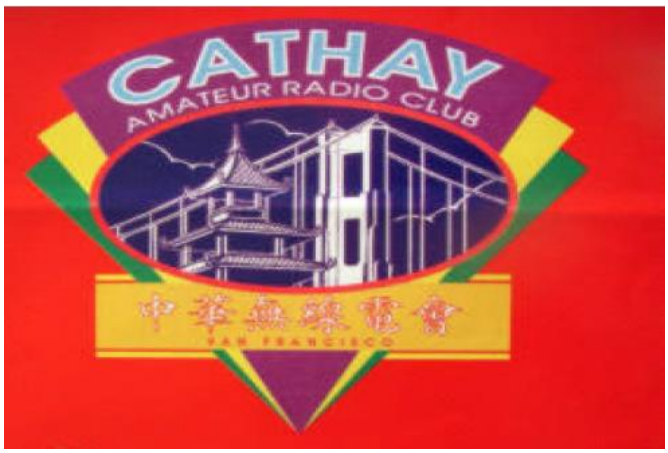



# Cathay February 2026

*www.cathayradio.org*

**President North:** Leonard Tom, *NX6E* **email:**nx6e@sonic.net
**Vice President South:** Bill Fong, *W6BBA* - **email:**w6bba@arrl.net
**Secretary/Membership:** Rodney Yee, *KJ6DZI* - **email:**rodyee2000@yahoo.com
**Editor:** Rodney Yee, *KJ6DZI* - **email:**rodyee2000@yahoo.com
**Treasurer:** Rodney Yee, *KJ6DZI* - **email:**rodyee2000@yahoo.com
**Web Master:** Edison Fong – *WB6IQN* - **email:**edison_fong@hotmail.com
**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, As of 8/21/2023 we are switching over from using Repeater: WB6TCS to **Nick Cassarino's Repeater: WA6GEL UHF 444.800 Mhz, Offset +5 Mhz, CTCCS/Tone PL 179.9 Hz on Monument Peak, Milpitas. If you are in the North Bay, one can use the WA6GEL repeater North Bay located on Mt. San Bruno - 444.8 MHz offset +5 Mhz, CTCCS/Tone PL173.3 Hz**

The CARC Monday night net is the best way to find out the latest club news. All check-in are welcome.

**Message on Behalf of the President:** Leonard Tom, *NX6E*

Hello CARC Members and Friends;

Many thanks to both Nick Cassarino for the use of repeater – WA6GEL for our CARC Monday Night Net.

Additional folks are needed to help out with conducting the CARC radio net on Monday nights. Please contact Ed Fong (edison_fong@hotmail.com) if you are interested.

I wish to thank our CARC members that set aside their valuable time to participate in our Monday night's nets.


Chinese New Year for 2026 is on Tuesday February 17, 2026, the Year of the Fire Element Horse

According to the Chinese calendar, folks born in the year of the Horse are in 1918, 1930, 1942, 1954, 1966, 1978, 1990, 2002, 2014, and 2026.

People born in the Year of the Horse are known for being cheerful, energetic, popular, independent, perceptive, adaptable, strong sense of justice, good humor, and optimistic. They thrive in social settings, love freedom, make quick decisions, and are resourceful.

Another trait is that the element fire brings is that of signifies smart, charismatic, lively, overflowing with enthusiasm, passion, intensity, leadership and entrepreneurship but can be very stubborn

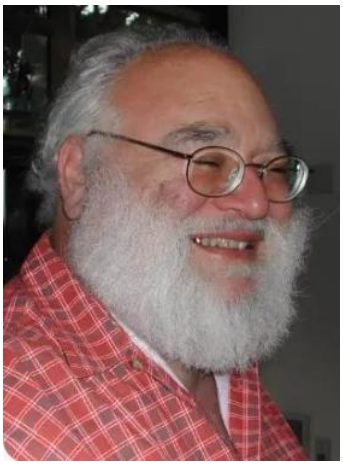
However; they can be overly ambitious, self-centered, impatient, or struggle to hide emotions.

Fire Horses are generally excellent at making money. Their confidence, drive, and willingness to take risks can lead to significant financial gains. However, they are much better at making money than they are at managing it. Their impulsiveness can extend to their finances, leading to expensive spending or high-risk investments that don't always work out. For long-term financial security, a Fire Horse is wise to partner with a more financially careful sign (like an Ox or a Rooster) or to work with a trusted financial advisor who can provide structure and protect their earnings from their own impulsive tendencies.

