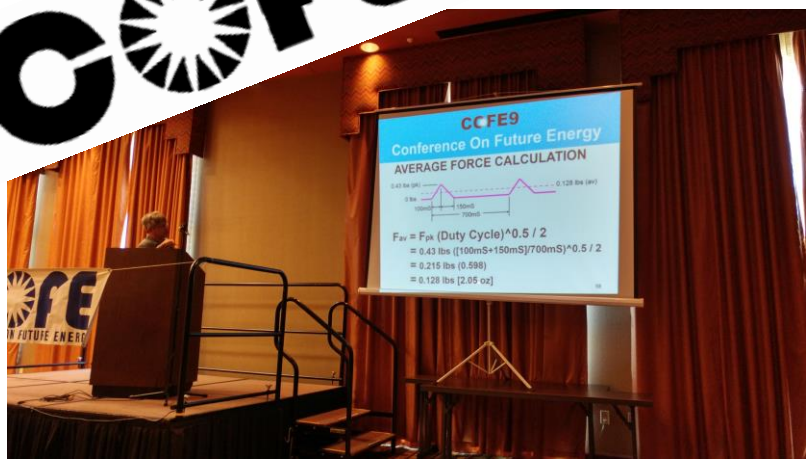
Future Energy

IRI Members Newsletter Fall 2017

COFE REVIEW



Engineer Mike Gamble explains his reproduction of a Boeing force producer at COFE9

PLUS

- Army Discovery May Offer New Energy Source
- **Clothes of the future could generate their own electricity**
- Cheaper, Lighter, Quieter: The Electrification of Flight Is at Hand
- **The 2017 Acura NSX: A Hybrid Supercar**
- Ultimate Electrotherapy – Growing Reprogrammed Cells with Electrical Current
- **Aztec New Mexico UFO Incident from DIA 1989 Document**
- Into the Drink: Building the Ultimate Solar-Powered Water Purifier

President's Letter

As our nation deals with an unprecedented *four* Atlantic hurricanes, two of which have already made history, our job at IRI has just become more urgent and immediate, especially when one million people lost power in Puerto Rico. Clearly the nation and the world need a revolutionary clean energy source that is so easy to implement that no one will want to use the old-fashioned fossil-fuel burners. Such an invention will also impact the type of propulsion or transportation they use and not fail just because weather gets serious. That is one of the mission directives of this institute, besides new bioenergetics advances. This past year, since my retirement from the government, has been quite busy and surprisingly, several filmmakers all have converged on me. This week, Prometheus Productions will be interviewing me for "The Tesla Files" series on the History Channel and will focus on electrotherapy, as per Nikola Tesla's 1898 paper. In addition, Prof. Jonathan Berman from Cal State is working on a documentary about Van Tassel and the Integratron so I have volunteered my expertise in that area of electrotherapy and electrostatic motors to help him. Spaett Film and Greg Mallozzi are working on a documentary of Dr. Andrija Puharich and IRI has the one and only archive of his most important lab notebooks and the TD-11 transdermal device he used on nerve deaf patients (see our edited book, ***Energetic Processes***, Volume I). Chris Munch has a sci fi movie called "Destination Maitland" which includes a gravity control propulsion craft and has asked IRI for technical advice. Lastly, Amardeep Kaleka from Neverending Light in Los Angeles just contacted me to finally make an offer on a pitch that I did in his office about five years ago for a "Future Energy Series" of about 6 to 10 episodes. When it rains, it pours around here!

The day after COFE9, Jackie and I went to visit our last year's plenary speaker, **Linda Moulton Howe**, at her home in Albuquerque NM. The purpose of the visit was really to test her bismuth-magnesium artifacts with a frequency generator and various coils to see if they would interact. The testing protocol has now begun, with faster rise time pulse generators planned for the next experiment.

This quarterly newsletter also gives a summary of our past conference (COFE9) and also offers you a glimpse of what we see as the most provocative discoveries in energy and energy medicine to make the news. At the top of the energy discoveries, there is the unusual finding by the Army of powdered, **nanosized aluminum that generates hydrogen** when thrown into water…truly a portable source of hydrogen that seems to be safe. In the bioenergetics arena, the discovery of **carbon nanotube yarn** promises to be a great source of low level electricity at least for the IRI patented antioxidant electric clothing (US Patent #8, 825,174).

We also have a great opportunity from John Reed, MD who is representing Foyle Research Institute of Monaco overseas that appears willing to fund our development projects for the 1) Spiral Permanent Magnet Motor and the 2) Zero Bias Diode Energy Converter. One proposal is now before the committee, mostly composed of colleagues of mine, so the chances look good that we will get to first base with it.

Thank you for your support and encouragement. We value every one of our members!

