

Charged Up



ELECTRIC VEHICLE ASSOCIATION OF SAN DIEGO (EVAOSD)

An affiliate of the Electric Auto Association (EAA)

2755 Dos Aarons Way, Suite A, Vista, CA 92081

Ph: (760) 670-3388 Fax: (760) 266-9505 Email: EVAOSD.Newsletter@DriveGasFree.com

Website: www.evaosd.com

Officers:

President: Joseph S. Gottlieb

Vice President: Wistar Rhoads

Treasurer: Lloyd Rose

Program Chairman: Joseph S. Gottlieb

Newsletter Editor: Staff

Webmaster: Russ Lemon

Librarian & AV: Lloyd Rose

Regular Meetings: 4th Tuesday of every month
(January thru November), at 7:00
p.m.

Location: California Center for Sustainable Energy
8690 Balboa Ave., Suite 100 · San Diego, CA 92123

Place: Main Conference Room

Next Meeting: Tuesday, Feb. 23, 2010 @ 7:00 p.m.

Program: General Topics

We are still on the move!

This month is at the CCSE. Next month we are not sure yet. Please check into the website www.evaosd.com to know where to go. Sorry for the inconvenience, we are trying our best to make it through the next couple of months before we can make the CCSE our permanent home.

Our rates are going up

The EAA has new rates for membership to our association. You now have two choices for subscription. One is the electronic version for \$35 per year and the other is paper for \$45 per year. Those are standard rates. Discounts apply for students and seniors. The EVAOSD will also be converting over and sending out an electronic version of the newsletter. We will continue to do a limited number of print copies for our members. As always, the newsletter is available for free on the EVAOSD website at www.EVAOSD.com).

Back page change

The back page of our newsletter now contains the new form the EAA wants to use for subscriptions. If you are new to subscribing, make sure you indicate you want to support the EVAOSD (San Diego Chapter of the EAA). I will eventually update the single page flyer we use for advertising.

Inside this issue:

- 1 News
- 2 Presidents Rant
- 2 From the Treasurer
- 3 Electric Motorcycle Info
- 4 History Corner
- 5 What is Nano Technology?
- 6 Subscription

News:**MINI E Customers All Have One Common Complaint – Range Anxiety**

California MINI-E electric vehicle drivers do not have a developed charging infrastructure. These customers have "range anxiety," feeling as though they are being controlled by an "electric leash" that prohibits how far they can travel. CarChat reports: "A BMW study conducted by the University of California, Davis, shows that most MINI E customers are happy with their cars after six months of usage. A fully-charged MINI E can move the car for 100 miles.

A full recharge with the included high voltage cables takes between four and eight hours. If a MINI E owner is forced to plug the car into a standard 110-volt outlet, a full recharge can take up to 23 hours."

Presidents Rant:

For starters, the above article! Range anxiety? Great, so I am guessing Pfizer is working on a new anti-anxiety drug called rangexo or ambiEV. Have we really boiled down to people that can't function without being handheld through life? As sarcastic as I am, I get it. I have driven the small electric vehicles with a feather toe causing everyone behind me to blare their horns because I am not exactly sure how much more I can go.

Also, what is up with Nissan? I hear they are leasing the batteries, now they are not, now they think they might lease the car. Sheesh, they need to get with the program and make up their minds. I am

worried ,however, that if they release a new car with too many questions in a "bad" economy, we might have another ev recession.

From the Treasurer:

San Diego is blessed with abundant, endless sunshine. We would be wise to use this resource accordingly.

The emerging application of the plug-in electric car coupled with new legislation that makes solar photovoltaic energy affordable and, in many cases, a net positive from day one will launch this county and state into a change in motive power and a change in the way we power our homes from consolidated sources of power (power plants, oil refineries) to distributed "in-basin" sources of power (home or business power plants) during the next few decades.

An electric vehicle in the garage charged from a solar photovoltaic system on the roof or car port equals a San Diego County that is far greater than it is today. Each, while beneficial alone, when paired together will change our county for the better.

