dr. Pilla explained to Valone years later, they never got funding for inventing the consumer-style pad which will help one out of every two people in America who normally develops some degree of porous bone structure from the lack of *weight-bearing exercise*. Which is necessary for the piezoelectric calcium channels in the bones and cartilage to absorb calcium. Therefore, the doctor-dominated instrument

became less and less known as the 1990s and 2000s evolved, until today not a single

device is available at CVS, Target, Walmart, or Sears to put under the mattress pad and sleep on for osteoporosis and arthritis. IRI has finally filled the gap with a 14 x 20" OsteoPad which is also available in a Deluxe model with two pads for larger magnetic coverage of the body all night. Once again, IRI has received testimonials that are posted on the



<u>www.OsteoPad.org</u> website showing anecdotal evidence from satisfied clients that the product works as planned. The above images show the finished OsteoPad with its Control

¹ Malyshev, Igor. *Immunity, Tumors and Aging: The Role of HSP70*, Springer Briefs in biochemistry and Molecular Biology, Springer Publishers, 2013

Box, AC adapter box, and stylish flannel zipper case covering the vinyl sleeved, six-coil



OsteoPad; its pancake coil artwork layout; as well as the fascinating Triple-ToroidTM effect from the strategic arrangement of the coils to create three separate circulating donut-shaped magnetic fields which bathe the body in the specific waveshaped pulsed magnetic fields that are optimum for stimulating calcium transfer across cell membranes and to stimulate the HSP70 chaperone protein which counters inflammation and assists general

protein synthesis (Malyshev, p. 3).

Premier Junior - Sales of the IRI-invented, high quality Premier Jr. has continued steadily over the past several years. We are happy to report that we have more than one

health professional or therapist using the Premier Jr. in their clinics. One of the latest testimonials from a therapist is her report of accelerating the healing of a patient with knee surgery with only a few 10-minute treatments 2 or 3 times a week, which was confirmed by his doctor. The high voltage 20,000 volt handheld Tesla coil device is known to produce a higher transmembrane potential (TMP) with each application as well as quench free radicals at the site where it is applied. It also seems to mitigate pain and rebuild tissues in a wide range of ailments. We





have a page-full of short testimonials from people who have had lifechanging benefits from the daily use of the Premier Jr., which by the way, can light a compact fluorescent light bulb in one hand when someone touches the other hand with the electrified noble gas tube. It is a great demonstration that Dr. Valone has used on stage in a darkened auditorium. More information and theory about all three of these remarkable bioenergy devices (www.BioEnergyDevice.org) is also contained in the book,

Bioelectromagnetic Healing: A Rationale for Its Use on <u>www.smile.amazon.com</u> (which benefits IRI by your choice when you buy from Amazon).

We are happy to share some of the **many testimonials** we have received showing how effective, novel and improved the Premier Junior actually is, as compared with any device similar to it on the market today:

" I am starting to notice it working for me because I hurt my elbow joint about 4 months ago and **now I can put my own shirt, pants, etc. on with both hands instead of one**. I very much enjoy the product. Now, I'll use the highest power as I am use to it. Even though I always stay just over the minimum to get the gases flowing." - Larry.

"Your device seems to be healing my damaged knee. I have been using for 2 weeks am & pm. less pain = can stand and walk better also in a peculiar way have more energy and better mood. Been using all nutrition protocols plus pulsed light from "light force" co. all helped, but your Premier.Jr. has already made a huge advance. I am very grateful. You are doing good work. thank you. I am going to get the book on meditation, thank you over and over. - James

"Boy oh boy! The improvements made to both Premier Jr and tubes is awesome. More power than ever. Thanks so much" - Don

"I've been using the PJ for a couple days now. It seems to be helping a condition that I have had reoccurring that is similar to gout (knees and ankles). I've used it in the morning and evening as prescribed. I've used it along my adrenals and lymph nodes, as well as the back of the neck, with **very invigorating results**. Thank you for your time. I'm very happy with the purchase." - Richard

