

Aviation Exploring Post 107

Personal and Aerospace
Career Development

Somerset Air Service, Inc.
SMQ



FLIGHT LOG FEBRUARY 2010

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Somerset Air Service, Inc.
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CONTENTS
[Up & Coming Events](#)
[Aerospace Program – Completed Activities Classifieds](#)
[AEP107 Member and Alumni News](#)
[Personal & Aerospace Career Development](#)
[Aerospace Humor](#)
[Aerospace Business](#)
[Aerospace News](#)
[Aerospace Technology News](#)
[Aerospace: The Future News](#)
[Picture\(s\) of the Month](#)

Aviation Exploring Post 107 has taken off and is on an exciting journey in aerospace. Our journey is documented in our AEP107 FLIGHT LOGS. Our experiences, activities, member information are recorded and published monthly to our membership, alumni, recruits, partners and friends of AEP107.

Please send all **FLIGHT LOG** information / comments / updates to the Editor: tfteel@optonline.net.

YOUTH PROTECTION NOTES:

- ➔ AEP107 Flight Logs do not publish the last names of Aviation Explorers ages 17 and under.
- ➔ AEP107 Flight Logs are distributed individually via Bcc:

WHAT IS EXPLORING?

<http://www.youtube.com/watch?v=GXLGEMwnqSg>

WHAT IS AVIATION EXPLORING?

<http://www.youtube.com/watch?v=xZHUI-ZhI8w>

UP AND COMING EVENTS

[Return to Contents](#)

AEP107 PROGRAM (under development)

- ➔ Aviation Merit Badge Event 2010, SAT, MAY 1

EAA CHAPTER CALANDER OF EVENTS:

<http://www.eaa.org/calendar/Default.aspx>

AEROSPACE PROGRAM COMPLETED ACTIVITIES

[Return to Contents](#)

CLASSIFIEDS

[Return to Contents](#)

AEP107 INVITES NEW MEMBERS TO JOIN,

www.aep107.org, Aviation Exploring Post 107 always welcomes new members! We are coed, ages 14 through 20 and focused on "Personal and Aerospace Career Development". We have a very active aerospace program that networks our members within the aerospace community. Please contact: Tom Teel, 908 581 6876, tfteel@optonline.net

POSSIBLE NEW FLIGHT LOG SECTION

I would like to add a new section to the FLIGHT LOG to highlight online aviation training / flight simm / games / directories / reviews / software articles / etc.

Here is the problem: I do not have a clue about what is out there.

I need your help. Please send me appropriate secure information from reliable sources. With your information I will start a new section.
Thank You.

Tom Teel / 908 581 6876 / tfteel@optonline.net

AEP107 MEMBER AND ALUMNI NEWS

[Return to Contents](#)

AEP107 Members & Alumni, please keep in touch with the AEP107 Flight Log. We would love to share your career development.

Tom Teel / tfteel@optonline.net.

PERSONAL & AEROSPACE CAREER DEVELOPMENT

[Return to Contents](#)

PERSONAL DEVELOPMENT / CAREER ASSESSMENT / CAREER IDENTIFICATION / CAREER DEVELOPMENT / CAREER DEVELOPMENT SUPPORT
FOR ADDITIONAL INFORMATION CONTACT: TOM TEEL, tfteel@optonline.net

PUBLICATIONS WORTH LOOKING AT:

AvSCHOLARS™ – Student Gateway to Aviation™:<http://www.avscholars.com>

- **NOTE:** This is an excellent Aerospace Career Development Website.

FLIGHTGLOBAL / Flight Jobs<http://www.flightglobal.com/jobs/default.aspx>**BLACK HISTORY IN AVIATION**<http://www.blackhistoryinaviation.com>**Environmentally Responsible Aviation project**

The Environmentally Responsible Aviation project of the Integrated Systems Research Program, Aeronautics **The Green Aviation Student Challenge**

Research Mission Directorate, has announced a new student contest. The Green Aviation Student Challenge invites students to propose ideas and designs for future aircraft that use less fuel, produce less harmful emissions and make less noise.