EV (electric vehicle) + PV (photovoltaic energy) is a pairing as natural as hardware and software, as chocolate and wine, as sunshine and photosynthesis.

The county of San Diego and most cities within the county, have adopted the Property Assessed Clean Energy program (PACE). This makes solar photovoltaic systems, as well as other important energy and water saving improvements, affordable to all by allowing the financing of the improvements over many years via property taxes. With the PACE program, the savings on your utility and water bills after your improvements can equal or exceed your payment via your property tax assessment.

Source - Peder Norby San Diego County planning commissioner

From Tom Dulaney

FIM launching the E-Power electric motorcycle racing series, without TTXGP



Until now the story regarding the development of zero carbon footprint motorcycle racing was simple. The TTXGP organization, led by Azhar Hussain, was developing the race series, collaborating with several motorcycle racing governing bodies to establish the rules. This included the FIM and its US (AMA) and UK (ACU) affiliate organizations. On Nov 19 the FIM announced the launch of its own "alternate energy" motorcycle racing series named E-Power. That announcement began with the words "Concerned about..." which, reading between the lines, implies a conflict between FIM and TTXGP. The TTXGP issued a press release on Nov 23 expressing disappointment and saying that TTXGP's plans are unaffected by FIM's actions.

The TTXGP is a series of zero carbon motorcycle races meant to inspire electric vehicle technology development. They held several exhibition racing events during 2009 and have a slate of races lined up in the US and UK .

The FIM e-Power International Championship is described as "events" to be held during the "opening race of a few rounds of our prestigious championships" in 2010. The tentative schedule is four "events", on April 18 at the 24 Hours of Le Mans in France, possibly at a race at Albacete in Spain, on Sept 12 at Nevers-Mangy Cours in France, and possibly on Nov 14 at a race in Doha Qatar. The press release does not mention TTXGP unlike other prior FIM Alternate Energy Working Group (AEWG) communications that prominently featured TTXGP's activities. The AEWG page contains a paragraph describing their electric motorcycle racing series, naming Mr Azhar Hussain as the leader of the project. However the paragraph comes word-for-word from their June 24 press release implying this page has not been updated.

Alex Goldenberg, the AEWG coordinator, responded to queries stating "We have the greatest respect for Mr Azhar Hussain and his projects and we are open to working with him in the future if circumstances permit" and "We really hope that the FIM E-Power International Championship and the other events for electric motorcycles will boost and promote the use of alternative energies at an international and national level and we are convinced that all these events will meet successful participation and interest from the public and the media".

The TTXGP expressed disappointment that "despite our best efforts over many months to establish a truly inclusive world series, the FIM has decided to launch one independently of TTXGP". The previously announced calendar of events are established in cooperation with national racing bodies, the AMA and ACU, and are unaffected by FIM's decision.

The TTXGP team has been working closely since its founding with a long list of partner organizations, including the FIM. In the video below this writer interviewed Sadie Homer in July at the TTXGP event held during the AMA Vintage Motorcycle days event in Ohio. This interview goes over the technical developments conducted by the TTXGP and partner organizations to establish electric motorcycle racing regulations.

HISTORY Corner by Al Hodges

THOMAS A. EDISON
LLEWELLYN PASS – WEST ORANGE,
NEW JERSEY

STORAGE BATTERY. PATENT
NUMBER: 1,299,693 Specification of
Letter of Patent, Patented April 8, 1919
Application, filed August 10, 1914. Serial
No. 856,025.

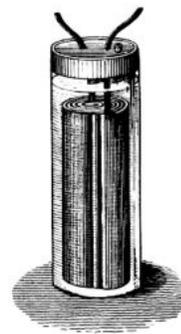
To all whom it may concern:
Be it known that I, Thomas Alva Edison, a
citizen of the United States, and a
resident of Llewellyn Park, West Orange,
in the county of Essex and State of New
Jersey, have invented certain new and
useful Improvements in Storage
Batteries, of which the following is a
description.