Below is extract from website:
https://www.travelchinaguide.com/intro/social_customs/zodiac/horse.htm
https://theqiflow.com/blogs/chinese-zodiac/chinese-zodiac-fire-horse


## Silent Key - David Gomberg - NE5EE

[David Gomberg Obituary (2025) - Colma, CA - Colma Cremation & Funeral Services - Colma]



David Roos Gomberg, 85, passed away in his home in San Francisco on December 4th, 2025

Born in San Francisco on September 2, 1940, to Louis Roos Gomberg and Ruth Murphy Goodbar Gomberg. David was the oldest of four children. He graduated from Lowell High School and received a BA in Math and Philosophy and a PhD in Statistics from UC Berkeley.

David spent the bulk of his working career working as a Computer Programmer for the University of California, San Francisco. After he retired in 1994 he engaged in the second mortgage market and volunteered for numerous organizations.

David enjoyed food and wine; playing with computers; collecting cars, wine and art; traveling around the world; nature-related activities such as sailing, traveling to observe eclipses, bonsai and hiking; and using HAM radio skills in emergency response, to connect around the world, and preparing users for HAM radio certification.

David is survived by his beloved Diana Lum, his son, Bryon Gomberg, and his daughters Seri Gomberg and Denise Lum; his grandchildren Segev Malool, Orionne Malool, Sarah Bowen, Luke Bowen, Sophia Gomberg, Omri Gomberg, and Itamar Gomberg; his brother Paul Gomberg, his sister Lynn McCarl; and many extended family members. His death was preceded by that of his parents and a younger brother.

David will be cremated and interred at the San Francisco Columbarium. Shiv'a will be held in North Oakland December 20-24, 2025.

Details at https://imseri.com/shiva/. In lieu of flowers and trees donations in David's memory may be made to Pocket Opera.

To send flowers to the family or plant a tree in memory of David Gomberg, please visit our floral store.

**On a personal note (Rodney Yee – KJ6DZI**)- Some 15 years ago, I took my Ham Examine and got my technician license via David Gomberg running a Ham cram and exam. Many of our fellow CARC members also took and got their HAM License via David/s Ham Cram Team. I would often see his wife Diana Lum at the Auxiliary Communications Service (ACS) meetings. Both David and Diana are folks that are really respected and admired for their contributions to the Bay Area HAM community. David will be greatly missed by our HAM community.

## Introduction to Tech Section:

The issue of plastic waste not breaking down in the environment has been a persistence issue. Japanese researchers may have come up with a way to creating plastics that breakdown in either seawater or in the soil.

For more details, see the Tech Section of this newsletter.

## Special FARS Winter Banquet – Friday February 27, 2026 Announcement

Our sister HAM Club, Foothill Amateur Radio Society (FARS) is hosting their Winter Banquet and guest speaker. Please read further details toward the bottom of this newsletter.

### CARC Final News Wrap Up

Chat sub s'em to all you CARC members! - Leonard Tom, *NX6E*

## 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) is a unit of trained professionals who supply communications support to the agencies of the City and County of San Francisco, particularly during major events/incidents. ACS goals are the support of gathering and distribution of information necessary to respond to and recover from a disaster.

The ACS Net begins at 1930 hours (7:30 p.m. PT) 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 perform Net Control duty on a regular basis. On the second Thursday of each month, the net is conducted in simplex mode on the output frequency of the WA6GG repeater, 442.050 MHz no offset, tone 127.3 Hz.

ACS holds its General Meetings on the third Tuesday of each month from 1900 hours to 2100 hours local time. Currently meetings are exclusively conducted over Zoom during the COVID-19 pandemic, ACS looks forward to meeting in person again as soon as possible.

Upcoming meeting dates in 2026 are:

- February 18, 2026
- March 18, 2026
- April 15, 2026

Location of in person future ACS meetings are yet to be determined as the regular location is under reconstruction. All interested persons are welcome to attend. For further information contact Corey Siegel KJ6LDJ <kj6ldj@gmail.com>.

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

**Free Disaster Preparedness Classes In San Francisco – NERT Taught by San Francisco Fire Department (SFFD).**

**https://sf-fire.org/nert/nert-calendar-meetings-trainings-events**

Training Classes: see above website. TBD

**+ Recertifications**
TBD

***SFFD DOT** is the Fire Department Division of Training. All participants walking, biking or driving **enter through the driveway gate on 19th St.** between Folsom and Shotwell. Parking is allowed along the back toward the cinderblock wall.