The contest spans a full calendar year, so high school and college students have multiple opportunities to enter. The deadline for the first round for high school entries is **May 1, 2010**. First-round entries from college students are due **Dec. 15, 2010**. The second round deadlines are in December 2010 for high school entries and May 2011 for college entries.

Students are asked to submit a well-documented paper and a short video to explain their ideas. The ERA project intends to reward top-scoring students by airing their videos on NASA Web sites, and students may win a trip to an aviation event. Top college students may also earn a paid internship at a NASA center.

For more information about the high school contest, visit http://aero.larc.nasa.gov/era_high/competitions_high_era.htm.

For more information about the college contest, visit http://aero.larc.nasa.gov/era_univ/competitions_univ_era.htm.

Questions about the contest should be directed to Elizabeth Ward at Elizabeth.B.Ward@nasa.gov.

SUBMITTED BY: Mary Lou Dordan, FAA

Somerset Signal Senders<http://www.somersetsignalsenders.org/dnn>

Somerset Signal Senders is a group of individuals interested in all aspects of radio controlled model aircrafts. We fly at North Branch Park in Bridgewater, New Jersey. Experienced and beginning fliers are welcome at both the meetings and the flying field.

If you are interested in joining the hobby, we encourage you to come to a meeting where club members will be happy to answer your questions and help you get started. Experienced fliers are available to help anyone learn to fly, select their first plane, and help with building advice.

Come join us!

Embry-Riddle Offers Certificate Of Management In Aviation Safety

Feb 12, 2010, Three Short Courses Focus On Safety/Security, Human Factors, And Accident Investigation The Professional Programs Office of the College of Aviation at Embry-Riddle Aeronautical University will host three five-day classroom courses in

May 2010 at the university's Daytona Beach campus that will cover the latest topics in safety, security, human factors, and accident investigation.

Student Pilots: Free Flight Training Resources and Support to Help You Complete Your Pilot Certificate<http://www.studentpilot.com>

If you're a student pilot, there's no doubt you have the drive, determination, ambition and ability to become a pilot. But what you may be lacking is access to additional training resources that will help get you there.

Air Force Officials Approve Incentive Pay For Officer, Enlisted RPA Aircrews

Feb 27, 2010, - Over 100 Percent Increase In RPA Personnel Expected In Coming Years Air Force officials in Washington, D.C. have approved an incentive pay for officer and enlisted Airmen who commit themselves to flying or operating sensors on **remotely piloted aircraft**.

AEROSPACE HUMOR[Return to Contents](#)

WALKING THE DOG

A WOMAN was flying from Seattle to San Francisco. Unexpectedly, the plane was diverted to Sacramento along the way. The flight attendant explained that there would be a delay, and if the passengers wanted to get off the aircraft the plane would re-board in 50 minutes. Everybody got off the plane except one lady who was blind. The man had noticed her as he walked by and could tell the lady was blind because her Seeing Eye dog lay quietly underneath the seats in front of her throughout the entire flight. He could also tell she had flown this very flight before because the pilot approached her, and calling her by name, said, 'Kathy, we are in Sacramento for almost an hour. Would you like to get off and stretch your legs?' The blind lady replied, 'No thanks, but maybe Buddy would like to stretch his legs.'

Picture this:

All the people in the gate area came to a complete standstill when they looked up and saw the pilot walk off the plane with a Seeing Eye dog! The pilot was even wearing sunglasses. People scattered. They not only tried to change planes, but they were trying to change airlines! True story... Have a great day and remember...
 ...THINGS AREN'T ALWAYS AS THEY APPEAR.

SUBMITTED BY:

Jerry Iacona, NJ Aviation Education Council

AEROSPACE BUSINESS

[Return to Contents](#)

As a leading indicator of aerospace business health the Flight Log is using an Exchange Traded Fund (ETF) which currently contains fifty eight Aerospace – Defence company stocks. We are not trying to represent or sell this fund. This chart will appear monthly as a leading indicator of the business health of the Aerospace Sector.