My name is Susan R and I ordered a Premier device at the X Conference. I was so excited to get my device. You allowed me to try it for 2 days in a row at the Conference and the results were astounding. I usually stay through Sunday night because taking in so much information in the past has been exhausting. About an hour after I tried the device for the 2nd time on the last day of the conference I had so much energy I packed up and drove 7 hours to get home. After I got home I still had energy to burn! I cannot wait to have more of that on a regular basis! Thanks! - Susan

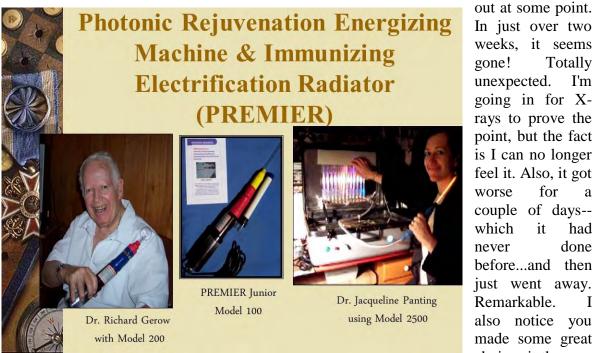
"I have been suffering from nerve damage in my back for several years now. I have had several operations, physical therapy and tons of pain killers. I heard you on Coast to Coast and decided to order the Premier Junior! WOW, I experience relief immediately, so much so, that I brought it to my Neurosurgeon's office, and ask that they include it in my treatments. **My doctor was so impressed that he bought one as well!** When I first got the Premier, I was using a wheelchair, after 4 months, I was walking with a walker and now I am walking with a cane! I use it every day morning and night and will never be without it! THANKS so much!" - Elliott.

" I am a chiropractor and have used many machines in the past. The Premier Junior is amazing! I have no health challenges, but enjoy the extra energy I receive from it. I use it morning and night for 5 mins each. The other day, I was late and did not have a treatment in the morning, so I decided to have two in the evening. I did my first treatment and then 15 mins later I did another. To my amazement, after I finished the second treatment, I started to hear the most beautiful, rhythmic sounds coming from my spine. I felt total joy and bliss... Since that episode I have learned that the sounds I heard were that of my chakras. I cannot explain why it happened, but it was definitely related to my using the Premier 2 times that evening and I am convinced that this machine can create altered states of consciousness besides all the **wonderful physical effects**. Thanks so much! - Dr. G.

Have been using it for about a week and a half on "stuck" locations in my body. such as sacrum and lower back. Also at locations of old surgeries in groin. Usually I address

these areas with both Rolfing deep bodywork and with energy work...weekly sessions of each type. I have added the Premier along with those sessions (but at a different time and place) and the effect is impressive. Changes in my posture and flexibility along with some increased energy. No problem sleeping. You have a good thing going!! - Richard

Our experience with our PJ 300 has been an adventure! My wife, Zan, and I each use it at least once a day. We're both in good health, but there's always room for improvement. We've both noticed increased detoxifying effects, which caught us by surprise. In addition, I've had a small, "stable" infection in my gums since a surgery over a year ago. It was antibiotic proof, it seems, and the dentist was talking about going back in to clean it



In just over two weeks, it seems Totally unexpected. I'm going in for Xrays to prove the point, but the fact is I can no longer feel it. Also, it got for а couple of days-it had done before...and then just went away. Remarkable. Ι also notice you made some great choices it the way

you decided to build the physical instrument. I can tell you put a lot of thought into it, including the case. Very well built, indeed. Bravo. - Robert

Integratron Research Project - A building designed by George Van Tassel with a large 100-turn coil underneath the center of the floor actually exists in Landers, CA east of Los Angeles (visit www.integratron.com). Ever since the 1970s when Valone received news letters from George, the progress of his building of what he called a "rejuvenation chamber" was the main news. However, George died prematurely before finishing it and years went by without any further progress. Now that two nurses own the building and regular meetings and events are held there, Dr. Valone visited the site (see photo) and took measurements with the intention of experimentally retrofitting a magnetic pulse circuit to the large coil (see



photos) in the floor, so the upper chamber will function as a healing chamber. We have an extra **Theramag Deluxe magnetoelectropulse instrument** that can be used for such a purpose and we look forward to the opportunity to go forward with the installation at the earliest convenience.