Tom Valone

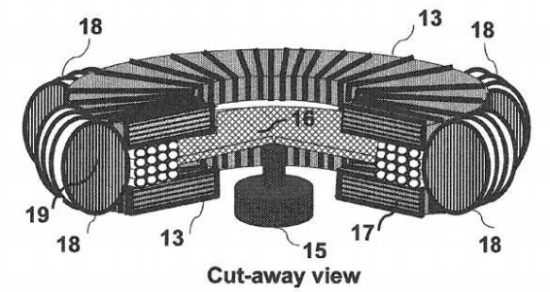
COFE9 Event Was a Great Success

Integrity Research Institute Press Release, August 2017

Integrity Research Institute (IRI) has the tradition of presenting the best and latest energy discoveries whether in the technical, environmental, space and human health areas. These are the hallmark of our conferences and all of us at IRI were very happy to host our The Ninth International Conference on Future Energy (COFE9) which provided the latest developments on Energy, Propulsion and Bioenergetics with superb speakers together who traveled far and wide to attend. Our venue was the Conference Center at the Embassy Suites Hotel in Albuquerque, New Mexico. The speakers included an impressive list from many disciplines and areas such as: Boeing Propulsion and Space scientists, Aerospace companies, University professors, and private inventors and entrepreneurs.

COFE9 Images. Starting top left clockwise, President Tom Valone welcoming attendance on opening day. Exec Director Jackie Panting at IRI Exhibit Booth, Dr. Carolyn McMackin at her full-sized booth before the throngs hit, Mike Gamble's CMG tabletop demonstration model, and the typical full house audience attendance at COFE9

The morning of the first day was opened with a presentation by Aidan Shaffer on **Living off the Grid** full of amazing information, including the specifics of a self-sufficient community that rarely used outside fuel or water. Then Glen Robertson (on the right) from NASA presented on **Acceleration Mechanics for Propellantless Space Drives**, showing breakthrough engineering with a new acceleration equation that was verified by comparison with known physical models and a simple internal accelerating mass experiment. Then Professor James Purvis, gave a great summary of his career and his **Electromagnetic Angular Acceleration and Segmented-Capacitor Propulsion Systems** with interesting data and an impressive patent application for a toroidal thrust producer without expelling any mass. His main drawing is seen below:



Cut-away view

In the afternoon, Robert DeBiase (on the left) presented the results of a yearlong effort to experimentally test his Casimir force production invention, "**Quantum Fire**" showing very promising advances in the next year with the help of Thorsten Ludwig. Dr. Ludwig (on the right) who is also helping with this project also presented his views of the Casimir force producer using diffraction gratings on his scanning electron microscope, that also is being used for assisted energy research results, which is funded by IRI in association with Veden Akadamie in Germany. We then had a bioenergy presentation by Dan Grebenisan on his new PEMF health device, a **Biochip for High Frequency Stimulation of Meridians and Acupuncture Points,** available in Canada. He promises to have the company website up soon so people may purchase his devices.

The following day opened with a presentation by Donald Reed who reviewed a **Proof-of Principle of Scalar Electrodynamics** which can offer faster than light transmission of information with Scalar fields, in the recent US patent 9,306,527 awarded to Lee Hively. Don also included some information about X-rays emitted from tape removal from a surface. Then Mike Gamble, retired Boeing engineer, spoke on his new tabletop experimental model of the Boeing CMG **Force from Gyroscopic Propulsion Engineering** which powers (moves) the ISS and many satellites - a project sponsored and funded with a grant from IRI. His tabletop model was operated and exhibited during the presentation gaining much praise and practical suggestions on improving the model. The most impressive statistic revealed in Mike's presentation was his peak force equation that predicted about

0.4 pounds maximum peak force production and then his detailed load cell force chart recording that clearly showed the force oscillation which just reached the predicted 0.4 pound limit for a maximum. Mike will be working this next year on improving the signal to noise ratio and reducing the mass of the cart holding the two opposing gyroscopes, which IRI will be preparing a journal article to be coauthored with Valone.

Russ Anderson followed with a presentation on the worldwide efforts to replicate the J.R.R. Searl

energy and propulsion device which he has also spent years researching. While no new information was presented, Russ' enthusiasm and dedication to the replication of the claims of John Searl were evident. Bill Alek also was speaking on **Developing Practical Warp Drive Engine Technology** and followed by Dr Nirmala Khandan, Professor from New Mexico State University, who presented on "**Harvesting Net Energy from Urban Wastewater**" developed locally in Las Cruces NM at the Arrowhead Center, Inc. Downstream processing of the resulting biomass by hydrothermal liquefaction has been demonstrated as a feasible process for recovering the energy-content of UWW as biocrude and its nutrient-content as fertilizers.

The afternoon followed with Bioenergy presentations by Dr. Glen Rein and Carol McMackin. Dr

Rein, spoke on "**ELECTRICAL PROPERTIES OF DNA AND ITS SENSITIVITY TO SUBTLE ENERGY**", with amazing data and measurements done in his lab showing how DNA responds to subtle energy.

Closing our COFE event was an amazing workshop presentation by Dr. Carol McMackin, who spoke with a short slideshow and then conducted a group experiment with many different frequencies based on her plenary lecture to both conferences the evening before on her new book, "**Resonant Effects in Clinical Practice**" which is also based on her previous, best-selling book, ***Frequency Specific Microcurrent*** (Churchill Livingston, 2011)which is also featured on the Elsevier Health website.