Please help. If you have another aerospace business leading indicator, please let me know.

PowerShares Aerospace & Defense Portfolio ETF (NYSE: PPA) 6 month view: 022601



UP IS GOOD

For additional fund information please go to the funds URL: <http://www.invescopowershares.com/products/overview.aspx?ticker=ppa>

[Analyst: UAV Market Will Total Over \\$80 Billion This Decade](#)

Today, February 04, 2010, 5 hours ago
 Teal Group Releases 2010 UAV Market Profile and Forecast While their rate of growth may decline

somewhat, Unmanned Aerial Vehicles (UAVs) continue to be the most dynamic growth sector of the world aerospace industry, reports Teal analysts in their latest integrated market analysis.

[Asia-Pacific Airlines Could Acquire 8,000 New Aircraft Over Next 20 Years](#)

Feb 06, 2010 - Region Driving Demand For Larger Aircraft Types Anyone looking for growth in the airline industry needs to look to the Asia/Pacific region, as airlines there could acquire as many as 8,000 new passenger and cargo aircraft over the next 20 years.

[Rolls - Royce Bullish on Long - Term](#)

New York Times, By REUTERS LONDON
 Engine-maker Rolls-Royce's bullish long-term outlook overshadowed its caution on the civil aerospace market as it reported...

[Chicago Aviation Officials Want to Negotiate with Airlines](#)

Chicago Public Radio, The Chicago Department of Aviation is responding to a threat from two major airlines. United and American Airlines say they don't want to pay more fees to...
<http://egov.cityofchicago.org/aviation>

[Banking On Boeing's Backlog](#)

<http://www.forbes.com/2010/02/19/whittington-undervalued-dreamliner-intelligent-investing-boeing.html>
 Rick Whittington, 02.19.10

Boeing's stock has risen in the past year but it's still undervalued.

This column has had extensive focus on **Boeing** and its commercial aviation food chain explained both by the company's key role in the American economy as the nation's No. 1 exporter but also its key status in defense contracting. Fueled by a huge backlog acquired during the global growth heyday of 2005 to 2007, **Boeing** revenues and earnings suffered the last two years from developing miscues on the innovative 787 Dreamliner and also by the late 2008 strike. Its defense operations also received disproportionate weapons systems cancellations and cutbacks when the new administration took office. The stock suffered mightily, collapsing from a record \$105 in fall 2007 to just beneath \$30 one year ago. Today the shares are just above \$60, the highest it has been in a year and a half.

[Cincinnati/Northern Kentucky International Airport Fastest Growing Local Market](#)

Feb 21, 2010, Reports 21 Percent Passenger Growth Last Year Over 2008 Local passenger traffic at Cincinnati/Northern Kentucky International Airport (CVG) grew almost 21% in the 3rd quarter of 2009 as compared to the same period in 2008 - moving CVG to the top position for the largest increase in local passenger traffic, according to the 3rd Quarter 2009 DOT report.

AEROSPACE NEWS[Return to Contents](#)**PUBLICATIONS WORTH LOOKING AT****SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM:**<http://www.nasm.si.edu>**AIR & SPACE MAGAZINE:**WWW.AirSpaceMag.com**Aero-TV: A New Milestone - FAA Certifies Cecil Field Spaceport**

Feb 01, 2010, - Jacksonville's Cecil Field Becomes Nation's 8th Commercial Spaceport The Navy's former Master Jet Base in Jacksonville, Florida, has received a Launch Site Operators License from the FAA, making it the nation's 8th designated horizontal launch commercial spaceport.

Scranton Breaks Ground On New Tower

Yesterday, February 01, 2010, 9:59:01 PM
New Facility To Be Complete By 2012 The 57-year-old air traffic control facility at the Wilkes-Barre/Scranton International Airport (AVP) is finally getting a replacement.

User Fees Axed From Proposed FAA Budget

Yesterday, February 01, 2010, 5:57:20 PM
Fiscal 2011 proposal does not include fees.