Visit ***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 no longer need to complete the Fire Department's Neighborhood Emergency Response Team (NERT) (www.sfgov.org/sfnert) training and then graduate into two 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 (New Members)**

The next SFPD ALERT training class has been scheduled for: TBD

*Class date indicated are only for new members

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 fora training class by contacting the ALERT Program Coordinator, marina.chacon@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, via scheduled for on TBD

For more information on the San Francisco Police Department ALERT Program, email us at sfpdalert@sfgov.org, or call Lt. Marina Chacon (SFPD Ret.), SFPD ALERT Program Coordinator, at (415) 401-4615.

For additional information on the web please refer to:
https://sfgov.org/policecommission/alert

**Special Announcement: FARS Winter Banquet**

The FARS Winter Banquet is Friday evening, February 27, 2026. The **Foothills Amateur Radio Society** (FARS) presents this ham radio event and fete. This annual event is open to anyone who wants to attend, but reservations are required. This meeting is an in person only (**NO Zoom Access**).

To sign up: https://www.fars.k6ya.org/banquet/banquet2026/#signup

**The banquet location:**
The Blue Pheasant
22100 Stevens Creek Blvd
Cupertino, CA 95014
408-255-3300

Menu

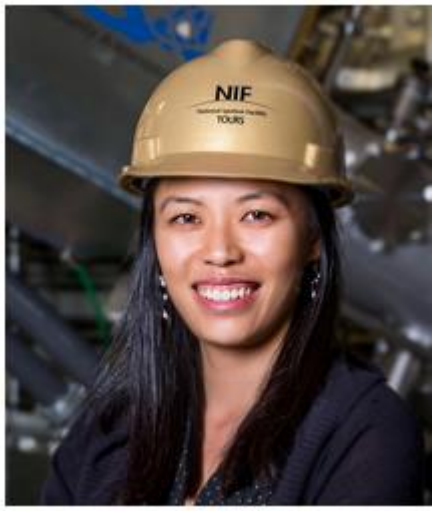
Prices for the 2026 banquet:

| Choice | Menu Description | Price |
|---|---|---|
| Beef | Roast Prime Rib of Beef | $ 61 |
| Fish | Broiled Salmon w/ dill sauce | $ 45 |
| Chicken | Breast of Chicken Jerusalem | $ 45 |
| Veg | Pasta Primavera | $ 45 |

**Guest Speaker:**
**A Milestone in Fusion Energy**
**By Dr. Tammy Ma, Plasma Physicist**
**Lawrence Livermore National Laboratory (LLNL)**

**February 27, 2026 @ 6:00PM-10:00PM**

**(NO Zoom Access)**




Dr. Tammy Ma is our speaker for this event. Dr. Ma is director of the Nuclear Fusion group at the Lawrence Livermore. It was her group that achieved the world's first positive net energy from nuclear fusion.

A goal that scientists have been working on for the last 60 years. She was featured in 60 minutes (https://www.youtube.com/watch?v=2kh6Ik4-yag) and is often on NPR explaining how this was achieved and what will be seen in the future.

This promises to be outstanding talk not only for engineers, but the folks interested in the present status of fusion technology.

**Speaker Bio**

Tammy Ma is an American plasma physicist who works on inertial confinement fusion at the Lawrence Livermore National Laboratory.

After postdoctoral research at the Lawrence Livermore National Laboratory, she joined the laboratory as a staff scientist in 2012.

She is currently the program element leader for High-Intensity Laser High Energy Density (HED) Science-Advanced Photon Technologies, and associate program leader for HED Laboratory Plasmas.

She also leads the Lab's Inertial Fusion Energy (IFE) Institutional Initiative. Dr. Tammy Ma currently leads the Livermore Institute for Fusion Technology (LIFT), which is accelerating the commercialization of fusion energy.

**Raffle prizes for the FARS Winter Banquet**

We shall have over a dozen prizes for the banquet raffle. Those prizes to be raffled at the banquet to be listed here.

**Yaesu FT710 SDR HF Transceiver** Outstanding SDR performance. Bandpass filters on every band; High Resolution 4.3 inch color touch display; Full color waterfall spectrum analyzer; Built in high speed antenna tuner; TX 1.8-54 MHz (amateur bands only); Accessories - SSM-75E hand mike; DC power cable.