Besides the ELF frequency mix which would be available from the Integratron electrostatic Schumann resonant antenna system of dirods, Callahan recommends a combination of diamagnetic and paramagnetic materials in the walls of the enclosure to focus or concentrate the electromagnetic waves into the center of the chamber dome, making it ideally similar to the Great Pyramid for example.

As to the Integratron being a healing and rejuvenation chamber, Valone believes that George had a vision similar to my friend and colleague, University of Gainesville Prof. Philip Callahan who patented an enclosure for "producing highly amplified radio signals for feedback into the human body" (US #5,449,376) after studying the spectrum of similar structures around the world, including a series of "round towers" that resonated with the 8 Hz Schumann earth frequency.





This would be possible to add between the support beams of the dome and would be a nonconductor that also will act as a thermal barrier and a reflector of the electromagnetic waves generated by the floor and column coil antenna. IRI is dedicated to contributing to the completion of the rejuvenation chamber as per George's original design (see him next to model in photo) on some committee perhaps and may be able to review the recently discovered "blueprints" that one of the owners states were delivered by a German visitor.

Spiral Magnetic Motor – IRI Investment in a Clean Energy Future

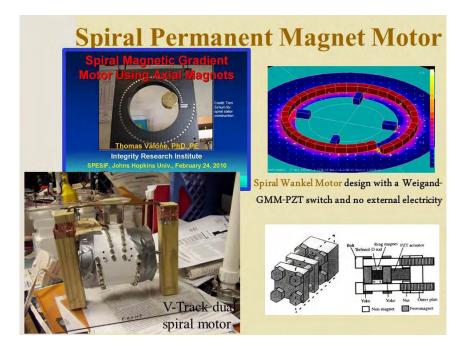
Most people may not realize that spinning electrons are the cause of magnetism. Some physicists remind us on science documentaries that electrons in the mountains have been spinning for millions of years. Perhaps this is the elusive perpetual motion of fantasies. Yet, the key to unlocking zero point energy and the negative energy of the quantum vacuum could just be the "**Magnetic Gradient**." While we use the voltage gradients, thermal gradients, and even gravity gradients all of the time to perform useful work, our world has not mastered the magnetic gradient (a change in magnetic field intensity over a distance of space). The Spiral Magnetic Motor (SMM) is just the kind of magnetic gradient motor which is ripe for scientific research today because the practice of energy harvesting is gaining a wide range of possible options. Capitalizing on an ambient source of energy, such as a passing magnet causing a voltage spike with Wiegand wires, or electric field control of magnetoelectricity, can lead to a viable method of magnetic switching for the SMM rotor so that the cycle can be repeated. This is very exciting for the serious inventor since 90% of the cycle is already powered by permanent magnets. IRI has built many SMM models and published the results in peer-reviewed journals.²

With a magnetic gradient, the magnetic field gets stronger at one end of the track, whether it is linear or circular or cylindrical V-track. The goals for this invention fall into two basic categories but others may be discovered at a later time:

• The first category is the production of electrical power, replacing fossil-fuel based generation, for a **Permanent Magnet-Powered Microturbine**.

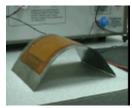
• The second category is the production of torque for automobile engines and basic transportation with a **Permanent Magnet-Powered Vehicle**.

Both applications will free the countries of the world from dependence on oil and natural gas, thus raising the standard of living for everyone, especially in the third world if and when IRI is successful with a working prototype which can easily be mass produced.