All who attended COFE9 carried back with them the latest and most invaluable information from the

IRI publication exhibit booth on Energy, Propulsion and Bioenergetics. IF you would like to order the any of the presentations, please order them from our website. The price for any individual DVD from COFE9 is the same as past years ($20). Since it may take a while for us to update the www.futurenergy.org webpage, Just specify the speaker name in the Comment Section of our **Order Page.**

Army Discovery May Offer New Energy Source

July 24, 2017 By David McNally, ARL Public Affairs
http://www.arl.army.mil/www/default.cfm?article=30

Army researcher Anthony J. Roberts inflates a balloon with hydrogen produced from a chemical reaction between water and an aluminum nanomaterial powder discover at the U.S. Army Research Laboratory at Aberdeen Proving Ground, MD

(U.S. Army photo by David McNally)




ABERDEEN PROVING GROUND, Md. (July 24, 2017) -- Army scientists and engineers recently made a discovery. An aluminum nanomaterial of their design produces high amounts of energy when it comes in contact with water, or any liquid containing water.

During routine materials experimentation at the U.S. Army Research Laboratory, a team of researchers observed a bubbling reaction when adding water to a nano-galvanic aluminum-based powder.

"We all as a team were very excited and ecstatic that something good had happened," said Dr. Anit Giri, a physicist with the lab's Weapons and Materials Research Directorate.

The team further investigated and found that water — two molecules of hydrogen and one of oxygen — splits apart when coming into contact with their unique aluminum nanomaterial.

The reaction surprised the researchers, but they soon considered its potential implications for future power and energy applications.

"The hydrogen that is given off can be used as a fuel in a fuel cell," said Scott Grendahl, a materials engineer and team leader. "What we discovered is a mechanism for a rapid and spontaneous hydrolysis of water."

Scientists have known for a long time that hydrogen can be produced by adding a catalyst (a substance that increases a chemical reaction rate) to aluminum. But these methods take time, elevated temperature, added electricity, and/or toxic chemicals such as sodium hydroxide, potassium hydroxide, or acid.

"In our case, it does not need a catalyst," Giri said. "Also, it is very fast. For example, we have calculated that one kilogram of aluminum powder can produce 220 kilowatts of energy in just three minutes."

That metric doubles if you consider the amount of heat energy produced by the exothermic reaction, he said.

"That's a lot of power to run any electrical equipment," Giri said. "These rates are the fastest known without using catalysts such as an acid, base or elevated temperatures."

The team demonstrated a small radio-controlled tank powered by the powder/water reaction. Moments after mixing the powder with to a small amount of water, a bubbling reaction produced a great deal of hydrogen, which was then used to power the model around the laboratory.

"We just take our material, put it in the water and the water splits down into hydrogen and oxygen," Grendahl said.

Grendahl said the discovery is dramatic in terms of what can be achieved.

"There are other researchers who have been searching their whole lives and their optimized product takes many hours to achieve, say 50 percent efficiency," Grendahl said. "Ours does it to nearly 100 percent efficiency in less than three minutes."

Additionally, since the nanomaterial powder has the potential to be 3-D printed, researchers envision future air and ground robots that can feed off of their very structures and self-destruct after mission completion.

Researchers said one possible application of the discovery that may help future Soldiers is the potential to recharge mobile devices for recon teams.

"These teams are out for a short number of days, three to five days, and a lot of that depends not only on their food supplies, but on how long their supplies last in terms of their equipment and right now that stems from lithium batteries," Grendahl said. "If we can recharge those batteries, they can stay out longer."

Giri said the Army Research Laboratory is all about giving Soldiers the advantage.

"We work here to help our Soldiers," Giri said. "That is our sole aim. This material we have developed will do so."

The next steps are to document the discovery with scholarly papers and intellectual property protections, some of which are ongoing, and to coordinate further applications with scientists and engineers across the laboratory.

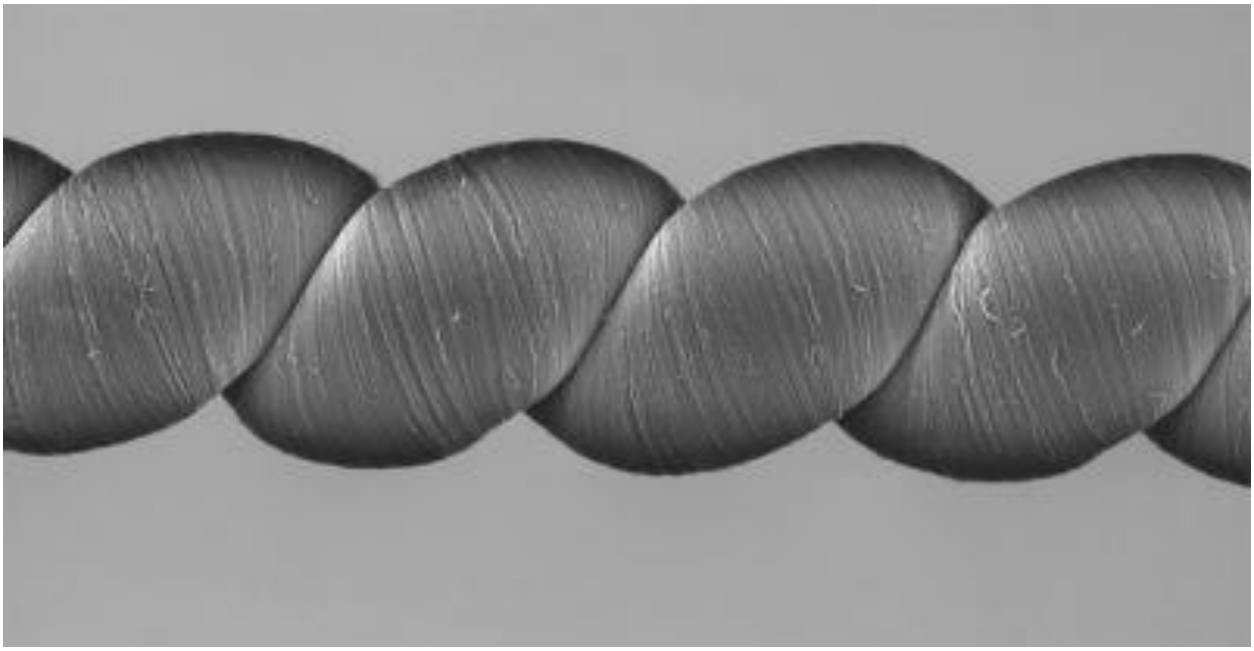
"We all feel pretty good that this can contribute to a new kind of research to generate power at ease and at will," Giri said. "I come to work every day excited and enthusiastic."