Boeing Improvements Produce Better Next-Generation 737s Faster.

Feb 01, 2010, gilSEATTLE (PRNewswire-FirstCall):
In just 12 years, Boeing (NYSE: BA) employees in Renton, Wash., built and delivered 3,133 Next-Generation 737 airplanes. It took 32 years to produce that same number of earlier-model 737s. Relentless employee and supplier focus on efficiency has resulted in 121 customer airlines receiving their airplanes more quickly.

Human Space Flight Needn't Rely on NASA: Analysis

Feb 01, 2010 - Is Obama's just-released NASA budget the "death march for the future of U.S. human space flight," or is it in fact a new beginning for the space agency?

Boeing 787 Dreamliner interior tour

Yesterday, February 03, 2010, 6:53:00 PM |
aubreycohen@seattlepi.com (Aubrey Cohen)
Boeing Wednesday showed off its third flight-test 787 Dreamliner -- the first with actual interior components such as seats, galleys and overhead bins.

Boeing 787 Flies with PPG Aerospace Transparencies, Coatings, Sealants

MarketWatch, Feb 04, 2010 (BUSINESS WIRE) -- A topflight team of products made by PPG Industries' (NYSE:PPG) aerospace business for the Boeing 787...

WASPS to Receive Gold Medals from Congress.

Feb 04, 2010, gil
Author in newly released book, "Flights of Adventure," Marion Stegeman Hodgson to receive Congressional Gold Medal, March 10, 2010.

Bensen Days 2010.

Feb 12, 2010, gil
Gyroplane, Gyro, Giro, Gyrocopter or whatever you call it, it is a type of aircraft that pilots don't just fly but are addicted too. Yet this amazing, affordable, nimble aircraft is one of the most misunderstood machines in aviation history.

Airlines slash prices as high-speed trains prove popular

Feb 12, 2010, China Southern Airlines Co, the nation's largest carrier, and Air China Ltd are slashing prices to compete with the country's new high-speed trains in a battle that Europe's airlines have largely already ceded.

Work on NextGen aviation park has begun

Press of Atlantic City
Utility and road work at the Next Generation Aviation Research and Technology Park has begun in Egg Harbor Township at a 55-acre site supporters say could

New Virtual Museum Web site on African-Americans in Aviation

http://www.ledger-enquirer.com/news/breaking_news/story/1009238.html
By ROBIN TRIMARCHI - rtrimarchi@ledger-enquirer.com
A new virtual museum dedicated to the history of African Americans in aviation launched was launched online Wednesday by American Airlines. Black History in Aviation, at <http://www.blackhistoryinaviation.com>, explores the history and accomplishments of African-Americans in the industry from before the civil rights era to the present, including the struggle for racial equality in commercial airlines, the military and aerospace.

Replace Pilot Certificates, Take Knowledge Tests Now

Feb 18, 2010, Pilots who are still carrying old paper FAA airmen certificates need to replace them with new plastic card versions by the end of March. On March 31, the old certificates will expire.

WACO Classic Announces All Glass Aircraft

Feb 18, 2010 - Traditional Meets Tomorrow In 1930's Style Biplane WACO Classic Aircraft says it has produced a first for single engine General Aviation, an all glass panel aircraft, the WACO YMF open cockpit biplane. This plane is completely without a single round or analog gauge.

Seattle-based Alaska Airlines obsoletes paper boarding pass

Feb 18, 2010, aubreycohen@seattlepi.com (Aubrey Cohen)
Starting Thursday, passengers on Seattle-based Alaska Airlines no longer need to print out boarding passes.

Parachutist Jumps From Tethered Hot-Air Balloon

Feb 19, 2010, Operators Were Not Expecting The Valentine's Day Stunt A person who had booked a ride in a tethered hot-air balloon for Valentine's Day surprised the other passengers by climbing over the gondola's safety

net, unrolling a hidden parachute, and launching himself into the air 300 feet above the ground.