² Valone, Thomas. "Permanent magnet spiral motor for magnetic gradient energy utilization: axial magnetic field", Proc. of SPESIF, 2010, Johns Hopkins University, sponsored by the American Institute of Physics, Valone, Thomas. "Permanent magnet spiral motor utilizing the magnetic gradient, Proc. of Vigier Symp., 2014, Morgan State University, World Scientific Press

It is the contention of IRI that the revolutionary breakthrough of the SMM can be realized by taking advantage of magnetic domain switching by utilizing a substitute for electrical energy input, the **Barkhausen effect**, or even ultra-miniature inductors, offers a microscopic source of magnetic anisotropy energy that normally is overlooked in magnetic motor design. The **Wiegand wire will create the voltage pulse as the rotor magnet passes** by in microseconds, triggered by the sudden passage of the rotor's magnets, just as with breakerless distributors and magnetic card hotel door openers. The voltage pulse can be used to cause a Terfenol D GMM-PZT actuator to shoot out a magnetic pulse in place of one of the last magnets in the spiral, thereby freeing the rotor to continue on its path and



adding the previous cycle's kinetic energy to the next one. Even a more benign design with a piezoelectric actuator seen in photo is another voltage pulse activated prime mover which is feasible for the V-track tilting of the stator horseshoe magnet requiring only 1-2 newtons of force, which is equal to the one pound orange the actuator was lifting at an exhibit booth which Valone witnessed. Negotiations

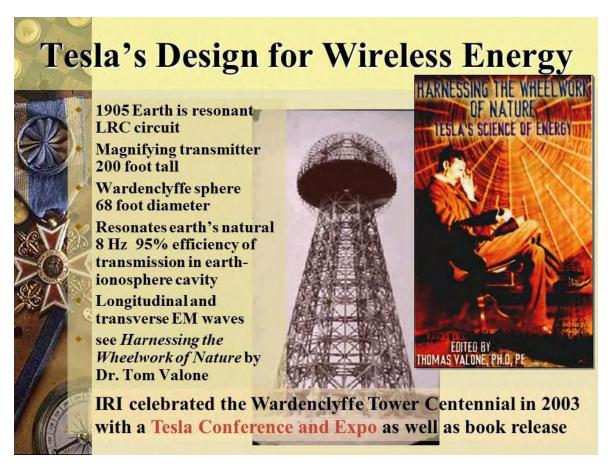
with the manufacturer are ongoing. We have slides of Inhomogeneous Magnetic Fields for example, which serve as a teaching tool in order to bring the nonspecialist up to speed regarding the availability of the magnetic gradient to perform useful work. This is an exciting breakthrough in new energy production which IRI is proud to engage in since new discoveries that aid in this pursuit are being published regularly.³



³ Heron, J.T. et al., Electric field control of magnetism using BiFeO3-based heterostructures, App. Phys. Rev., 1, 021303 (2014)

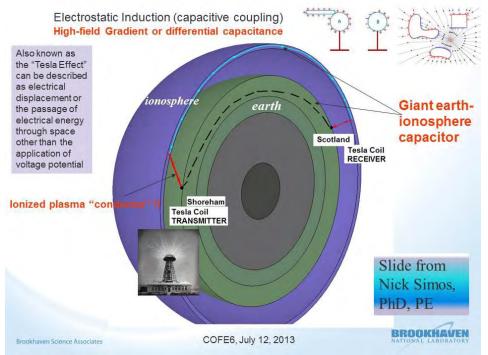
Wireless Transmission of Electrical Power – IRI Advocates Circumventing the Power Grid

Wireless Transmission of Power – Not only has IRI published a factual report on "Tesla's Wireless Transmission of Energy" (available online and Amazon) but we are happy to report that the arrangements for the 2015 Conference on Future Energy will include Nick Simos, PhD, PE once again from Brookhaven National Labs. Nick has advanced his electromagnetic theory of Tesla's wireless transmission of power to account for the possible long-range transmission of useable electricity (see below). He is planning on a peer-reviewed journal article which will be presented at COFE7 as well. IRI has been an advocate for Tesla's wireless transmission ever since the **2003 Centennial of the Wardenclyffe Tower** which we celebrated in the DC area with a Tesla Conference and the publication of *Harnessing the Wheelwork of Nature: Tesla's Science of Energy* through Adventures Unlimited Press in 2003 featuring articles by Tesla experts.