**Nano VNA - H4** 4 inch 1.5 GHz VNA - Tuned antennas, duplexers, filters etc. Full touch screen. Latest version includes functions for TDR – time domain reflectometer. Includes cables and full calibration kit.

**uSDX+ QRP HF transceiver** Covers 160-6 meters – SSB, CW, digital QRP transceiver. 5 watts CW – 10 watt SSB. Built in CW decoder, full DSP noise reduction. Complete Description of prize.


**DSO03D12 Portable Oscillioscope** - 120 MHz dual trace scope with probes - features a built in DVM and signal generator


**Radtel RT-860** 1024 channels 2m/1.25m/70cm transceiver; full HF all mode receiver; preprogrammed with local channels


**ATS-20 Receiver** All Mode AM/FM/SSB/CW 100KHz-30 MHz - FM Stereo Receiver.


**BaoFeng UV-5R x2** Dual Band VHF/UHF HT, 136-174MHz VHF (5W TX), 420-520MHz (4W TX), FM Broadcast, 128 channel memory, 1.8-Ah Li-Ion battery, drop-in smart charger


**Flashlight** Mil spec - 800 lumen aircraft aluminum LED flashlight, rechargable 18650 3000mAh battery


**JOC TG-77 Digital AM/FM/SW** Pocket radio receiver

**TBJ-1 Triband Antenna** 146MHz/220MHz/440MHz

On the next page is the signup sheet and menu options for you to print out and mail in with your payment.

## FARS Winter Banquet February 27th, 2026

***A Milestone in Fusion Power***

*Dr Tammy Ma,*
*Plasma Physicist*


February 27th, 2026 - 6:00PM

The Blue Pheasant
22100 Stevens Creek Blvd
Cupertino, CA 95014
408-255-3300

**Schedule**

| | |
|---|---|
| 6:00 PM | Arrivals and Mixing. |
| 7:00 PM | Dinner Service begins. |
| 7:45 PM | Introductions, program. |
| 9:00 PM | Raffle and wrap up. |

**Meal Choices**

| | | |
|---|---|---|
| Beef | Roast Prime Rib of Beef, au jus | $61 |
| Fish | Broiled Salmon w/ dill sauce | $45 |
| Chicken | Breast of Chicken Jersusalem | $45 |
| Veg | Pasta Primavera | $45 |


Raffle prizes including:

- Yaesu FT-710 – HF Radio
- Nano VNA - H4 4 – Network Analyzer
- uSDX+ – QRP HF transceiver
- DSO03D12 Portable Oscillioscope
- Radtel RT-860 HT
- ATS-20 – All mode receiver
- Baofeng UV5R x2 – Dual band HT
- TBJ-1 Triband Antenna

Use this form to sign-up by mail, or go on-line at k6ya.org/bqs to sign-up. After February 19th, use the on-line sign-up instead of this form. If we receive your sign-up after February 23th, it will be handled as a late sign-up, which requires confirmation. More information at: k6ya.org/bq. Mail this completed form with your **check, payable to FARS**, to:

FARS
PO Box 112551
Campbell, CA 95011-2551

**FARS WINTER BANQUET SIGN UP FORM (February 27, 2026)**

| | Name & Call Sign | Meal Choice | Amount |
|---|---|---|---|
| You | _____ | _____ | _____ |
| Email | _____ | | |
| Guest | _____ | _____ | _____ |
| Guest | _____ | _____ | _____ |
| Other (Dues $20) | _____ | | _____ |
| | | Total | _____ |