The U.S. Army Research Laboratory, currently celebrating 25 years of excellence in Army science and technology, is part of the U.S. Army Research, Development and Engineering Command, which has the mission to provide innovative research, development and engineering to produce capabilities that provide decisive overmatch to the Army against the complexities of the current and future operating environments in support of the joint warfighter and the nation. RDECOM is a major subordinate command of the U.S. Army Materiel Command.

Clothes of the future could generate their own electricity using carbon nanotube-based generators

Potential applications for 'Twistron' range from full scale wave power generation to individual fibres in clothing powering sensors.

By Immanuel Jotham *August 28, 2017 13:46 BST, International Business Times*



Coiled carbon nanotube yarns, created at The University of Texas at Dallas and imaged here with a scanning electron microscope, generate electrical energy when stretched or twisted. University of Texas at Dallas

Researchers at the University of Texas at Dallas and Hanyang University in South Korea have developed a type of carbon nanotube-based yarn that can produce electricity when stretched.

The yarn is made up of carbon nanotubes that have been spun into thread and then twisted into a coil with internal structures that distributed stress evenly among the nanotubes, reports Science Daily. When stretched out, the strain and friction from within the tubes released a charge which they were able to harvest.

The nanotubes that go into making the yarn are reportedly 10,000 times smaller in diameter than human hair and to achieve the level of elasticity that was needed, they "over twisted" the yarn, says the report.

The power output of this material is also surprising, with "Twistron" producing over 250 watts per kg when the coil is stretched 30 times per second. Dr Ray Baughman, corresponding author of the study, said: "No other reported harvester provides such high electrical power or energy output per cycle as ours."

The researchers say that harvesting power from this yarn requires capturing the escaping charges when they are released and the team says that the yarn needs to be coated with or kept submerged in an ionic conducting solution or an electrolyte - any material that can move an ion from one site to another.

While the report says that the team made use of hydrochloric acid, the actual solution can be as simple as salt dissolved in water which can effectively carry charges to electrodes.

Since the sea is pretty much just a large body of electrodes, the team carried out an experiment off the south Korean coast by simply attaching weights to a bit of their special yarn and attaching one end of it to a float and submerging it in the sea. They reportedly made use of platinum electrodes because sea water is highly corrosive.

The output of this setup was recorded at over 90 watts per kg of yarn. Another experiment that the team carried out involved the use of an artificial muscle that contracts when heated. Ars Technica reports that the team was able to produce electricity at every heating and cooling cycle.

When incorporated into fabric, the yarn, immersed in a conductive gel and sewn into a shirt, reportedly produced electrical power every time the wearer breathed.

While the Twistron technology is still in its infancy, the report points out that this could be a way of generating environmental energy. The researchers are looking at generating power from sea waves, changing temperature, or including this yarn in clothing to power various sensors and apparatuses like breathing monitors.

The cost of carbon nanotubes is also falling constantly, so "there is a lot of interest in using waste energy to power the Internet of Things, such as arrays of distributed sensors", said Na Li, one of the researchers from South Korea. "Twistron technology might be exploited for such applications where changing batteries is impractical," he added.

https://youtu.be/Lt2vGlC4uRc

Cheaper, Lighter, Quieter: The Electrification of Flight Is at Hand

Our small electric plane, which uses light and powerful batteries and motors, is less costly than its gasoline-engine rivals

By George Bye, IEEE Spectrum, 22 Aug 2017 | 15:00 GMT

Photo: Bye Aerospace

When you first sit in the cockpit of an electric-powered airplane, you see nothing out of the ordinary. However, touch the Start button and it strikes you immediately: an eerie silence. There is no roar, no engine vibration, just the hum of electricity and the soft whoosh of the propeller. You can converse easily with the person in the next seat, without headphones. The silence is a boon to both those in the cockpit and those on the ground below.