As a result, the book has received many positive customer reviews on Amazon and reached bookstores all over the world. Our *Future Energy eNews* also reported recently on a pair of Russian scientists who are using crowdfunding to rebuild the Wardenclyffe Tower for a wireless transmission experiment. There is a growing interest in understanding the very advanced concept of "earth-ionosphere resonance" which only a few physicists

and licensed professional engineers have been able to master. IRI is privileged to have collaborated with these experts in formulating its advocacy program for wireless energy.



Dr. Nick Simos from Brookhaven National Labs presented his amazing classical physics analysis of Nikola Tesla's wireless transmission of electrical power at COFE6 in 2013. He will return to COFE7 with an updated paper and slide presentation on the theory of earth cavity transmission of wireless power for publication as well. Nick admits that he gives wireless energy transmission based on Tesla's design a high feasibility rating. His slideshow is also posted online at the IRI website under "News" and July 2013 FE eNews.



IRI Prediction of Future Earth Temperature Increase Based on CO2 Levels in 2006 Acknowledged by Climate Experts in 2009



Here is a snapshot from the short "Climate Changes" video on the IRI website of Dr. Valone explaining the NASA climatologist Jim Hansen's graph which combines a half million year history of the earth's average temperature, sea level and carbon dioxide (CO2) levels (see IRI homepage for both Hansen's "Climate Beast" graph

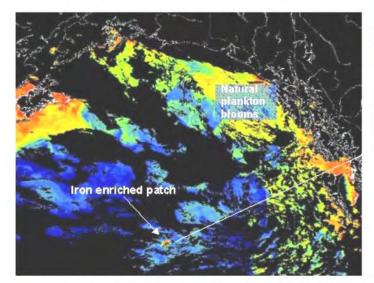
and Valone's annotated version). The surprise to Dr. Hansen and to Valone is the unanticipated close correlation between the three variables which follow each other closely through the thousands of years before the present. Dr. Jim Hansen, who Valone had met, was persecuted through the Bush years for predicting global warming trends but now is recognized as a whistle blower. The most important trend revealed in comparing the amount of CO2 increase (up to 400 ppm now) with the **amount of temperature increase anticipated to match it is that about 4 degrees Celsius or 7 degrees Fahrenheit are predicted from the analysis, which could easily happen before the century is out.** *Dr. Valone announced this finding at COFE2 in 2006 and gave the entire audience color copies of the annotated graphic above.* Three years later in 2009 the climate experts on both sides of the Atlantic started publishing the same findings as seen in the slide below.



IRI Advocacy for Iron Seeding of Plankton to Sequester Millions of Tons of CO2 Vindicated Six Years Later with Field Study

The previously discussed anticipation or prediction of world events has become more and more commonplace in the IRI activities. In 2006, COFE2 presented Russ George, President of Planktos, who described his ocean studies with iron seeding to cause algae blooms of plankton that are calculated to absorb millions of tons of CO2. All of the "experts" and environmental groups, including Greenpeace, fought against him and criticized the method. Then six years later in 2012 a field study published in Nature magazine and carried by New Scientist found that the majority of plankton did indeed fall to the bottom of the ocean with the captured carbon, thus vindicating the largest scale carbon sequestration concept ever conceived. IRI is proud to have been an early advocate of this amazingly effective process for bringing down atmospheric levels of **CO2** once a carbon-free power source has been mass marketed to replace the fossil fuel burners worldwide. Though it is a herculean task, it has to be done in order to save mankind from approaching 1000 ppm of CO2 by the end of this century, which is known to cause "cognitive impairment" from closed classroom studies of CO2 levels and thinking ability. Climate experts have already been predicting the exponential growth of atmospheric CO2 levels at present rates of increases in coal, gas, natural gas, wood, and oil burning that are predicted to reach 1000 ppm of CO2 by 2100 unless drastic measures are introduced, including attractive low cost carbonless engines and carbon sequestration.

