



BERCHLY E WEEKLY

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SCIENCE



Cosmic lens flair: Hubble captures a gravitationally lensed galaxy. (July 18, 2022)

The Hubble Space Telescope revealed a gravitationally lensed galaxy. Gravitational lensing has generated a mirror image of the galaxy at the center of this image, creating a captivating centerpiece. This particular lensed galaxy image is from a set of Hubble observations that take advantage of gravitational lensing to peer inside galaxies in the early Universe. The lensing reveals details of distant galaxies that would unobtainable. otherwise be and this allows astronomers to determine star formation in early galaxies.



Credit: ESA/Hubble & NASA, J. Rigby

Read more at:

https://scitechdaily.com/cosmic-lens-flair-hubble-captures-a-gravitationally-lensed-galaxy/

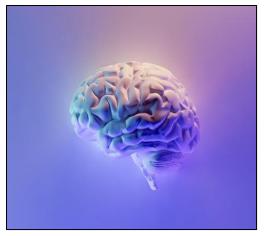
Scientists have created genetically modified drought-resistant plants.

(July 20, 2022)

Researchers at Heidelberg University's Centre for Organismal Studies have shed light on a biological process that increases the life of plant proteins. They have now discovered a crucial protein, called N-terminal acetylation, that controls this mechanism. It promotes N-terminal acetylation, extending the lifespan of plant proteins—important for, among other things, adapting to environmental circumstances.

For the first time ever, images of brain inflammation have been successfully captured.

(July 20, 2022)



Representative Image Credit: Unsplash

Using diffusion-weighted magnetic resonance, researchers captured pictures of the activation of microglia and astrocytes, two kinds of cells involved in neuroinflammation not only for the first time but also in great detail. After developing the technique, the researchers were able to measure the changes in the morphology of the various cell populations contributing to the inflammatory process in the brain. This significant discovery may be essential to altering research the trajectory of and treatment of neurodegenerative diseases, was made possible by an innovative strategy created by the researchers.

Read more at: <u>https://scitechdaily.com/for-the-first-time-ever-images-of-brain-inflammation-have-been-</u> <u>successfully-captured/</u>

Physicists have developed a method for predicting the composition of dark matter.

A method for predicting the composition of dark matter has been developed by a team of physicists. The new work centers on predicting "cosmological signatures" for models of dark matter with a mass between that of the electron and the proton. In the research, the physicists focused on big bang nucleosynthesis (BBN)—a process by which light forms of matter, such as helium, hydrogen, and lithium, are created.



Representative Image Credit: Cara Giovanetti/ New York University

(July 21, 2022)

Read more at: <u>https://scitechdaily.com/physicists-have-developed-a-method-for-predicting-the-composition-</u> <u>of-dark-matter/</u>

Blood test could predict risk of leukemia years in advance.

(July 21, 2022)

By identifying changes in blood cell production, a blood test could predict the risk of developing leukemia in the elderly population years in advance, according to new research. Experts say that identifying those most at risk should make it possible to provide preventive or early treatment in the future to improve patient outcomes. Scientists from the Universities of Edinburgh and Glasgow investigated how changes in fitness advantage that occur in blood production might provide clues to the risk of developing leukemia depending on the type of mutation that occurs.

Read more at: https://scitechdaily.com/blood-test-could-predict-risk-of-leukemia-years-in-advance/

30% less than average: Antarctic Sea ice levels lowest ever recorded.



Credit: Unsplash

(July 22, 2022)

The Antarctic Sea ice extent was the lowest since satellite monitoring started in 1978, according to a recent report from the National Institute of Polar Research and Japan Aerospace Exploration Agency in Japan. As one would anticipate, there are seasonal fluctuations in the amount of sea ice, with winter seeing an increase and summer seeing a decrease. However, contrary to expectations, recent global warming has not directly resulted in a reduction in the amount of sea ice in the Antarctic region.

Read more at: https://scitechdaily.com/30-less-than-average-antarctic-sea-ice-levels-lowest-ever-recorded/





Artist Claes Oldenburg, maker of huge urban sculptures, dies.

Pop artist Claes Oldenburg, who turned the mundane into the monumental through his outsized sculptures of a baseball bat, a clothespin and other objects, has died at age 93. The Swedishborn Oldenburg drew on the sculptor's eternal interest in form, the dadaist's breakthrough notion of bringing readymade objects into the realm of art, and the pop artist's ironic, outlaw fascination with lowbrow culture — by reimagining ordinary items in fantastic contexts.

Credit: Getty Images

Read more at:

https://www.thehindu.com/entertainment/art/artist-claes-oldenburg-maker-of-huge-urbansculptures-dies/article65655748.ece

From MF Husain to KCS Paniker: Rare works by India's greatest artists on display in Chennai.

