

## Cathay October 2015

[www.cathayradio.org](http://www.cathayradio.org)

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**Mission:** The Cathay Amateur Radio Club is basically an active social club of Ham Radio Operators and their spouses. We support local community requests for HAM emergency communications. Several of us are trained in CPR/ First Aid and are involved with community disaster preparedness.

**Monday Night Net Time:** 9 PM Local Time/PST, Frequencies: 146.67MHz -600KHz PL85.4 and 442.70 +5MHz PL 173.8. The repeaters are linked only during the CARC Monday night net.

Update: Link to repeater 442.70 is currently not active until further notice.

The CARC Monday night net is the best way to find out the latest club news.

All check-ins are welcome.

**Message from the President:** George Chong, *W6BUR*

Hello CARC Members and Friends;

In the Public Announcement Section, please check out:

- The Chinatown Health Fair is on 10 am – 3pm Saturday October 17, 2015.
- PACIFICON 2015 is on October 16, 17, 18, 2015 and it is being held in San Ramon. The walk-in attendance price has risen to \$30.00.

As you know with cellular phones, people are wondering is Ham Radio dying. Well the following story just might change your mind.

**5-year-old passes ham radio exam**



5 year old Colton Ragdale



Proud Parents: Zeke and Debra

In January 2015, 5 years and 9 months old Colton Ragdale – passed his HAM Radio Technicians Exam. His Federal Communications Commission (FCC) issued license call sign; KEOCRD was issued on January 5, 2015. Colton is at the tender young age where he is still in Kiddie Garden.

Coltan's parents: Mother Debra Ragdale – KOKAI and Father: Zeke Ragdale- KOXF are both holders of Extra Ham licenses.

The current technicians HAM license test consist of 35 questions from a random pool of 430 questions. The minimum passing score is 26 correct answers – approx. 74%

Colton Ragdale passing score of 91% mean he missed 3 out of the 35 questions from the HAM Technicians test. His Technicians license permits him to run 200 watts output on 4 High Frequency Bands and 1,500 watts on the UFH, VHF and Microwave bands.

From seeing his parents operate their HAM Radio, he wanted to participate and to fulfill his dream communicating with people around the world with a desire to help people.

For additional information see: <http://ad8bc.com/bc/?p=392>

The **Featured Tech Article** deals with a product that may find its way into your local hardware store, a super-efficient dusk mask.



Yi Cui  
Associate Professor  
Department of Materials Science  
and Engineering  
Stanford University

Stanford Associate Professor of material science and engineering, Yi Cui asked himself a fundamental question: How Can I Fix This Problem of Heavy Smog?

The problem of heavy air pollution is something that many of today's developing countries are encountering and trying to mitigate.

In the Bay Area we have: "Spare The Air Days" as one of the tools to control smog.

### **CARC Final Wrap-up News**

Chat sub s'em to all you CARC members! - George W6BUR.

## Public Service Announcements

### **HAM CRAM / HAM Licensing**

For upcoming HAM Licensing locations please refer to:

<http://www.arrl.org/find-an-amateur-radio-license-exam-session>

### **Auxiliary Communications Service (ACS)**

The Auxiliary Communications Service (ACS) was organized by the San Francisco Office of Emergency Services (OES) following the 1989 Loma Prieta Earthquake to support the communications needs of the City and County of San Francisco when responding to emergencies and special events.

The Auxiliary Communications Service holds General Meetings on the third Tuesday of each month at the San Francisco Emergency Operations Center, 1011 Turk Street (between Gough Street and Laguna Street), from 1900 hours to 2100 hours local time. All interested persons are welcome to attend.

The ACS Net begins at 1930 hours (7:30 p.m.) local time each Thursday evening, on the WA6GG repeater at 442.050 MHz, positive offset, tone 127.3 Hz. The purpose of this net is to practice Net Control skills, practice checking in with deployment status in a formal net, and to share information regarding upcoming ACS events. Guests are welcome to check in. ACS Members should perform Net Control duty on a regular basis. On the second Thursday of each month, the net will be conducted on the output frequency of the WA6GG repeater, 442.050 MHz no offset, tone 127.3 Hz, simplex.