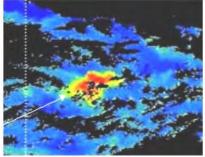
PLANKT®S * IRI ADVOCACY PROJECT *



Iron stimulated blooms are very similar to natural blooms

SERIES (2002) iron fertilization patch near Alaska compared with a natural bloom

2012 success published in Nature magazine



Close-up of the SERIES bloom (~ 2000 km²) 20 days after iron application

A Planktos bloom will be 5-10 times this size ... still a small fraction of the surrounding natural blooms



Personal Perspective on the Energy and Propulsion Technology Being Developed by IRI

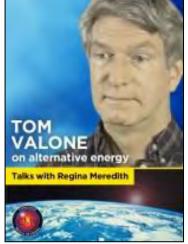
Thomas Valone, PhD, PE

I grew up in the 1950s, and therefore view our American society as an outgrowth of the World War II mentality and political agenda that was promulgated by the efforts of Dr. Edward Teller to discredit J. Robert Oppenheimer who led the Manhattan Project so that nuclear proliferation could accelerate. As Teller also aggressively pursued the hydrogen bomb when Scientific American admitted decades later that there was no need for it after spending billions, we find ourselves in the 21st century with the over growth of all of this nuclear arsenal for literally no possible benefit and most importantly, no solution to the more pressing matter of environmental concerns, global warming and energy demands.

While many experts agree that black projects or covert ops that have used unacknowledged billions of defense funding, called "The Billion Dollar Secret" by journalist Nick Cook who sponsored a two hour television special on the subject, already have advanced, carbon-free fuel sources and propulsion innovations, the declassification conundrum prevents ANY of this highly desirable technology from benefiting the civilian population. In fact a USDOE engineer told me of his personal experience with Boeing who had developed a special type of aerodynamic improvement for the US Air Force (possibly a laminar flow method) that was classified. They then proceeded to ask their customer, the USAF, for permission to declassify it for commercial airliners and were refused. According to Bennett Hart, the Deputy Director of the National Reconnaissance Office (NRO), who spoke to me personally at the National Space Society conference in DC in 2005, it is easier for him to hire a private contractor to reinvent a classified technology than to attempt to declassify it, especially if it is way up there in classification – what he called "out of sight." The former CEO of Lockheed, Ben Rich, called it "locked up in black project programs."

Therefore, it is generally agreed by all of the experts that we civilian scientists need to re-discover the major advances that have "rewritten the laws of physics" according to Dr. Paul LaViolette in his latest book, *Secrets of Antigravity Propulsion* (Inner Traditions, 2008) from interviews with at least two black project engineers. My vision is that Integrity Research Institute (IRI) can and will fulfill its mission to advance the cause of scientific integrity in the field of energy research especially in the IRI program areas of energy, propulsion and bioenergetics.

Specifically, I have found and published evidence that pulsed **electrokinetics** can provide a highly efficient means for



providing a propulsion force which apparently has already been discovered by several inventors and even predicted by an "electrokinetic equation" described in a textbook by Dr. Oleg Jefimenko on causality and gravity. This project deserves funding to scientifically advance the correlation of theory and experiment so that electrokinetics may be used in civilian transportation applications, such as space travel and satellite maneuvering.

We have also published a summary of the discovery that **zero bias diodes** and tunnel diode arrays are the best and most readily accessible solid-state means to convert thermal and non-thermal energy to direct current electricity on a round-the-clock basis anywhere in the world or even in outer space. This project is the most exciting to many investors since there is lots of intellectual property still available in the application of the diode array proposed for the electrical generators.