You rev the motor not with a throttle but a rheostat, and its high torque, available over a magnificently wide band of motor speeds, is conveyed to the propeller directly, with no power-sapping transmission. At 20 kilograms (45 pounds), the motor can be held in two hands, and it measures only 10 centimeters deep and 30 cm in diameter. An equivalent internal-combustion engine weighs about seven times as much and occupies some 120 by 90 by 90 cm. In part because of the motor's wonderful efficiency—it turns 95 percent of its electrical energy directly into work—an hour's flight in this electric plane consumes just US $3 worth of electricity, versus $40 worth of gasoline in a single-engine airplane. With one moving part in the electric motor, e-planes also cost less to maintain and, in the two-seater category, less to buy in the first place.

It's the cost advantage, even more than the silent operation, that is most striking to a professional pilot. Flying is an expensive business. And, as technologists have shown time and again, if you bring down the cost of a product dramatically, you effectively create an entirely new product. Look no further than the $300 supercomputer in your pocket.

At my company, Bye Aerospace, in Englewood, Colo., we have designed and built a two-seat aircraft called the Sun Flyer that runs on electricity alone. We expect to fly the plane, with the specs described above, later this year. We designed the aircraft for the niche application of pilot training, where the inability to carry a heavy payload or fly for more than 3 hours straight is not a problem and where cost is

a major factor. But we believe that pilot training will be just the beginning of electric aviation. As batteries advance and as engineers begin designing hybrid propulsion systems pairing motors with engines, larger aircraft will make the transition to electricity. Such planes will eventually take over most short-hop, hub-and-spoke commuter flights, creating an affordable and quiet air service that will eventually reach right into urban areas, thereby giving rise to an entirely new category of convenient, low-cost aviation.

Photo: Bye Aerospace **Batteries are Included:** The Sun Flyer fills the perfect electric-plane niche, that of the trainer craft. Such airplanes fly for a relatively short time, carry only two people, and are quiet enough to be based near populated areas. The key to the airplane's feasibility is the development of more powerful batteries, more efficient motors, and power-saving tricks, such as turning off the motor when it's not needed and using it to recover energy while descending or slowing down.

Even more important was the lithium-ion battery technology, the steady improvement of which over the past 15 years was key to making our project possible. Bye Aerospace has worked with Panasonic and Dow Kokam; currently we use a battery pack composed of LG Chem's 18650 lithium-ion batteries, so called because they're 18 millimeters in diameter and 65 mm long, or a little larger than a standard AA battery. LG Chem's cell has a record-breaking energy density of 260 watt-hours per kilogram, about 2.5 times as great as the batteries we had when we began working on electric aviation. Each cell also has a robust discharge capability, up to about 10 amperes. Our 330-kg battery pack easily allows normal flight, putting out a steady 18 to 25 kW and up to 80 kW during takeoff. The total energy storage capacity of the battery pack is 83 kWh.

Why aren't we pursuing a larger commercial electric airplane? The main reason is the energy-to-speed ratio. The bigger and faster an electric airplane gets, the greater the number of batteries it needs and the greater the share of its weight those batteries constitute. The underlying problem is the same for any moving object: The drag on a vehicle goes up as the square of speed. If you double speed, you increase drag by a factor of four. In a relatively slow airplane, like a flight trainer, electric aviation is a serious contender, but it will take years before batteries have enough energy density to power airplanes that are substantially faster and heavier than our models.

We are in the midst of the monumental task of making the two-seat Sun Flyer 2 and the four-seat Sun Flyer 4 a viable, commercial reality. Some still say it can't be done. I counter that nothing of any fundamental and lasting value can be accomplished without trying things that have never been done before. Thanks to visionaries and pioneers, electric airplanes are not just an intriguing possibility. They are a reality.

This article appears in the September 2017 print issue as "Fly the Electric Skies."

The 2017 Acura NSX: A Hybrid Supercar

Honda's new Acura NSX is the first to marry a V-6 engine to three electric motors for high-speed steering

By Lawrence Ulrich, 26 Sep 2016 | 13:30 GMT, IEEE Spectrum

Photo: Acura

One. Two. Whoosh. By the time I count to three, the Acura NSX's automated launch control leaps from a standstill to 60 miles per hour. But there's not a trace of wheel spin and smoking rubber, the usual hallmarks of a neck-snapping drag-strip run here at the track in Thermal, Calif. Oh, there is drama, only it's largely confined to what's happening under the Acura's swoopy skin.

This Acura is a plug-in hybrid, part of an electron-pumping vanguard that's changing the very definition of a performance car. From showrooms to race paddocks, the clock is ticking for fuel-slurping gasoline engines. Battery-boosted cars, whether hybrid or full electric, are rushing to fill the gap. In our highly regulated future, these may be the only kinds of sports cars you'll be able to buy, and the trippy journey to such a world seems to be taking place at warp speed.

Photo: Acura **Hunkered Down:** The new Acura NSX has a twin-turbo, 500-horsepower V-6 engine, which is mounted longitudinally in the midsection for optimal handling. A 75-degree angle between the cylinder banks lets the engine hunker down, giving it the lowest center of gravity in its class.