For more information, please attend an ACS meeting or check in on a net, or call 415-558-2717.

Upcoming meetings: Tuesday 7pm, Oct 20, 2015  
Tuesday 7pm, Nov 17, 2015

### **Gilbert Gin (KJ6HKD)**

Free Disaster Preparedness Classes In Oakland:

<http://www.oaklandnet.com/fire/core/index2.html>

CORE is a free training program for individuals, neighborhood groups and community-

based organizations in Oakland. The underlying premise is that a major disaster will overwhelm first responders, leaving many citizens on their own for the first 72 hours or longer after the emergency.

If you have questions about the recertification process, you may contact the CORE Coordinator at 510-238-6351 or [core@oaklandnet.com](mailto:core@oaklandnet.com).

### **Free Disaster Preparedness Classes In San Francisco – NERT Taught by San Francisco Fire Department. Upcoming events .....**

#### **October**

3rd: Staging area & Neighborhood Command Post activation drill. 8:30a-12:30p, SFFD DOT\*

10th-11th: Fleet Week Humanitarian Village; NERT Outreach/Education booth. 9:00a-3:00pm, Marina Green near Scott St.

17th: Save the Date! NERT drill, celebrating 25 years of NERT, Pledge to attend

24th: ALERT training with SFPD. details and instructions

28th: Neighborhood Coordinator/Leadership Quarterly. 6:30p-8:30p, SFFD DOT\* Register

RSVP to [sffdnert@sfgov.org](mailto:sffdnert@sfgov.org) or call 415-970-2024 to register.

Visit [www.sfgov.org/sffdnert](http://www.sfgov.org/sffdnert) to learn more about the training, other locations, and register on line. Upcoming Special NERT Events.

### **San Francisco Police Department: Auxiliary Law Enforcement Response Team (ALERT)**

The Auxiliary Law Enforcement Response Team (ALERT) is a citizen disaster preparedness program designed. The ALERT program is for volunteers 16 years of age or older, who live, work, or attend high school in San Francisco.

Graduates of the San Francisco Police Activities League (P.A.L) Law Enforcement Cadet Academy are also eligible to join.

ALERT volunteers will first complete the Fire Department's Neighborhood Emergency Response Team (NERT) ([www.sfgov.org/sfnert](http://www.sfgov.org/sfnert)) training and then graduate into an 8

hour Police Department course specifically designed for ALERT team members.

ALERT members will work closely with full-time and/or Reserve Police Officers in the event they are deployed after a disaster. The Basic ALERT volunteer will have no law enforcement powers other than those available to all citizens.

### **SFPD ALERT Training**

The next ALERT training classes have been scheduled for **Saturday, October 24th, 2015**. The classes will be held at the San Francisco Police Academy, in the parking lot bungalow, from 8am-5pm (one hour lunch break).

IMPORTANT- All participants must complete the background interview process in order to be eligible to attend the ALERT training class.

Eligible ALERT participants may register for a training class by contacting the ALERT Program Coordinator, Mark Hernandez, at [sfpdalert@sfgov.org](mailto:sfpdalert@sfgov.org), or by telephone at 415-401-4615.

### **SFPD ALERT Practice/Training Drill**

All active/trained ALERT members are asked to join us for our next training drill, scheduled for **Saturday November 7, 2015 9AM – 1PM**. Details will be emailed to active ALERT members, prior to the date of the exercise. Participation is not required, but strongly encouraged.

For more information on the San Francisco Police Department ALERT Program, email us at [sfpdalert@sfgov.org](mailto:sfpdalert@sfgov.org), or call Sergeant Mark Hernandez (SFPD, Ret.), SFPD ALERT Program Coordinator, at (415) 401-4615.