(July 20, 2022)

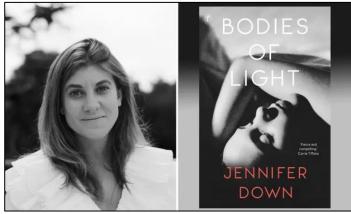
(July 19, 2022)

An intriguing collection of Indian contemporary art, including rare early works by luminaries of the Madras Art Movement and the Bengal School and from the personal collection of the late entrepreneur Pradipto Mohapatra has been set up by Sanghamitra Mohapatra with a sensitively curated show at Focus Art Gallery to honour his passion for art. This collection, built lovingly over decades, holds many remarkable pieces and form around 275 works that span veteran artists, varied schools of thought, and changing styles that Pradipto Mohapatra.

Read more at: <u>https://www.thehindu.com/entertainment/art/from-mf-husain-to-kcs-paniker-rare-works-by-</u> <u>indias-greatest-artists-on-display-in-chennai/article65661147.ece</u>

Jennifer Down wins 2022 Miles Franklin award for Bodies of Light.

(July 20, 2022)



Jennifer Down and her book 'Bodies of Light'/ The Guardian

Melbourne author Jennifer Down has won the \$60,000 Miles Franklin Literary Award, one of Australia's most prestigious prizes for writers, for her ambitious and brutally realist novel Bodies of Light.Bodies of Light is the Melbourne writer's second novel. In announcing their shortlist, the Miles Franklin judges praised it for its "ethical precision" and an "astonishing voice".

Read more at:

https://www.theguardian.com/books/2022/jul/20/jennifer-down-wins-miles-franklin-award-2022-winner-book-literary-prize-for-bodies-of-light

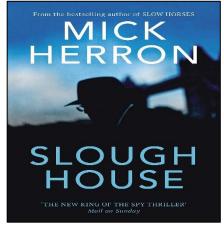
Author Mick Herron wins Britain's most prestigious crime writing award.

AuthorMick Herron won the Theakston Old Peculier Crime Novel of the Year 2022, supported by the Daily Express, for his book Slough House. The novel is the seventh entry in his Jackson Lamb series about disgraced MI5 spies. Mick won £3,000 and an engraved oak beer cask at the annual Harrogate crime writing festival.



Credit: Sonja Horsman/ The Observer

(July 21, 2022)



Mick Herron 's book 'Slough House'

Henri Cartier-Bresson's photos of Gandhiji's final hours at exhibition.

(July 22, 2022)

A rare series of images by renowned photographer Henri Cartier-Bresson capturing the final hours before and after Mahatma Gandhi's death is part of an exhibition at Kolkata's Indian Museum. Titled 'March to Freedom', the exhibition is being held in partnership with DAG on the occasion of the 75th year of independence. The exhibition is curated by historian Mrinalini Venkateswaran, currently based at Royal Holloway, University of London. The show opens for public viewing from July 23 to September 18 as part of the Azadi Ka Amrit Mahotsav.

Read more at:

https://timesofindia.indiatimes.com/city/kolkata/henri-cartier-bressons-photos-of-gandhijisfinal-hours-at-exhibition/articleshow/93041613.cms

68th National Film Awards: Ajay Devgn and Suriya share Best Actor award.

(July 22, 2022)



Credit: Hindustan Times

The winners of the 68th National Awards were announced on Friday afternoon in New Delhi. The prestigious awards are regulated by the Government of India's Directorate of Film Festivals. This year, the films released in 2020 were also recognised due to the delay caused by the Covid-19 pandemic. Actors Suriya and Ajay Devgn were declared as best actors for their films Soorarai Pottru and Tanhaji: The Unsung Warrior respectively. Aparna

Balamurali was named the best actor in the female category for her work in 'Soorarai Pottru.'

Read more at:

https://timesofindia.indiatimes.com/entertainment/hindi/bollywood/news/68th-national-filmawards-ajay-devgn-and-suriya-share-best-actor-award-complete-winnerslist/articleshow/93053893.cms

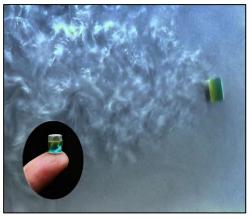
TECHNOLOGY



Stanford-developed millirobot swims in your body and delivers medicine to places that need it.

Renee Zhao, a mechanical engineer who leads research at Stanford University is developing a number of millirobot designs simultaneously. Her robots can self-select various locomotive states and navigate obstacles within the body because they are powered by magnetic fields, which allow for continuous motion and can be applied instantaneously to produce torque. The robot waits to deliver a highconcentration medicament until it reaches the target, as opposed to pills that must be ingested or liquids that must be injected.

(July 17, 2022)



Credit: Zhao Lab

Read more at:

https://scitechdaily.com/stanford-developed-millirobot-swims-in-your-body-and-deliversmedicine-to-places-that-need-it/

New technology gives AI human-like eyes.



Representative Image Credit: Adobe Stock

Researchers at the University of Central Florida (UCF) have built a device for artificial intelligence that replicates the retina of the eye. The research might result in cutting-edge AI that can identify what it sees right away, such as automated descriptions of photos captured with a camera or a phone. The technology could also be used in robots and self-driving vehicles. The technology, also performs better than the eye in

(July 19, 2022)

terms of the range of wavelengths it can perceive, from ultraviolet to visible light and on to the infrared spectrum.