Back in 1990, the original Acura NSX challenged every notion of what a supercar was supposed to be. Coming from Honda, the manufacturer of the Acura luxury brand and a company known for safe, affordable, and ultrareliable cars, the NSX wedded those practical virtues to a gorgeous lightweight body designed by Italy's Pininfarina. Smack at its

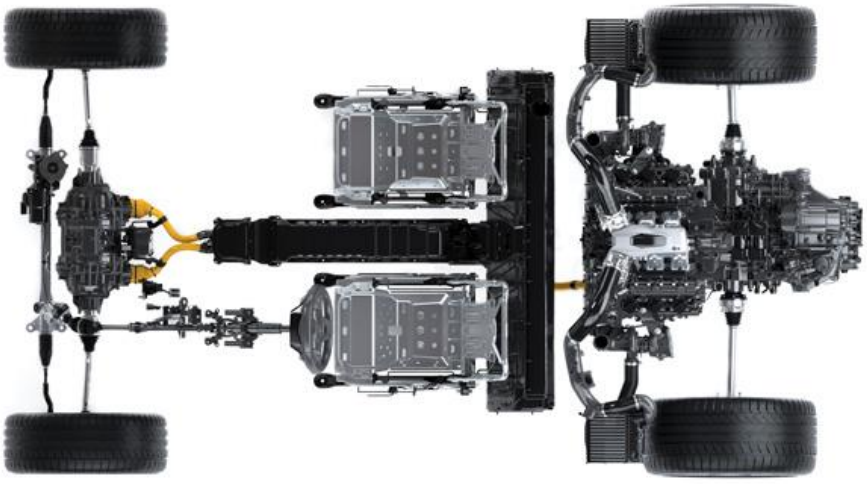
center rested a modest 3-liter V-6, capable of 200 kilowatts (270 horsepower). Packing more lightweight aluminum than anything from Ferrari, Lamborghini, or Porsche, the Acura defied expectations again with a shocking US $60,000 price, a fraction the cost of its highfalutin rivals. In a final coup, Brazilian Formula One superstar Ayrton Senna, then driving for McLaren-Honda, helped tune the NSX's suspension and performance prior to its release.

Ferrari and Co. were instantly forced out of their complacency on technology and quality alike. The NSX topped the Ferrari 348, and most every other competitor, in handling and daily drivability.

So when Honda found itself developing a reborn NSX in 2011, the new car had massive shoes to fill. Oddly, Honda's engineers originally planned to power their new roadster with a prosaic V-6 derived from an Odyssey minivan. No wonder that project was aborted midstream. To deserve the storied name, any Son of NSX would have to be an "everyday supercar" while again moving the needle on technology. Ted Klaus, chosen to head up the NSX's global R&D team—which is now run out of Ohio, rather than Japan—knew that electricity was the answer, not just to power the car but to perform handling magic as well.

"We had been working for years to come up with drive force that could help turn the car right and left," Klaus recalls. "We asked ourselves: What if we could marry emerging hybrid e-drive technology with yaw-control tech [that is, steering]? Would it be possible?"

The answer was yes. But the tight-knit NSX team was facing three more years—and an increasingly skeptical media and fan base—to create that ambitious design from scratch: a hybrid supercar that converts electricity into mechanical commands, not just for explosive, efficient propulsion and regenerative braking but also to steer and stabilize the car.



Photos: Acura **The Energizer:** Behind the seats, a T-shaped lithium-ion battery feeds three electric motors, including a pair to power and steer the front wheels. A braking simulation system saves energy in a way that feels natural.

As it happens, Porsche was developing an all-wheel-drive hybrid with similar characteristics, the 918 Spyder; it would arrive priced at a mind-boggling $845,000. The 2017 NSX that I'm testing near Palm Springs costs $157,800.

And unlike the Porsche, which has just one electric motor to power both front wheels, the Acura has two electric tricks up its sleeves: the so-called Twin Motor Unit. This dizzyingly complex electric duo, mediated through a planetary gear set, cranks out up to 27 kW (36 hp) and 73 newton meters (54 foot-pounds) of torque to either wheel, divvying it up as needed. This is true torque vectoring, able to independently speed up or slow down either wheel, helping the Acura dive into turns and dig out the other side. Discreetly nestled behind pilot and passenger, the roughly 1-kilowatt-hour lithium-ion battery is designed to rapidly charge and discharge for generous squirts of performance. A larger battery might have contributed more all-electric driving range, but it would have come at the expense of weight and ultimate performance.

Ed. Note: *Later this month, (September, 2017) Tesla is expected to officially unveil its long-awaited* ***semi-truck****. If the vehicle is as cost-effective as anticipated, it could bring about a sea change for the trucking industry. - Elon Musk at TED 2017, 9/8/17*

