



The Journal



The best Holiday Christmas window Displays for 2020; NY wins

NY Dec 1st, 2019; When it comes to holiday window dressing, more people are thinking out of the box — and out of the windows — for the brightest displays ever.

Look no further than Hudson Yards, home to Neiman Marcus and a cluster of other stores, which will immerse itself in light and music shows from 5 p.m. beginning on Friday. There'll be live music and dance performances on Tuesdays, kids' activities on Saturdays and holiday-themed photo ops practically everywhere you look.

Up on Fifth Avenue, Louis Vuitton has swathed itself in a psychedelic splash of pastel lights, while PayPal — the new kid on the block — is taking window shopping literally: Scan the codes in each of its five windows on West 44th Street off Fifth, and you can buy handmade toys, honey, chocolate and more from a bunch of small businesses.



New Chocolate Store featuring Oscartek GEM model

Some of the best things in store this holiday season are in the stores themselves. Duck out of the cold and lose yourself in enchanting displays in Nordstrom and elsewhere. Read on to find the brightest holiday action in town.

Macy's

Theme: "Believe in the Wonder"

Draws: Macy's celebrates gal power with its story of Santa Girl, who's determined to take a proactive role in holiday giving. The loosey-goosey narrative is told through neon lights, multiple Mylar-like Santas and a sweet giant of a dog named Willow, whose big dark nose pokes out of one window. Stroke it, and watch his hind leg come up for a good scratching. Or take the steering wheel at another window and pilot Santa Girl's truck. As one young boy jerked it back and forth the other day, his mother sighed. "You've been in New York too long already," she said.

Don't miss: Holiday Lane. On Macy's ninth floor, just east of the recliners, lies a winter wonderland of trees, ornaments, nutcrackers and stockings. It's here that you can write a letter to Santa or book (via computer) a visit with the big man himself, now ensconced in Santaland, on the eighth floor. And you thought a table at Rao's was hard to reserve!

Bergdorf Goodman

Theme: "Bergdorf GoodTimes"

Draws: Seven windows filled with old-fashioned frivolity — musical chairs, a slumber party, a scavenger hunt, even a giant pinball machine. A life-size chess game has two glamorous, red- and green-sequined queens going head to head amid a battalion of bishops and rooks, while a card game in another window features a frog splashing into a pond, an ace of spades clutched in one of his webbed feet. Thanks to the dazzling perspective — all these tableaux are viewed from overhead — these are the most dizzying windows in town. "You could look at this for 10 or 15 minutes and still see something different," marveled Noella Gabriel, a first-time New York holiday-window watcher visiting from the UK. Added one veteran viewer: "You can only get this in New York."

Don't miss: The slyly subversive, somewhat spooky windows at Bergdorf's men's store across the avenue. In one of them, a male mannequin is being hoisted out of a giant "swag grabber" box like the prize he is.

Nordstrom

Theme: "Festive Scandinavian Holiday"

Draws: For its first holiday season in New York City, Nordstrom's elves worked feverishly through Thanksgiving to unveil Friday some 50 miles of twinkling lights, more than 700 Scandinavian-inspired ornaments, 120 trimmed trees and 150 Sputnik-esque chandeliers, like the ones at the Metropolitan Opera. There are also three pop-up holiday gift shops — the one on the first floor featuring curated gifts by RuPaul, Chloë Sevigny and Bill Nye the Science Guy, who personally selected that bow tie. As for that Scandinavian theme: It's a nod to store founder John W. Nordstrom, who was born in Sweden. Immigrants! They get the job done!

Don't miss: The daily parades at 6 p.m. (and 2 p.m. on weekends) in which Santa comes ho-ho-ing down the Nordstrom escalator, accompanied by fake snow and a live Dixieland jazz band.