For additional information on the web please refer to:

<http://sf-police.org/index.aspx?page=4019>

### **The 20<sup>th</sup> Chinatown Community Health Fair**

This year's event, which will be held from 10:00 AM – 3:00 PM Saturday Oct 17, 2015 at Chinatown YMCA (855 Sacramento Street, San Francisco, between Stockton St and Grant Avenue).

It is free and open to the public. Lots of information about community programs, no cost health screening, and giveaways items.



<http://pacificon.org/>

# PACIFICON 2015



*ARRL Pacific Division Ham Radio Convention*



*The ARRL Pacific Division and the Mt. Diablo Amateur Radio Club Present:*

## PACIFICON 2015 -

October 16, 17 and 18, 2015

- **The Great West Coast Ham Radio Convention!**
- **One of the Largest West Coast Vendor Shows of Amateur Radio Gear!**
- **Outstanding Technical Forums!**
- **Great Swap Meet!**
- And...Much, Much More!*



**Change of Venue to San Ramon,**



### **California**

San Ramon Marriott Hotel  
2600 Bishop Drive  
San Ramon, California, 94583

For Events, Schedules, Latest Updates, and  
[Registration and Ticket Reservations](http://www.PACIFICON.org) go to

[www.PACIFICON.org](http://www.PACIFICON.org)

## Pacificon 2015

### Pricing:

- |   |         |  |
|---|---------|--|
| • General Admission - Early Bird (until Oct. 5)     | \$25.00 |  |
| • General Admission - At the Door                   | \$30.00 |  |
| • College Student (w/ Valid Student ID, Max age 25) | \$5.00  |  |
| • Youth (Age 17 & under)                            | Free    |  |
| • Antenna Seminar (Oct. 16)                         | \$20.00 | (See our <a href="#">Antenna Seminar</a> page.)                                    |
| • Breakfast with Gordon West (Oct. 17)              | \$21.00 | (See our <a href="#">Breakfast with Gordo</a> page.)                               |
| • Banquet - (Oct. 17)                               |         | (See our <a href="#">Banquet</a> page.)  |
| ◦ Steak   | \$55.00 |  |
| ◦ Chicken or Vegetarian                             | \$52.00 |  |
| • Wouff Hong (Oct 17)                               | Free    | (See our <a href="#">Wouff Hong</a> page.)   |
| • License Testing Fee (FCC mandated)                | \$15.00 | (See our <a href="#">License Testing</a> and <a href="#">One-Day Class</a> pages.) |

### Location:

Registration will be located at the Mt. Diablo Room which is to the left of the hotel front entrance lobby area. The Registration Desk can assist attendees who are walk-in's, have questions about the event or business related to their registration. You may also purchase special event items at the Registration Desk.

Will-Call for those attendees that pre-registered on-line/phone will also be located in the hotel front lobby. Specific location will be announced at a later date.

### Hours:

Registration and Will-Call Desk hours for PACIFICON 2015:

FRIDAY - October 16th: 6:30am - 6:00pm

SATURDAY - October 17th: 6:00am - 5:00pm

SUNDAY - October 18th: 7:00am - 11:00am

Contact Registration Chair, Misa Siemons, KJ6BUE, at (925) 945-8007 or e-mail: [misa@siemons.com](mailto:misa@siemons.com) if you have any questions regarding registering for the event.