NASA Ponies Up for Commercial Suborbital Space Rides

<http://news.discovery.com/space/nasa-ponies-up-for-commercial-suborbital-space-rides.html>

By [Irene Klotz](#) | Fri Feb 19, 2010

Even at \$200,000 a ticket, the lines for a suborbital ride into space may soon be growing longer. The U.S. government is proposing to spend \$75 million over the next five years to send science experiments -- and presumably scientists -- into space.

"For everyone who has dreamed of participating in the grand adventure of spaceflight, this \$75 million commitment marks the dawn of a new space age," said Alan Stern, NASA's former lead scientist who is now spearheading several commercial and research agency initiatives interested in suborbital spaceflight

Concrete Phase of Runway Begins at Spaceport America

<http://www.spaceportamerica.com/news/press-releases/294-concrete-phase-of-runway-begins-at-spaceport-america.html>

FEBRUARY 15, 2010, UPHAM, NM

The first batch of concrete was poured Thursday, February 11, marking the start of the final concrete finish phase of the runway construction at Spaceport America, the world's first purpose built commercial spaceport. The runway project, which began in August 2009, is expected to be completed this summer, according to the New Mexico Spaceport Authority (NMSA).

NASA Increases Support Contract to Mid-Atlantic Regional Spaceport

Feb 22, 2010, NASA has increased the support contract to the Virginia Space Flight Authority/Mid-Atlantic Regional Spaceport at NASA's Wallops Flight Facility, Wallops Island, Va., to provide launch services for expendable launch vehicles.

WASP - WWII CONGRESSIONAL GOLD MEDAL CELEBRATION



<http://www.flygirls.org>

The Women Airforce Service Pilots (WASP-WWII),

travel to Washington, DC to receive the Congressional Gold Medal on March 10, 2010. Nearly 70 years have passed since America fought in World War II. In those critical days over a thousand courageous women pilots took to the skies in military aircraft for the United States Army Air Forces to relieve desperately needed male pilots for combat duty.

Submitted By: Kurt Stofko AEP898

The World's Largest Airplane Graveyard in High Resolution, Now On Google Maps

Feb 23, 2010, John Mahoney



Some take religious journeys to sacred places, others gather at the home fields of beloved sports teams. But my pilgrimage? One day it will be here, to the 309th Aerospace Maintenance and Regeneration Group outside of Tuscon. Better known as the "Boneyard," it's the place where nearly 5,000 aerospace vehicles have gone to die. I'm going to spend the rest of the work day scoping out the [new high-res](#) Google map.

Ninety-Nines Urge Women Pilots To 'Fly A Friend'

Feb 25, 2010, - Celebrating 100 Years Of Licensed Women Pilots Susan Larson, President of the Ninety-Nines, has committed to flying women who have never flown before in both her Cessna 182 and Hughes 500 helicopter during the week of March 6-12, in celebration of 100 years of licensed women pilots.

Goodrich Corporation Donates Vintage Aircraft to WACO Historical Society

<http://www.goodrich.com/portal/site/grcom?GUID=27f8ec624ace6210VgnVCM10000068f57eaaRCRD>

• 1929 WACO model CTO "Taperwing" biplane was owned by air racer Joe Mackey

Court Opens Blocked N Numbers

Feb 27, 2010 - A federal court has ruled the FAA must release aircraft registration information previously kept secret in a special program if it receives a Freedom of Information request. For about 10 years, private aircraft operators have been able to have their N numbers "blocked" from outside scrutiny under the National Business Aviation Association's Blocked Aircraft Registration Request (BARR) program.



Feb. 22, 2010 ~ Goodrich Corporation's [Aircraft Wheels and Brakes](#) team in Troy, Ohio donated a 1929 WACO Model CTO "Taperwing" biplane, once owned by famous air racer Joe Mackey, to the WACO Historical Society. A ceremony involving Goodrich employees, representatives of the WACO Historical Society and Troy civic leaders was held at Historic WACO Field today to commemorate the donation.