In prior patents and applications, I
have described storage batteries in which
an alkaline electrolyte is employed, and
in the referred form of which the positive
elements contain alternate layers of
hydroxides of nickel and nickel flake and
the negative-elements contain
electrolytically active iron or oxides of
iron. My present invention relates to an
improved battery of a similar type, and
my principal object is to increase the
capacity of such a battery by the
provision of an improved negative
element. My invention is based on the
discovery that the capacity of the
negative element can be materially
increased by adding tin or a compound of
tin, such as tin monoxide or stannous
oxide, to the negative electrode. The
finely divided iron preferably employed
for said electrode may be prepared by
reducing an iron compound, such as
ferric oxide, by hydrogen in the
manner set forth in my Patents Nos.
727,117 and 727,118, or in my Patent
No. 1,275,232, dated August 13, 1918,
or in any other suitable manner....

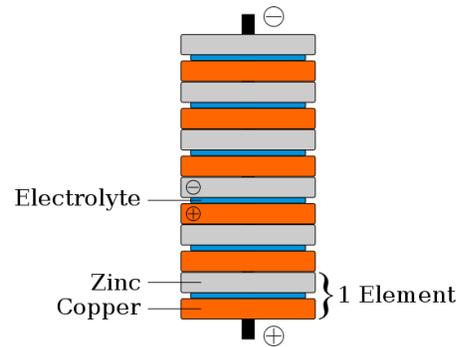
Edison continued his battery research
and the above patent was granted for
improvement of earlier work on the
alkaline iron negative electrode by adding
tin.



1910 – Edison’s 1,000 mile endurance test of his nickel iron alkaline battery using a Bailey Electric car. Edison and Ford planned to joint venture an electric car, but the electric starter was introduced in the 1912 Cadillac and in 1914 in Ford’s Model T. GM killed the electric car for the first time in the 20th Century.



1859 – Gaston Plante’s first rechargeable battery



1800 –Voltaic Pile by Alessandro Volta

What is Nanotechnology?

Nanotechnology is the understanding and control of matter at dimensions between approximately 1 and 100 nanometers, where unique phenomena enable novel applications. Encompassing nanoscale science, medicine, engineering, and technology, nanotechnology involves imaging, measuring, modeling, and manipulating matter at this minute scale.

A nanometer is one-billionth of a meter. A sheet of paper is about 100,000 nanometers thick. Dimensions between approximately 1 and 100 nanometers are known as the nanoscale. Unusual physical, chemical, and biological properties often emerge in materials at the nanoscale. These properties may differ in important ways from the properties of bulk materials and single atoms or molecules.

Moore's Law: This trend has continued far past the predicted 10 years until this day, going from just over 2,000 transistors in the original 4004 processors (1971) to over 700,000,000 transistors in the Core 2 (2006). There has, of course, been a corresponding decrease in the size of individual electronic elements, going from millimeters in the 60's to hundreds of nanometers in modern circuitry.

At the same time, the chemistry, biochemistry and molecular genetics communities have advanced. During this same period, it became possible to direct synthesis, either in the test tube or in modified living organisms. Finally, the last quarter of a century has seen tremendous advances in our ability to control and manipulate light. We are forty years from the beginning, and the world is awakening – rapidly – at academic, industrial, and government levels. Already, out automobile tires have greater wear resistance from nanotech rubber compounds.

[I believe nanotechnology will be the most influential and universal field of science for the 21st Century. Today, in 2010, universities, industries, medical research, governments, and individuals are experimenting and developing new commercial nanotech substances that enable elements and compounds to react completely differently from the accepted "facts" of the past 5,000 years of scientific study.] - Al Hodges

Website – U.S. Government: <http://www.nano.gov/>

Full article and more details: <http://www.nano.gov/html/facts/whatIsNano.html>

Education Center for Students K-12!