Bloomingdale's

Enlarge Image Bloomingdale's Out of This World Holiday Window Unveiling: With performance by John Legend

Bloomingdale's

Theme: "An Out of This World Holiday"

Draws: Bloomie's marks the 50th anniversary of the moon landing with window after window of space-age displays. In one, robotic arms slowly reach out to grab an ornament and, carefully, automatically attach it to a golden tree: Elon Musk might want to take notes. In another window, several blasé-looking, nonbinary mannequins — imagine the Jetsons, retooled by David Bowie — recline in what's titled "a Stellar Soiree." Several windows on the store's Third Avenue side complete the show, including one with a microphone that lets you karaoke to "Jingle Bells" and a couple of other holiday chestnuts, though not between 7 p.m. and 9 a.m. Judging from what we've heard, it's best to stick to Lexington Avenue, where John Legend's holiday album plays all through the day.

Don't miss: Inside the store are Ralph's Winter Wonderland Polar Ice Bar, a Daily Harvest latte and coffee sampling counter and what, in the shoe department, may well be the world's largest Ugg.

Saks Fifth Avenue

Theme: Disney's "Frozen 2"

Draws: You've seen the movie — now see the windows! Six beautifully detailed tableaux inspired by the film depict Elsa, Anna, Olaf and friends on a journey through forests, fires and ice. Elsa, the ice queen, gets most of the window time, leading one little girl to ask, hopefully, "Another Anna?" Each window is beautifully wreathed in faux evergreens and twinkling lights. Every night after dusk, the store's Fifth Avenue facade becomes a light show unto itself, set to a soundtrack of "Frozen" songs and holiday favorites.

Don't miss: The Enchanted Forest Experience. Up on the ninth floor is an immersive journey through four rooms rife with perky performers, realistic-looking birch trees, lots of fog and — spoiler alert! — a photo op with Elsa and Anna. Timed tickets are \$5 at ShowClix.com; proceeds benefit the New York–Presbyterian Children's Hospital.

Fifth Avenue Association

Theme: "New York Nostalgia"

Draws: Nature abhors a vacuum, and so does the Fifth Avenue Association. Stung by the loss of Barneys, Bendel's, Lord & Taylor and other Midtown stalwarts, the group unveiled a quartet of windows to fill in the blank spots — some more Instagram-friendly than others.

More readings on what to do in NY this December;

With holiday classics like “Miracle on 34th Street” and “Home Alone 2” based in New York, it’s no wonder NYC is a mecca for Christmas lovers. Whether you are visiting or are a resident of the Big Apple, your holiday season won’t be complete without engaging in some of the fun things the city has to offer at Christmas time.

Before saying goodbye to 2019 and welcoming the new year, check out some of the fun ways you can enjoy Christmas in New York City.

1. Holiday Window Display

Whether you plan to hit up some of the stores to shop or are in the mood for a walk, department stores like Macy’s Herald Square, Bloomingdale, and Saks Fifth Avenue impress tourists and locals every year with their extravagant holiday window displays.

Located between 34th Street up to 60th Street, New York, NY

2. Dyker Heights

Take a trip to Brooklyn and step into the Christmas wonderland nestled in Dyker Heights. Each year, residents spend thousands of dollars to showcase their holiday-themed decorations. Although viewing is free, some homeowners ask for donations so they continue the costly tradition.

Located at 11th to 13th Avenues from 83rd to 86th St in Dyker Heights, Brooklyn

3. Rockefeller Center Christmas Tree

The 77-foot tall, 46-foot wide Norway Spruce will be officially lit on Dec. 4 at the 87th Rockefeller Center tree lighting ceremony. After the event, the tree, which is expected to be decorated with more than 50,000 multi-colored LEDs and topped with a Swarovski star, can be viewed up until Jan. 17, 2020.

Located at 30 Rockefeller Plaza, New York, NY

4. Union Square Holiday Market

Those looking for an intimate shopping experience will be thrilled while visiting the Union Square Holiday Market. This year’s market includes nearly 200 vendors selling unique Christmas gifts, desserts and other goods. The market is set to close on Dec. 24, but be sure to check out the Citi Holiday Lounge, which will offer free hot chocolate, warming stations, and a photo booth.

Located at 14th St & Union Square West, New York, NY

5. Rockefeller Center Skating Rink

If you missed the tree lighting, head over to the Rockefeller Center Skating Rink where you can skate right next to this year's decorated spruce tree.