AEROSPACE TECHNOLOGY NEWS

[Return to Contents](#)

Websites worth visiting:

NASA - TechGate Wire:

http://technologygateway.nasa.gov/TechGate_Wire.html

C-5 Galaxy

<http://www.lockheedmartin.com/products/c5/>

[Engineers aim to make air travel greener](#)

Feb 03, 2010 - Carbon emissions from air travel could be reduced, thanks to a new collaboration between engineers in the UK and the aerospace industry. The million projects will investigate new ways of using composite materials for wing panels in aircraft. The research will be using carbon fibers that are curved within flat plates to produce damage-tolerant, buckle-free structures.

SINGAPORE 2010: Boeing examines extending 737 nosegear to accommodate new engine

<http://www.flightglobal.com/articles/2010/02/04/338040/singapore-2010-boeing-examines-extending-737-nosegear-to-accommodate-new-engine.html>

04/02/10, Flight International, Jon Ostrower

Amid increasing industry speculation about the imminent launch of [re-engined narrowbodies](#), Flightglobal has learned how [Boeing](#) could engineer the tricky installation of an advanced turbofan under the wing of the [737](#).

[Marine Corps' Unmanned Programmable Copter Passes First Major Test](#)

Feb 09, 2010, Stuart Fox



The difficulty of supplying remote outposts across rugged terrain has contributed to many of the deadliest moments in the Afghan War, by preventing the delivery of weapons and ammo to engaged soldiers, forcing supplies to travel over dangerous roads, or turning helicopters into vulnerable targets.

AOPA: 40 Top Technologies

The Future You Fly Today

<http://flash.aopa.org/technology>

[In First Successful Test, Airborne Laser Shoots Down Missile](#)

Feb 12, 2010, Jeremy Hsu



But can it shoot down skeeters?

Futuristic airborne energy weapons have officially arrived, so mark your calendars. The U.S. Missile Defense Agency said that its airborne laser weapon successfully shot down a ballistic missile during a test late last night, according to [Reuters](#).

[Lockheed, Kaman unmanned helicopter test a success](#)

The Associated Press

Lockheed Martin Corp. and Kaman **Aerospace Corp.** are launching their own unmanned military helicopter. Lockheed Martin based in Bethesda, Md., and Kaman...

Sikorsky Innovations Launched to Redefine Future of Vertical Flight

<http://www.prnewswire.com/news-releases/sikorsky-innovations-launched-to-redefine-future-of-vertical-flight-83273367.html>

STRATFORD, Conn., Feb. 1 /PRNewswire-FirstCall/ --



Sikorsky Aircraft Corp. today launched its new technology development organization --

Sikorsky Innovations -- at a program attended by more than 100 government, education, business, technology and other officials at the Connecticut Science Center in Hartford. Sikorsky Aircraft is a subsidiary of United Technologies Corp. (UTX).

[Sikorsky venture to develop unmanned Black Hawk](#)

Feb 01, 2010 - Sikorsky Aircraft Corp. is launching a \$1 billion venture featuring a pilot-less Black Hawk helicopter as military demand rises for technology to fight two wars.

[Say Hello to Robonaut, NASA's Android Space Explorer of the Future](#)

Feb 04, 2010, Stuart Fox



With the news that the White House [has canceled the Constellation Program](#), NASA seems to be moving out of the human space flight business. However, the unveiling of [a next-generation robot astronaut](#) shows the android space program to be alive and well.

Designed through a partnership with General Motors, the Robonaut2 is the cutting edge of android technology. Equipped with a wide array of sensors and dexterous five fingered hands, NASA plans for the Robotnaut2 to work along side humans in space operations, or by itself in missions too dangerous for people.

[Prototype: Luxury Eco-Zeppelins Will Fly Future Passengers Around the World](#)

Feb 04, 2010, Jeremy Hsu



Phileas Fogg may have hopped aboard hot air balloons, trains, and elephants in his race around the world in 80 days, but future airship passengers need only step aboard the Aircruise for a far shorter and more luxurious travel experience. The 2015 concept for a sky hotel comes courtesy of London designers Seymourpowell, and a commission from Samsung Construction and Trading to make the vision come to life.