### Meet the Biggest Names in Amateur Radio

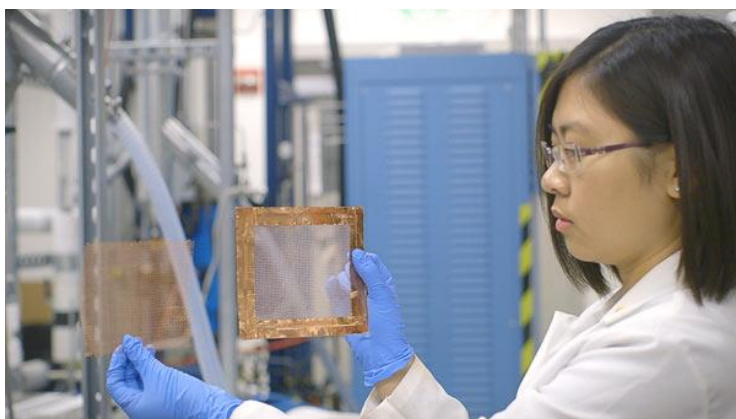
*Pacificon 2014 featured Forum presentations from legendary names in amateur radio including the hosts of Ham Nation: Bob Heil, Gordon West, and George Thomas of AmateurLogic.tv. Carole Perry (Director of Youth Programs @ Radio Club of America, and leader of the Dayton Hamvention Youth Forum) led the Pacificon Youth Forum. Our roster of Forums included thought leaders from the Software Defined Radio, Open Source, D\*Star, DMR/TRBO, and Maker communities. Dennis Wingo told the story of how citizen scientists teamed with radio amateurs in an attempt to reactivate the ISEE-3 cometary satellite.*



# Stanford engineers develop new air filter that could help Beijing residents breathe easily

*Stanford's Yi Cui and his students have turned a material commonly used in surgical gloves into a low-cost, highly efficient air filter. It could be used to improve facemasks and window screens, and maybe even scrub the exhaust from power plants.*

BY BJORN CAREY



Graduate student Chong Liu holds a newly created nanofilter that efficiently removes tiny pollution particles from the atmosphere. (Photo: Kurt Hickman)

By Bjorn Carey

In the past few years, Yi Cui has made several business trips to China. Each time he has found himself choked by smog produced by automobiles and coal power plants.

After a few of these trips, Cui, an associate professor of materials science and engineering at Stanford, came up with an idea to clean the pollution. He and his graduate students set to work designing an inexpensive, efficient air filter that could ease the breathing for people in polluted cities.

"My lab group really likes to solve problems, even if it's something we've never worked on," Cui said. "We think we could use this material for personal masks, window shades and maybe automobiles and industrial waste. It works really well, and it might be a game-changer."

The work is published in the current issue of the journal Nature Communications.

This was the first time Cui's group had designed an air filter – Cui's work with nanomaterials focuses primarily on battery technology – so he and his students didn't immediately look to materials that have traditionally been used in air filters.

Instead, they looked for polymers that would have a strong attraction to the main components of smog, particularly particle matters that are smaller than 2.5 microns, known as PM2.5. These pose the greatest risk to the human respiratory system and overall health; current filtration systems that can remove them from the air are very energy-intensive.

It turned out that polyacrylonitrile (PAN), a material commonly used to make surgical gloves, met these requirements.

"It was mostly by luck, but we found that PAN had the characteristics we were looking for, and it is breathtakingly strong," said Po-Chun Hsu, co-author on the study and a graduate student in Cui's lab.

Using a technique called electrospinning, the researchers converted liquid PAN into spider-web-like fibers that are just a thousandth the diameter of a human hair. In the study, the researchers approximated Beijing's smog by flowing smoke from burning incense over different densities of the fiber, and later performed a field test in Beijing. The final material allows about 70 percent transparency and yet collects 99 percent of the particles.

"The fiber just keeps accumulating particles, and can collect 10 times its own weight," said Chong Liu, lead author on the paper and a graduate student in Cui's lab. "The lifespan of its effectiveness depends on application, but in its current form, our tests suggest it collects particles for probably a week."

The first two immediate applications, Cui said, would probably be simple passive systems, such as personal masks and window screens, or possibly hospital air filtration systems.

"The transparency and distance between the fibers means that light and air can pass through very efficiently, which makes it a very good application for windows," Cui said. "It might be the first time in years that people in Beijing can open their window and let in a fresh breeze."

The material might also have a place filtering exhaust from cars, or from the smoke stacks of power plants and industrial complexes. These applications, Cui said, would require additional testing of the material to ensure that it is robust enough to withstand other acidic or toxic compounds in these types of exhaust.

For more Stanford experts on engineering and other topics, visit [Stanford Experts](#).