Located at Rockefeller Center, 600 5th Ave, New York, NY

6. Bryant Park Winter Village

The holiday shops will be open until Jan. 5, 2020. Luckily for last-minute shoppers, many of the shops will be open on Christmas. Whether you want to grab a unique knick-knack or a tasty treat, the 17,000 square foot winter village has plenty to offer.

Located at 41 W 40th St between Sixth and Fifth Avenues

7. The Rockettes

From their famous high leg kicks to your favorite Christmas tunes, the Radio City Rockettes will surely get you into the Christmas spirit. The last day to catch the X-mas classic will be on Jan. 5. The final show takes place at 5 p.m. EST.

Located at 1260 Avenue of the Americas, New York, NY

8. Santaland at Macy's Herald Square

Rather than waiting for hours, skip the line this year by making sure your little one is on Santa's calendar. Santa will be available to take Christmas requests starting at 6 a.m. each day. Pick a time slot from 30 minutes to five days in advance.

Located at 151 W. 34th Street New York, NY

9. New York Botanical Garden Holiday Train Show

Head to the New York Botanical Garden to check out the model trains cruising past more than 175 famous NYC landmarks made out of various plant parts. This year's show was inspired by Central Park and will feature famous replicas like the Dairy and Belvedere Castle.

Located at 2900 Southern Blvd. Bronx, NY

10. The Nutcracker

Grab your tickets to watch some of the most elite dancers tell the story of the young girl, who finds herself in the middle of a battle between toy soldiers and mice.

Located at 20 Lincoln Center Plaza, New York, NY

Christmas tree

Visiting the Christmas tree at Rockefeller Center is a great way to celebrate the holidays. Pictured: A view of the Rockefeller Plaza during the 85th Rockefeller Center Christmas Tree Lighting Ceremony on Nov. 29, 2017 in New York City.

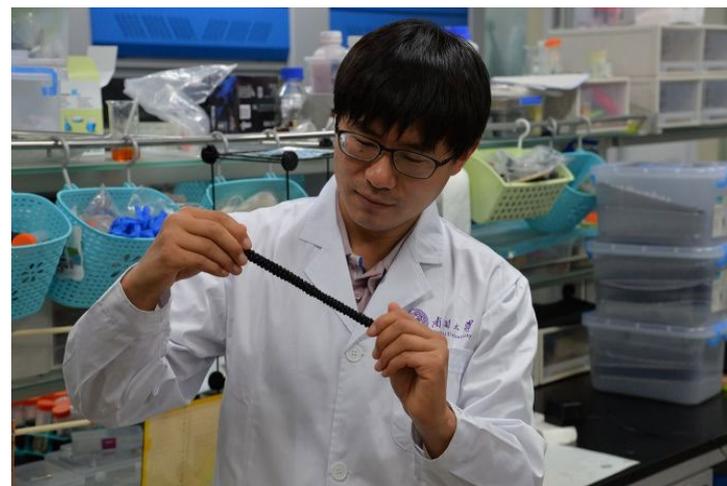
Researchers 'Do the Twist' for Refrigeration; A global research team has published a paper examining the potential for solid-state cooling via the twisting of rubber and other materials.

In a study published in the Oct 11 issue of the journal *Science*, an international team led by researchers at The University of Texas (UT) at Dallas and Nankai University in China has demonstrated “twistocaloric” refrigeration via twisting materials as diverse as natural rubber and ordinary fishing line.

“Compared with conventional vapor compression refrigerators, a solid that changes entropy when deformed could possibly provide higher efficiency; lower cost, weight, and volume; and more convenient miniaturization,” according to the study, entitled “Torsional refrigeration by twisted, coiled, and super-coiled fibers” by Wang et al.

For the past three years, Dr. Ray Baughman, Director of the Alan G. MacDiarmid NanoTech Institute at UT Dallas (Dallas, Texas, U.S.) has been working with Dr. Zunfeng Liu, a Professor in the State Key Lab of Medicinal Chemical Biology in the College of Pharmacy at Nankai University in Tianjin, China – and a team of 28 other researchers.