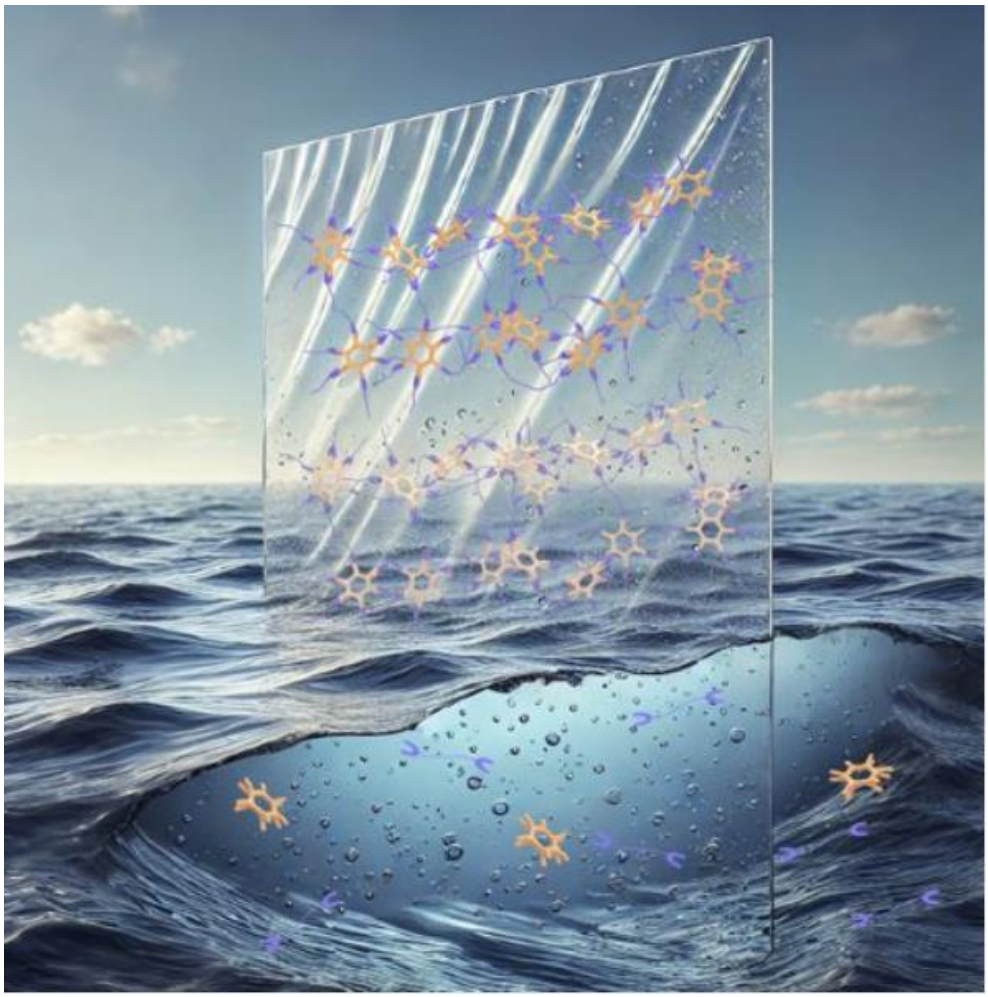
# Tech Article

https://www.riken.jp/en/news_pubs/research_news/rr/20250327_1/index.html

Date: Mar. 27, 2025

**Plastic-like materials that dissolve in the sea**

Supramolecular materials that fully degrade when soaked in saltwater have the potential to help address the microplastics pollution crisis.



Artistic rendering of the new plastic. Cross linked salt bridges visible in the plastic outside the seawater give it its structure and strength. In seawater (and in soil, not depicted), resalting destroys the bridges, making it water soluble, thus preventing microplastic formation and allowing the plastic to become biodegradable. © 2025 RIKEN

Microplastics—small fragments of plastics less than 5mm across—now infiltrate every corner of our planet, from remote regions of the deep ocean and the Arctic, to the very air we breathe.

Microplastics—small fragments of plastics less than 5mm across—now infiltrate every corner of our planet, from remote regions of the deep ocean and the Arctic, to the very air we breathe.

## Seawater solution

RIKEN scientists are aiming to tackle the problem of microplastics in the ocean with a new material that biodegrades in saltwater.

Similar in weight and strength to conventional plastics, the new material could chart a new path to reducing plastics pollution, as well as reduce greenhouse gas emissions associated with burning plastics, says Takuzo Aida, a materials scientist who heads the Emergent Soft Matter Function Research Group at the RIKEN Center for Emergent Matter Science in Wako, Japan.

This new plastic is a culmination of his three decades of pioneering work as an expert in materials called supramolecular polymers. Plastics are a type of polymer, which are comprised of small molecules bound into long chains by strong covalent bonds that require extensive energy to break.

In contrast, supramolecular polymers have weaker, reversible bonds “like sticky notes that you can attach and peel off,” explains Aida.

This gives supramolecular polymers unique properties, such as the ability to 'self-heal' when broken and then pressed back together. They are also easy to recycle, by using specific solvents to break down the materials’ bonds at the molecular level, meaning that supramolecular polymers can be easily reused and repurposed.

### Unlocking bonds

Plastic products are everywhere for a reason, says Aida. “Plastics, especially polyethylene terephthalate, which is used in bottles, are incredibly versatile. They are flexible but strong, durable and recyclable. It’s hard to beat that convenience.”