IRI is also developing a self-contained, **spiral permanent magnet gradient motor** to provide motive power (torque) for transportation and generation of electricity. It is the next subject of a journal publication for the *IEEE Transactions on Magnetics* (2010). Since the National Science Foundation released its 2009 report on coronal mass ejections (CME) from the sun's corona, it should be apparent to most Americans that our "umbilical cord" lifestyle of dependence on a central power source for our electricity puts us at grave risk. The NSF predicts that it will take about four (4) years for the U.S. to recover from any

CME that strikes the earth since most of the power transformers will burn out. (The last CME occurred in December, 2008 which fortunately missed the earth.) Therefore, the development of the spiral permanent magnet gradient motor (and the large scale integration of the zero bias diode project) are essential for back-up power. It is our vision that these will soon provide the main source of free electricity to homes, businesses, and vehicles, with the grid used for back-up. We also predict that this revolution will also spur the economic growth of all third world countries, extremely rural areas on the planet, and especially the African continent.

Like all other nonprofits, we rely upon our members, donors, and benefactors for sustaining our humanitarian activities and our growth. We are happy to enlist our supporters' talents to access channels to grow our programs to a scale we'd otherwise struggle to access on our own. We are extremely grateful for that support and hope to grow not only our base of supporters but also the relationships that we have with our supporters over the coming years.

Is Zero Point Energy a Game Changer?

Excerpts of an interview by Randal Mayes, TechCast News, 9/30/13

Summary:

In 1913, Einstein and Otto Stern proposed that quantum systems produce energy. Numerous discoveries in quantum physics over the past century provide evidence for the existence of zero point energy (ZPE). While energy is derived from quantum vacuum fluctuations is not controversial, whether or not you can extract it on a scalable level and use it for practical applications, is. Governments and private researchers are investigating the possibility of tapping ZPE as an infinite, clean, and virtually free energy source and alternative to fossil fuels. Advancements in the field could also help make interstellar travel and flying saucers possible. ZPE generators will provide infinite, clean, and virtually free energy for laptops, telephones, TVs, cars, homes, spaceships reducing the usage of fossil fuels which will benefit the environment.

The Wild Card of Zero Point Energy – Interview with Dr. Tom Valone

There are wild cards and then there are wild cards. Harnessing Zero Point Energy (ZPE), quantum fluctuations which release energy and affect the behavior of atoms and the universe, is a game changer. Imagine at your job using a slide rule one week and the next week training to use a quantum computer. This is the transition that could occur for the energy industry and for space travel. There is also a serendipity factor. So, who knows what some bright entrepreneur of scientist may unleash on the world. Unless you are a physicist, electrical engineer, or sci-fi buff; you are probably asking what in the heck is ZPE. So for the average person, how do you make sense out of ZPE and forecast how it will impact our future? In your research, if you do not throw in the towel, you will encounter Tom Valone, a US Patent Office examiner. He is now the President of Integrity Research Institute in Beltsville, MD, prolific writer with numerous publications on ZPE, and hours of YouTube videos for non-physicists who are just curious about this controversial, fascinating, and mysterious topic, as well as experts in the field.

If you are looking for someone who has the ability to effectively communicate highly technical scientific concepts, I would recommend his *Zero Point Energy: The Fuel of the Future* (2007), which has an introduction and history of ZPE, a discussion of fifteen observed phenomenon that provide experimental

evidence for the existence of ZPE, along with progress with research in the field. Once you grasp ZPE, the next step is to understand if we can harvest it. For this topic, I recommend *Practical Conversion of Zero-Point Energy: Feasibility Study of Zero-Point Energy Extraction* (2005), a revised edition of his PhD thesis. They are both available at his website <u>www.integrityresearchinstitute.org</u>, which also has links to many interesting articles and technical papers. For those of us that are futurists and to put ZPE in the context of forecasting, I asked Dr. Valone about trends that are moving this field forward and holding it back, and about the implications if we are successful in developing it.