Darpa Eyes SM-3 For Hypersonic Strike

http://www.aviationweek.com/aw/generic/story_generic.jsp?channel=aerospacedaily&id=news/asd/2010/02/04/02.xml

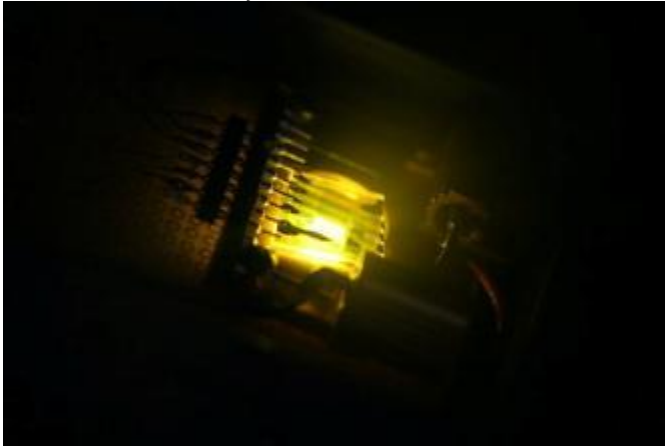
Feb 4, 2010, Graham Warwick

The U.S. Defense Advanced Research Projects Agency (Darpa) is seeking funding in Fiscal 2011 for ArcLight, a program to flight-test a long-range, high-speed strike weapon based on the Raytheon SM-3 ballistic-missile interceptor.



Wonder Material Graphene Becomes Lighting for Future Devices and Homes

Feb 08, 2010, Jeremy Hsu



New light-emitting electrochemical cells could replace OLEDs

Graphene may brighten the future more literally than we had originally anticipated, besides merely [revolutionizing electronics](#) and Silicon Valley. Swedish and American researchers have transformed the one-atom-thick carbon material into a new, inexpensive lighting component that could give [organic light diodes](#) (OLEDs) a run for their money.

Ion Engines Will Make Little CubeSats Steerable

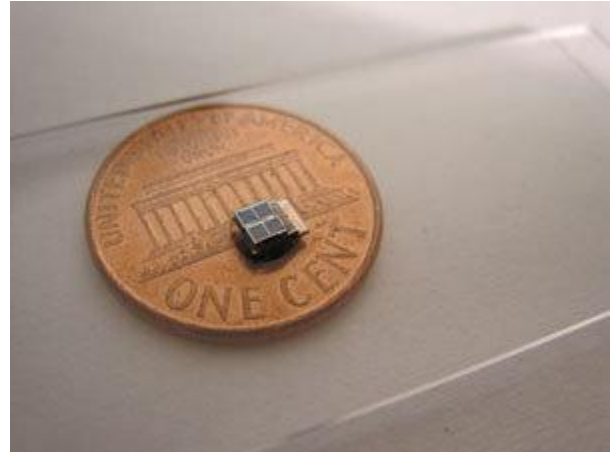
Feb 04, 2010, Stuart Fox



The DIY miniature satellites known as CubeSats have a lot going for them. They're cheap, they're easy to program, and they're small. That last benefit also adds a downside, in that the CubeSats are too small to sport any propulsion systems. MIT is looking to change that by [creating an ion propulsion system](#) so small that it will take up less than 10 percent of the already tiny Cubes.

Miniature Sensor Perpetually Charges Self Using Environmental Energy

Feb 09, 2010, Stuart Fox



Scientists, engineers, and doctors yearn for tiny sensors to record a vast array of events in the world's many hard-to-reach places. And so far, the tradeoff between battery life and size has prevented sensors from becoming small enough to fit unobtrusively in the human body, or inside very small machines. Now, University of Michigan researchers seem to have solved that puzzle by creating a chip that [draws energy through solar power, heat, or movement](#). By forgoing a large battery for perpetual environmental power, the U of M scientists managed to produce a sensor 1,000 times smaller than any other similar device.