Ultimate Electrotherapy – Growing Reprogrammed Cells with Electrical Current

Published on Aug 14, 2017

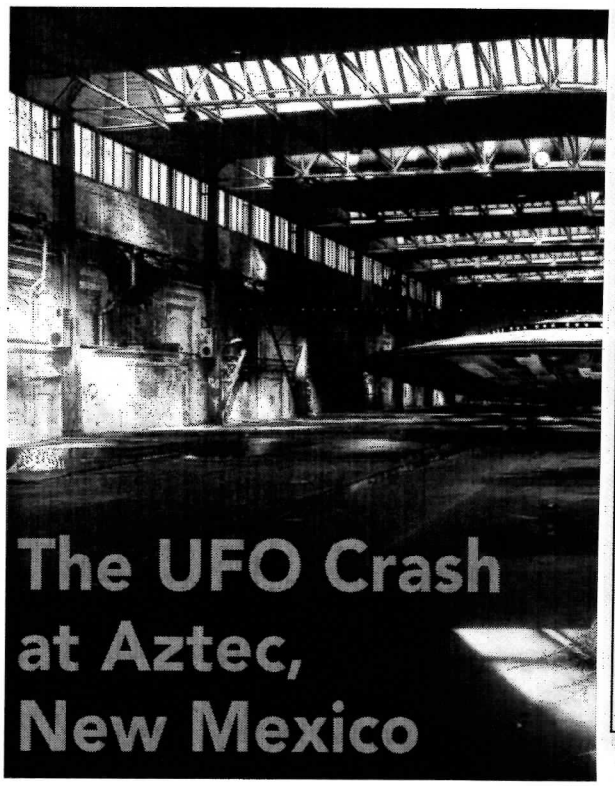
(COLUMBUS, Ohio) – Researchers have developed a device that can switch cell function to rescue failing body functions with a single touch. The technology, known as **Tissue Nanotransfection (TNT),** injects genetic code into skin cells, turning those skin cells into other types of cells required for treating diseased conditions. “It takes just a fraction of a second. You simply touch the chip to the wounded area, then remove it,” said Chandan Sen, PhD, director of the Center for Regenerative Medicine and Cell-Based Therapies at The Ohio State University Wexner Medical Center. “At that point, the cell reprogramming begins.” In a series of lab tests, researchers applied the chip to the injured legs of mice that vascular scans showed had little to no blood flow.

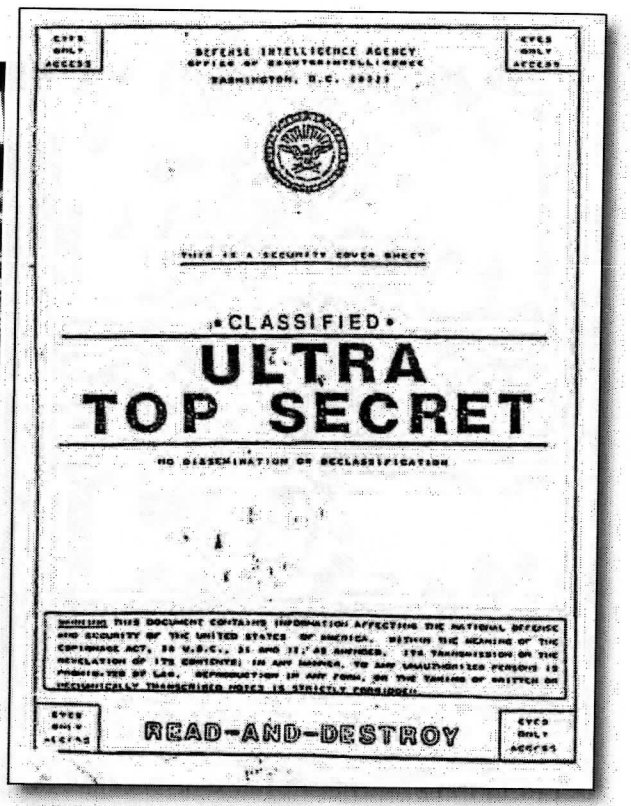
Breakthrough Device Heals Organs with a Single Touch

https://www.youtube.com/watch?v=tMQ51Kj2tS0

“We reprogrammed their skin cells to become vascular cells,” Sen said. “Within a week we began noticing the transformation.” By the second week, active blood vessels had formed, and by the third week, the legs of the mice were saved—with no other form of treatment. “It extends the concept known as gene therapy, and it has been around for quite some time,” said study collaborator James Lee, PhD, a professor of chemical and biomolecular engineering at Ohio State. “The difference with our technology is how we deliver the DNA into the cells.” The chip, loaded with specific genetic code or certain proteins, is placed on the skin, and a small electrical current creates channels in the tissue. The DNA or RNA is injected into those channels where it takes root and begins to reprogram the cells. In a new study published in ***Nature Nanotechnology***, first author Daniel Gallego-Perez of Ohio State demonstrated that the technique worked with up to 98 percent efficiently. “What’s even more exciting is that it not only works on the skin, but on any type of tissue,” Sen said. In fact, researchers were able to grow brain cells on the skin surface of a mouse, harvest them, then inject them into the mouse’s injured brain. Just a few weeks after having a stroke, brain function in the mouse was restored, and it was healed. Because the technique uses a patient’s own cells and does not rely on medication, researchers expect it to be approved for human trials within a year. Those interested in participating in a clinical trial for this technology should email InfoRegenMed@osumc.edu.

Ed. Note: It is very rare for IRI to get involved with any E.T. or UFO story. We only have a couple so far, always associated with verifiable technology or separate corroboration (e.g., Zeta Reticuli Incident reprint, Giant Rock photo in *The Homopolar Handbook,* Linda Moulton Howe's electrogravitic chip). Here comes one more, with a June 2017 leak of a classified 1989 DIA report, verified by Dr. Stan Friedman (friend and colleague), condensed with excerpts in the September 2017 issue of *Nexus* magazine. You may obtain the Nexus article as a PDF download for $1.50 online or visit the tiny URL below and download the original DIA report. We recommend the "large PDF" (which is the most readable, with a single sheet per page) and draw your own conclusions.




