

Chicago Tribune



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BREAKING NEWS AT CHICAGOTRIBUNE.COM

Turning algae into building blocks

Chicago firm offers look at a zero-carbon bio-cement option

By **Adriana Pérez**
Chicago Tribune

As pedestrians head down Halsted Street in the Fulton Market district, a spiral structure in the middle of the Mews Pedway invites them to walk toward its center.

At a glance, the coil seems to have been assembled with traditional construction materials. But looks are deceiving — these building blocks were made of microalgae.

Dubbed “bio-blocks,” they offer a zero-carbon substitute to their concrete alternatives and were engineered by Prometheus Materials and the Chicago-based architecture firm Skidmore, Owings & Merrill, or SOM. They are being displayed as part of the fifth Chicago Architecture Biennial through the end of February.

“The installation itself that’s built there saves over a metric ton of carbon compared to an identical structure made with conventional concrete blocks,” said Ryan Culligan, design principal at SOM.

The shell-like shape of the structure is a nod to the production techniques of the bio-blocks themselves, which imitate a natural process called mineralization that creates seashells and coral reefs.

Engineers grow algae in photobioreactors, tanks surrounded by LEDs that mimic sunlight. Once the algae reaches a certain density, it is harvested and put in another tank, where it is stimulated until it mineralizes into calcium carbonate — the main component of shells and corals.

“Unlike nature, that might take days, weeks or months or even years to create a coral reef, for instance, we can do it in a matter of hours,” said Loren Burnett, Prometheus Materials CEO and president. “So we bio-mineralize in commercially viable quantities and time scales.”

The calcium carbonate is then combined with natural binding agents to create a zero-carbon bio-cement, Burnett said. This cement gets mixed with sand and aggregate, much like the process to create concrete, and the mixture is then placed into a standard molding machine to create the blocks. After drying for a few days, the bio-block is ready to be used.

“Using bio-blocks in this installation was a no-brainer,” Culligan said. “In part because the amount

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Russia intensifies assault on Ukraine

Russia launched 122 missiles and dozens of drones against Ukrainian targets, killing at least 30 civilians in what an air force official called the largest aerial barrage of the war. **Nation & World**

Things to do on New Year’s weekend

Free fireworks at Navy Pier and the Riverwalk are among the offerings in and around the Chicago area on New Year’s Eve, along with concerts, plays and other performances. **Arts & Living**

Notre Dame cruises in busy day of bowls

The 16th-ranked Irish won in a 40-8 rout of No. 19 Oregon State in the Sun Bowl, kicking off a busy holiday weekend of bowl games heading toward the CFP semifinals Monday. **Chicago Sports**



A police officer makes a report near an SUV inside the Flee Club after an overnight smash-and-grab burglary in the 2200 block of West Taylor Street on Oct. 25. According to the police report, a group fled the scene with merchandise in several vehicles that were waiting. **ANTONIO PEREZ/TRIBUNE**

Smash-and-grab burglary victims call for solutions

Some Chicago businesses have been repeatedly hit by thieves crashing vehicles into stores

By **Alysa Guffey**
Chicago Tribune

Inside SVRN, a luxury retail store in the West Loop, smooth black stone materials adorn the floors and ceilings, creating an immersive and serene shopping experience that feels far away from the bustle of the busy neighborhood outside.

Owner David Kim opened the store with his brother, Robert, in 2019 to help bolster the retail

experience in Chicago and draw people from across the world to visit the city for its unique stores.

“I would always come back to Chicago after traveling and think that Chicago doesn’t really have something that I would want to show off,” Kim said. “So I had the opportunity to do that, and this store is my best foot forward.”

But the thoughtfully designed brick-and-mortar store is taking physical and financial hits after a burglary on Dec. 12 that was the

fourth time this year thieves drove a car into the storefront to steal merchandise.

Kim is one of several small business owners in the city who have been hit by multiple smash-and-grab burglaries involving cars in a short time span, despite increased physical security such as shutters and riot glass for windows. The tactic involves a crew of thieves driving a vehicle through storefronts and stealing hundreds of thousands of dollars worth of merchandise before fleeing in cars.

Also called “crash-and-grabs,” store owners quickly pick up the

pieces after they occur, reinstall security and reopen — usually within a week — to serve customers. While owners say they are committed to their brick-and-mortar stores, the lack of arrests and the relentless burglaries have them wondering how they can keep their businesses afloat.

“We want to keep growing and be more of a staple in the community, but if this keeps happening over and over again, what are we supposed to do?” Kim said on a recent afternoon in SVRN.

Sabrian Sledge, co-owner of

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Dr. Sumanas Jordan, assistant professor of plastic surgery, and Dr. Lauren Beach, assistant professor of medical social sciences, were part of the Legal X workgroup. **EILEEN T. MESLAR/CHICAGO TRIBUNE**

At Northwestern, patients can now mark their legal sex as ‘X’

Medical records option comes ahead of state bill for IDs

By **Ilana Arougheti**
Chicago Tribune

As a plastic surgeon at Northwestern Medicine, Dr. Sumanas Jordan knows transgender and nonbinary patients can have unique needs. About half of her patients come in for gender-affirming surgeries, and their tests and treatments often lead to deep conversations about gender identity.

Now, conversations about gender at Northwestern Medicine are expanding to include patients’ medical records.

As of Dec. 18, Northwestern Medicine patients can record their legal sex as “X” in electronic medical records.

“X” is an alternate gender marker for those who do not identify as male or female. On legal records, it’s commonly used by transgender, nonbinary and intersex people.

The change comes just ahead of a state bill allowing the gender category of “X” on driver’s licenses and other forms of state

identification. Gov. J.B. Pritzker first introduced the bill in 2019. The Illinois secretary of state’s office determined that X would become available on driver’s licenses in 2024.

“Over the last year, since we knew this law was going to be put into place, we’ve been working really hard to make sure our system was ready for that,” Jordan said. “It doesn’t seem like a huge task ... but that little letter actually affects a number of downstream events.”

Multiple health systems in

Turn to Gender, Page 2

Thousands crowd into southern Gaza town

Palestinians fleeing intense bombing of territory’s center

By **Najib Jobain, Samy Magdy and Jack Jeffery**
Associated Press

RAFAH, Gaza Strip — Tens of thousands of Palestinians streamed into an already crowded town at the southernmost end of Gaza in recent days, fleeing Israel’s bombardment of the center of the strip, as a senior U.N. official criticized Israel on Friday for continuing to impose “severe restrictions” on access to aid.

The renewed criticism came a week after the U.N. Security Council demanded an immediate increase in humanitarian deliveries to the besieged territory.

Israel’s unprecedented air and ground offensive against Hamas has displaced 85% of the Gaza Strip’s 2.3 million residents, sending swells of people seeking shelter in Israeli-designated safe areas that the military has nevertheless also bombed. That has left Palestinians with a harrowing sense that nowhere is safe in the tiny enclave.

Nearly the entire population is fully dependent on outside humanitarian aid, said Philippe Lazzarini, head of UNRWA, the U.N. agency for Palestinian refugees. A quarter

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