<http://www.nano.gov/html/edu/educ12.html>

Nanotechnology is a multidisciplinary field of discovery. Scientists working in physics, chemistry, biology, engineering, information technology, metrology, and other fields are contributing to today's research breakthroughs. The worldwide workforce necessary to support the field of nanotechnology is estimated to be at 2 million by 2015.

NNI Research Centers

A highly significant impact of the NNI has been the focused investment by the [NNI-participating agencies](#) in the establishment and development of multidisciplinary research and education centers devoted to nanoscience and nanotechnology.

NNI agencies have developed an extensive infrastructure of over 60 major interdisciplinary research and education centers and user facilities across the country. Many such centers, with state of the art equipment for nanoscale S&T research, are designated as user facilities and are available to researchers from academia and the private sector, and to scientists at the national laboratories.

The Web has many sites, sources, and centers of research providing information to the world. The Internet is undoubtedly the greatest communication tool ever developed. Anyone willing to learn has unlimited opportunities if politics and those who fight progress will get out of the way.

Electric Auto Association (EAA) Membership Application Form

Fill out this form, attach a check, money order or use PayPal, in US funds only, payable to 'Electric Auto Association'. CE = Current EVents newsletter

e-CE [] \$35 USA & other Countries [] \$25 Student [] \$25 Senior (>65-USA/Canada only) birth year []

paper CE [] \$45 USA [] \$48 Canada [] \$52 World [] \$29 Student [] \$29 Senior (>65-USA/Canada only)

[] \$120 (supporting level-1) [] \$240 (supporting level-2) [] \$500 or more (high voltage) [] do not list my name

I support the _____ EAA Chapter (additional chapters, \$10 each) _____

[] (\$10each) Additional Chapters or Special interest group (other than the one that comes with the membership)

You can fold this form as indicated and mail it with your payment enclosed. Use tape to seal the form, on the sides, before you mail it or send an e-version of this form, through PayPal using http://electricauto.org/eaamembership.html

[] New Member [] Renewal

Name [] email []

Mailing address (Apt. #) [] Home phone []

Mailing City, State & Zip-8 [] Work phone []

[] Electronic version of Current EVents, paperless only, link sent by email, if your membership was for the e-version, that is what you will receive

[] Do you own or [] Lease an electric vehicle (plug-in) [] production [] conversion [] bicycle [] hybrid or [] None

please include miles driven and type of vehicle []

All information in this application is for the exclusive use of the EAA and not sold or given to any other organization.

Please identify your primary areas of interest relating to the EAA (check as many as your wish

[] Owner/Driver [] Hobby/Builder [] Professional/Business [] Competition (Rallies, Races, Records [] Plug-in Hybrids

[] Environmental/Govt. Regs [] Social (Rallies, Shows, Events [] New Technology & Research [] Solar & Wind Power

[] Promotion & Public Awareness of EVs [] Student or General Interest [] Electrathon/Bicycle/Scooter/Other

The Electric Auto Association is a non-profit, 501(c)(3) for the promotion of electric vehicles. Your donations are tax deductible and with your membership you will receive the EAA publication, "Current EVents". All information and statistics in this application are for the exclusive use of the EAA and is not sold or given to any other organization or company. Your membership dues include a percentage goes to the EAA Chapter you support for public Electric Vehicle promotion EVents like rallies, shows and EV rides.

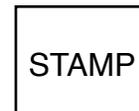
Current subscribers have borrowing privileges for the association's video tape and publications library. Subscribing to the newsletter is optional and is not a requirement for membership. EVAOSD meetings are always open to any and all interested parties. New Subscribers, please use this form to register to receive the EVAOSD Newsletter. Current Subscribers, please use this form to send us any change in your details.

Please make check or money order payable to: EAA and reference EVAOSD. Send this form and payment to: Lloyd Rose, EVAOSD Treasurer; 2755 Dos Aarons Way, Suite A, Vista, CA 92081

EVAoSD Newsletter

2755 Dos Aarons Way, Suite A

Vista, CA 92081



Address Correction Requested

First Last

Other Street

Other City, Other State Other ZIP