DARPA launches search for unmanned A-10 replacement

Today, February 10, 2010, 5 hours ago

The Defense Advanced Research Projects Agency (DARPA) could demonstrate within two to three years a new unmanned aircraft...

Sun-powered water splitter makes hydrogen tirelessly

<http://www.newscientist.com/article/dn18511-sunpowered-water-splitter-makes-hydrogen-tirelessly.html?DCMP=OTC-rss&nsref=online-news>

Feb 2010, by [Colin Barras](#)

Sunlight + water = hydrogen gas, in a new technique that can convert 60 per cent of sunlight energy absorbed by an electrode into the inflammable fuel.

To generate the gas [Thomas Nann](#) and colleagues at the University of East Anglia in Norwich, UK, dip a gold electrode with a special coating into water and expose it to light. clusters of indium phosphide 5 nanometres wide on its surface absorb incoming photons and pass electrons bearing their energy on to clusters of a sulphurous iron compound.

Space 2020: what NASA will do next

<http://www.newscientist.com/article/mg20527473.500-space-2020-what-nasa-will-do-next.html?DCMP=OTC-rss&nsref=online-news>

10 Feb 2010, [David Shiga](#) and [Rachel Courtland](#)

ASTRONAUTS digging into an asteroid for samples to send back to Earth. Experimental robots on the moon, paving the way for extraterrestrial refuelling stations and for astronauts "living off the land". Commercial space taxis ferrying crew members to and from the International Space Station, while a "plasma thruster" - a precursor to engines that will eventually send astronauts to Mars - undergoes tests in space.

- Trip to an Asteroid
- Space taxis
- Fuelling in space
- Ion engines

Planes Without Pilots.

Feb 16, 2010, gil, Remote-controlled drones, used for surveillance and missile strikes in Iraq and Afghanistan, are changing the face of modern warfare.

Silicon wire forest makes wearable solar cells

<http://www.newscientist.com/article/mg20527485.200-silicon-wire-forest-makes-wearable-solar-cells.html?DCMP=OTC-rss&nsref=online-news>

21 Feb 2010, Magazine issue [2748](#).

SOLAR cells built into clothing sound like a great way to charge gadgets while on the move, but for the idea to work the cells will have to be both flexible and cheap. With that in mind, [Harry Atwater](#) and his team at the California Institute of Technology in Pasadena have developed a bendy solar cell made from an array of microwires encased in a clear flexible polymer. It uses just 1 per cent of the expensive silicon needed by a regular solar cell with the same output, and is just 5 per cent of the size.

Stars Can Teach Us a Thing or Two about Manufacturing Carbon Nanotubes, NASA Finds

Yesterday, February 22, 2010, 4:55:28 PM | Jeremy Hsu
Efficient space-born recipe requires no metal
Carbon nanotubes may push future innovations ranging from [self-repairing electronic devices](#) to batteries based on [nanotube ink](#) and paper. Now NASA scientists may have uncovered a new recipe for making carbon nanotubes based on interstellar processes.

World's First Junctionless Transistor Could Revolutionize Chip Industry

Yesterday, February 22, 2010, 2:59:04 PM | Clay Dillow
Transistor junction, what's your function now? Irish researchers at the Tyndall National Institute have fabricated the world's first [junctionless transistor](#), a nanotech development that could change the way semiconductors are manufactured.

The Present and Future of Unmanned Drone Aircraft: An Illustrated Field Guide

Feb 23, 2010, Eric Hagerman



Inside the wild kingdom of the world's newest and most spectacular species of unmanned aircraft, from swarming insect 'bots that can storm a burning building to a seven-ton weaponized spyplane invisible to radar

PICTURE(S) THE MONTH

[Return to Contents](#)

An Astronaut Peeks Out from the Space Station's Lovely New 360-Degree Window

Feb 22, 2010, Jeremy Hsu - I see you, space shuttle



Space shuttle Endeavour has landed safely after installing a new observation deck on the International Space Station. But the Endeavour astronauts didn't leave without first checking out the new view from the cupola window.