Driving Trends

TechCast: For an interview with Pure Energy Systems News in 2009, you said that ZPE devices are 5-10 years from market. (http://pesn.com/2009/01/21/9501515_ZeroPointEnergy_Valone) In your opinion, what breakthroughs are needed for harnessing ZPE at a scalable level?

Dr. Tom Valone: More concerted effort by private industry is needed without regard for the immense power that is possible from ZPE extraction. I believe that the current trend for developing energy harvesting is the proper umbrella for the next generation of clean energy generators. As climate change worsens it probably will be the impetus for change and accelerated deployment of ZPE devices.

TechCast: In your thesis, you concluded that of the four major extraction methods thermodynamics has the highest feasibility and energy quality ratings; however, from my research it appears that the Casimir Effect has influenced most researchers. What is currently the low hanging fruit and what do expect to see on the market in the next decade?

Dr. Tom Valone: Though thermodynamic devices have theoretically looked attractive, it is likely that solid state electronic rectifiers or diodes will lead the pack in marketable energy generators that harvest both thermal and nonthermal fluctuations. After all ZPE is nothing more than virtual EM radiation.

Implications

TechCast: Obviously tapping ZPE for homes, transportation, and electronic gadgets is at the top of the

wish list, then space travel. What else do you vision seeing in the markets over the long term that will revolutionize our lives?

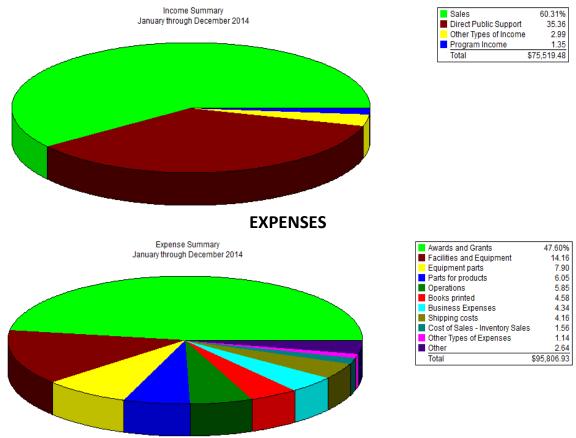
Dr. Tom Valone: Though I have heard a firsthand account of material teleportation, I have more interest in "inertial mass shielding". To me this is a proven principle seen in every unidentified flying object sighting (right angle turns and fast acceleration) and it makes space travel and protection from cosmic rays a lot is complimentary It also easier. to This has already electrogravitics. been developed in the black world from back



engineering. In the bioenergetics realm, the extension of telomeres is now becoming feasible and is on track to become mainstream very soon, along with stem cell injections and growing replacement organs from our own skin cells modified to become stem cells. In the same realm I also foresee meditation and human transformation becoming more widespread. They go hand-in-hand with sports achievements but will definitely be needed for survival on Mars. Electric antioxidant clothing will also soon become popular for many healthful reasons. We also have the technology with military grade lasers to start nudging earthbound asteroids off course which is an essential technology for long term planetary protection. Our vision for the future that our institute strives for really is centered on abundant electrical energy, clean efficient propulsion for travel, and reusable electrotherapeutics for everyone...energy, propulsion, bioenergetics.

IRI FINANCIAL REPORT 2014

INCOME



BALANCE SHEET

Assets	December 2013	December 2014
Current Assets	\$ 44,025.64	\$ 20 <i>,</i> 488.19
Fixed Assets	<u>\$1,546.77</u>	<u>\$1,546.77</u>
Total Assets	\$45,572.41	\$22,034.96
Liabilities & Equity		
Total Current Liabilities	\$776.35	-\$2,473.65
Total Liabilities	\$776.35	-\$2,473.65
Equity	\$44,796.06	\$24,508.61
Total Liabilities & Equity	\$45,572.41	\$22,034.96



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Integrity Research Institute is a 501(c)3 nonprofit that researches Eco-friendly Emerging Energy Technologies, in energy generation, human health and propulsion