“Refrigeration contributes greatly to global warming, and the efficiency of refrigerators, after many decades of research, is only about 60%,” explained Baughman. “Yet in only three years, we’ve shown an efficiency of 67% by simply twisting rubber. It’s very promising.”



Zunfeng Liu, one of the study authors, holding a super-coiled rubber fiber in his laboratory

Baughman worked in industry for 31 years before becoming a professor. He currently holds over 99 patents in the U.S. alone and various other foreign ones as well.

He explained that a team member first observed twistocaloric cooling when building a platform in which a slender, coiled polymer-fiber artificial muscle lifted a person. His research teams previously developed artificial muscles made by tightly twisting and coiling fibers that range from carbon nanotube yarns to ordinary nylon thread and polyethylene fishing line.

How does it work?

Stretching a rubber band heats the rubber and releasing the stretch cools it; this process is called elastocaloric cooling. Other solid substances that can be cooled include electrocaloric and magnetocaloric materials, which cool via changes in electric and magnetic fields, respectively. “This elastocaloric behavior of natural rubber has been known since the early 1800s. But to get high cooling from a rubber band, you have to release a very large stretch,” Baughman said. “With twistocaloric cooling, we found that all you have to do is release the twist.”

In the current work, the scientists stretched rubber fibers, then twisted them until they not only coiled, but also “supercoiled.” Fast release of just the twist resulted in surface temperature cooling of 15.5°C (27.9°F). Releasing both the twist and the stretch from the rubber produced even greater cooling of 16.4°C (29.5°F).

The twistocaloric cooling also worked for fishing line. The researchers inserted twist into nonelastic polymer fishing line until coils formed. Stretching the coiled fiber caused heating, while stretch release produced a maximum surface cooling of 5.1°C (9.2°F).

The best-performing material the team tested, Liu said, was nickel titanium (also known as nitinol) wire, an elastic alloy that’s been used in medical devices and implants. A single twisted nitinol wire could produce a cooling effect of 17.2°C (31°F); adding three more wires to the mix eked out a few more degrees of chill. In an experiment, the team bundled up three of these nitinol wires in a small chamber and flowed water over them. As the wires untwisted inside the tiny refrigerator – or “twist fridge,” as they called it – they cooled, bringing down the temperature of the surrounding fluid as well. This bundle of nitinol wires, weighing about 0.6g (0.02oz), lowered the temperature of a teaspoon or so of water by around 5.6°C (10°F) in a single, 30-second cycle, according to Liu.

That’s not much water, and the technology is still in its infancy. According to Baughman, the team has only scratched the surface of what is possible with this technology. “With more tinkering, our discovery could someday provide an alternative to traditional cooling systems, which, in addition to consuming fossil fuels, produce gobs of greenhouse gases and account for about 20% of global electricity consumption.”

In another set of experiments, they coated different types of fibers with thermochromic paint, which changes color in response to temperature variations produced by twisting fibers or stretching coiled fibers. Such fibers could be used for remotely readable sensors of strain and twist, as well as for color-changing textiles for clothing.

But the timing for commercialization of the technology is still to be determined. “Many challenges and opportunities exist on the path from these initial discoveries to commercialization of twist fridges for diverse large- and small-scale applications,” Baughman said. “Among the challenges are the need to demonstrate refined devices and materials that provide application-targeted cycle lifetimes and efficiencies by recovering part of the inputted mechanical energy.” The opportunities include using performance-optimized twistocaloric materials, rather than the few presently studied commercially available candidates, he added.

A replacement for vapor compression ?

According to Baughman, this new technology has the potential to replace all vapor compression refrigeration systems, eliminating the need for refrigerant gases completely.

Interestingly, as part of Baughman’s research on the artificial muscle, his team has also been looking at comfort-adjusting clothing that focuses on cooling the person, rather than the whole room.

According to Baughman, he and his team have been inundated with inquiries into the technology since the article in Science came out. He said that they are still trying to decide which direction to take this in – whether to start a consortium or to license the technology to a company (or two) for commercializing it.

The team will continue with this research, with the work at UT Dallas supported by the Air Force Office of Scientific Research, The Welch Foundation, and the National Science Foundation.

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