Biodegradable plastics have been touted as an alternative, but Aida says the speed and conditions at which they degrade have been a major challenge. For instance, he says, significant amounts of polylactic acid (PLA), a plastic that biodegrades in soil, have been found intact in the ocean because it takes too long to break down under standard environmental conditions. As a result, it eventually ends up intact in the ocean. Since plastics such as PLA are not water-soluble, they slowly break up over time into microplastics that cannot be broken down by bacteria, fungi and enzymes.

Driven by a sense of urgency for the planet's future, Aida began seeking ways for supramolecular materials to overcome these challenges. "But the reversible nature of the supramolecular polymer bonds are also their weakness, since the materials disintegrate too easily," he says. "This had limited their applications."

His team set out to discover a combination of compounds that would create a supramolecular material with good mechanical strength, but that can break down quickly under the right conditions into non-toxic compounds and elements. Aida had a specific reaction in mind, one that would lock the material's molecular bonds and could only be reversed with a specific 'key'—salt.

After screening various molecules, the team found that a combination of sodium hexametaphosphate (a common food additive) and guanidinium ion-based monomers (used for fertilizers and soil conditioners) formed 'salt bridges' that bind the compounds together with strong cross-linked bonds. These types of bonds serve as the 'lock', providing the material with strength and flexibility, explains Aida.

"Screening molecules can be like looking for a needle in a haystack," he says. "But we found the combination early on, which made us think, 'This could actually work'."

In their study, Aida's team produced a small sheet of this supramolecular material by mixing the compounds in water. The solution separated into two layers, the bottom viscous and the top watery, a spontaneous reaction that surprised the team. The viscous bottom layer contained the compounds bound with salt bridges. This layer was extracted and dried to create a plastic-like sheet.

The sheet was not only as strong as conventional plastics, but also non-flammable, colorless and transparent, giving it great versatility. Importantly, the sheets degraded back into raw materials when soaked in salt water, as the electrolytes in the salt water opened the salt bridge 'locks'. The team's experiments showed that their sheets disintegrated in salt water after 8 and a half hours.

The sheet can also be made waterproof with a hydrophobic coating. Even when waterproofed, the team found that the material can dissolve just as quickly as non-coated sheets if its surface is scratched to allow the salt to penetrate, says Aida.

A thin square of the glassy new plastic © 2025 RIKEN

## Driving change

Not only is the supramolecular material degradable, but Aida hopes what is left after it breaks down could be usefully re-used. When broken down, his team's new material leaves behind nitrogen and phosphorus, which microbes can metabolize and plants can absorb, he explains.

However, Aida cautions that this also requires careful management: while these elements can enrich soil, they could also overload coastal ecosystems with nutrients, which are associated with algal blooms that disrupt entire ecosystems. The best approach may be to largely recycle the material in a controlled treatment facility using seawater. This way the raw materials could be recovered to produce supramolecular plastics again, he says.

In addition to developing alternatives to fossil fuel-derived plastic, Aida argues that governments, industries and researchers must also act decisively to drive change. Without more aggressive measures, the world's plastics production—and corresponding carbon emissions— could more than double by 2050.

“With established infrastructures and factory lines, it’s extremely challenging for the plastics industry to change,” says Aida. “But I believe there will come a tipping point where we have to power through change.” And a technology like this will be needed when that time comes.

**Reference**


- 1. Cheng, Y., Hirano, E., Wang, H., Kuwayama, M., Meijer, E. W. *et al*. Mechanically strong yet metabolizable supramolecular plastics by desalting upon phase separation. *Science* **386,** 875-881 (2024). doi: 10.1126/science.ado1782


**About the researcher**
**Takuzo Aida**

Takuzo Aida is the group director at the RIKEN Center for Emergent Matter Science, located in Wako, Saitama, Japan. Here, he also leads the Emergent Soft Matter Function Research Group. In addition, he is a distinguished professor at the University of Tokyo. Aida has received several notable honors and awards, including the American Chemical Society Award in Polymer Chemistry (2009), the Chemical Society of Japan Award (2009), the Purple Ribbon (2010), the Alexander von Humboldt Research Award (2011), and the Leo Esaki Prize (2015). His achievements were further recognized with membership in the Royal Netherlands Academy of Arts and Sciences in 2020, the US National Academy of Engineering in 2021, and the American Academy of Arts and Sciences in 2023.

**Update**: Researchers are now claiming that the new plastic can dissolve slowly in soil within 10 days.