DEFENSE INTELLIGENCE AGENCY
WASHINGTON, D.C.

THIS IS A SECURITY COVER SHEET

•CLASSIFIED•

ULTRA
TOP SECRET

NO DISSEMINATION OR DECLASSIFICATION

READ-AND-DESTROY

Cover sheet of the Defense Intelligence Agency's Report Number 405389, dated 8 January 1989

...and conversations with the alien survivor

from a leaked, classified report compiled by the United States Defense Intelligence Agency in 1989

This article is extracted from sections C and D of a collection of leaked Ultra Top Secret/Eyes Only Access documents, compiled by the US Defense Intelligence Agency's Office of Counterintelligence (Agency Report Number 405389), dated 8 January 1989. The documents were leaked anonymously by two retired military personnel on 13 June 2017 to Heather Wade, host of the *Midnight in the Desert* radio program, who then posted them online at http://tinyurl.com/y84kzhcg. Initial analysis by MJ-12 and UFO researcher Stanton Friedman suggests that the documents are authentic and provide new information about the highly secretive MJ-12 group. The documents also seem to confirm the existence of extraterrestrial human-like beings.

The typewritten report is barely legible in many parts, but we have reproduced it as faithfully as possible, retaining grammar, spelling and punctuation. We have followed obvious typographical errors with "[*sic*]", expanded on names/abbreviations in brackets, and italicised words that are underlined for emphasis in the original. – Editor

page C-1-of-10

AZTEC, NEW MEXICO (25 MARCH 1948)

On 25 March, 1948 at approximately 16:19 (4:19PM) hours, Mountain Standard Time (local time, or LT), a disc-shaped flying machine came down about twelve (12) miles northeast of the small community of Aztec, New Mexico. The controlled landing occurred in a small desert canyon on the private grazing land of a local farmer and rancher...

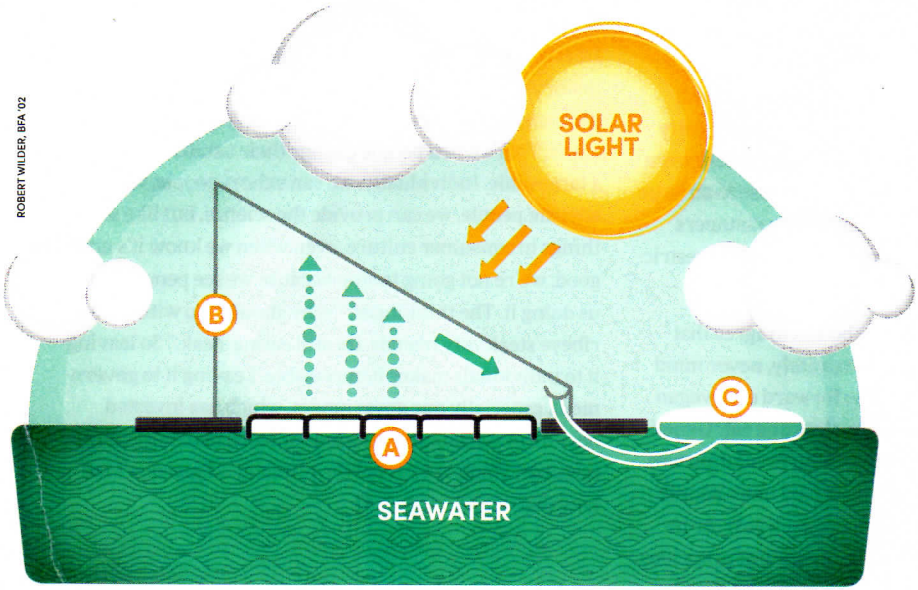
Into the Drink

By Cory Nealon and Sally Jarzab

Building the ultimate solar-powered water purifier

Perhaps you've seen celebrity adventurist Bear Grylls transform foul liquids into drinkable water using little more than sunlight and plastic sheeting. Now, a UB-led interdisciplinary team of researchers has turned this rudimentary survival tactic into a highly productive yet still inexpensive method to make contaminated water, or even saltwater, potable. The advancement could help to address drinking water shortages in developing or disaster-stricken regions.

Called a solar still, this type of contraption is nothing new, but current models tend to be inefficient and costly to build. With its innovative addition of a carbon-dipped paper surface that both soaks up and heats up liquid, this one can produce 3 to 10 liters of water a day. That's up to three times the output of commercial solar stills of similar proportions (about the size of a mini-fridge). Because the new design forgoes pricey optical concentrators, like mirrors and lenses, it costs dramatically less to make.



ROBERT WILDER, BFA '02

Qiaoqiang Gan, associate professor of electrical engineering in UB's School of Engineering and Applied Sciences, was lead researcher on the project.

(SUNY at Buffalo)

Here's how it works:

A: A layer of porous paper absorbs water like a napkin, while its black carbon coating attracts and absorbs solar energy to vaporize the water. A layer of polystyrene foam underneath the paper provides insulation and buoyancy.

B: A clear, lightweight structure traps the water vapor as it rises, then cools and condenses.

C: A separate chamber collects the distilled liquid, now free of salt and contaminants. Cheers!