Read more at: <u>https://scitechdaily.com/new-technology-gives-ai-human-like-eyes/</u>

Turning buildings into batteries to cheaply improve power quality. (July 20, 2022)

In order to ensure that the supply and demand of electricity are appropriately balanced, the electricity quality in metropolitan areas may be improved by using a novel energy storage idea proposed by International Institute for Applied Systems Analysis (IIASA) researchers, which could transform tall buildings into batteries. The researchers proposed a novel gravitational-based energy storage system that makes use of elevators and vacant apartments in tall buildings. This strange concept, named Lift Energy Storage Technology (LEST) by the authors, stores energy by lifting wet sand containers or other high-density materials that are remotely moved in and out of a lift using autonomous trailer devices.

Read more at:

https://scitechdaily.com/turning-buildings-into-batteries-to-cheaply-improve-power-quality/

Quantum digits unlock more computational power with fewer quantum particles.

(July 22, 2022)



Credit: Uni Innsbruck/ Harald Ritsch

A team of scientists has now succeeded in developing a quantum computer that can perform arbitrary calculations with so-called quantum digits, thereby unlocking additional computational power with fewer quantum particles. Even though many of the tasks that need quantum computers, such as problems in physics, chemistry, or material science, are also naturally expressed in the qudit language, rewriting them for qubits can often make them too complicated for today's quantum computers.

Read more at: <u>https://scitechdaily.com/quantum-digits-unlock-more-computational-power-with-fewer-</u> <u>quantum-particles/</u>





Avinash Sable finishes 11th in 3000m steeplechase final in World Championships.

India's Avinash Sable finished 11th in the final of the men's 3000m steeplechase event with a disappointing show on the fourth day of competitions at the World Championships. The 27-year-old Sable clocked 8:31.75, way below his seasons and personal best of 8:12.48, which is a national record. He had qualified for the final after finishing third in heat number 3 and seventh overall with a time of 8:18.75.

(July 19, 2022)



Credit: Media SAI/Twitter

(July 20, 2022)

Read more at:

https://indianexpress.com/article/sports/sport-others/avinash-sable-finishes-11th-in-3000msteeplechase-final-in-world-cships-8037993/

Shooting World Cup: India end Changwon campaign with most medals.



Credit: PTI

India finished another ISSF Shooting World Cup campaign by topping the medal's tally with a haul of 15 medals, including five gold, six silver and four bronze. On the final day of competitions, the Indian trio of Anish Bhanwala, Vijayveer Sidhu and Sameer won the silver in the men's 25m Rapid Fire Pistol team event. At one point, the Indian team were leading 10-2 against the quality Czech side but later lost their nerve as they went down 15-17 to settle for second place. Read more at: <u>https://indianexpress.com/article/sports/shooting-world-cup-india-end-changwon-campaign-</u> <u>with-most-medals-8041123/</u>

West Germany soccer great Uwe Seeler dies at 85.

Uwe Seeler, who led West Germany to the 1966 World Cup final as captain of the national team, died on Thursday. Regarded as one of Germany's best-ever players, Seeler was famous for his overhead kicks and ability to score goals from the unlikeliest of angles. He was also known for his humility and fairness, and respected for his never wavering loyalty to hometown club Hamburger SV. The club on Thursday mourned the loss of a "legend."



(July 21, 2022)

Credit: Helmuth Lohmann/ AP Photo

https://indianexpress.com/article/sports/football/west-germany-soccer-great-uwe-seeler-diesat-85-8044363/

World Athletics Championships: Shericka Jackson edges Shelly-Ann Fraser-Pryce to win world 200m gold.

(July 22, 2022)



Read more at:

Credit: addojunr/ Twitter

Jamaica's Shericka Jackson outgunned compatriot Shelly-Ann Fraser-Pryce on the back straight to win 200m gold at the World Athletics Championships on Thursday. Jackson set a championship record of 21.45 seconds, the second fastest time ever run over the distance, for a first individual world title at Hayward Field, Eugene. Newlycrowned 100m gold medallist Fraser-Pryce took silver in 21.81sec, with defending champion Dina Asher-Smith of Britain claiming bronze (22.02).

Read more at:

https://timesofindia.indiatimes.com/sports/more-sports/athletics/shericka-jackson-edgesshelly-ann-fraser-pryce-to-win-world-200m-gold/articleshow/93042311.cms

World Athletics Championships: Javelin thrower Annu Rani finishes seventh in final.

India's Annu Rani finished seventh in the women's javelin throw final with a below-par effort of 61.12m at the World Championships at Eugene. Competing in her second consecutive final in the showpiece, Rani achieved her best of the day in her second attempt but failed to cross 60m mark in other five throws on Friday. Defending champion Kelsey-Lee Barber of Australia won the gold with a best and world leading throw of 66.91m.



Credit: Reuters

Read more at:

https://timesofindia.indiatimes.com/sports/more-sports/athletics/javelin-thrower-annu-ranifinishes-seventh-in-world-cships/articleshow/93065093.cms

Neeraj Chopra's historic 88.13m throw gives India first-ever silver in World Athletics Championships.

(July 24, 2022)

(July 23, 2022)



India's Neeraj Chopra won the country's only second medal at the National Athletics Championships, finishing with a historic silver in the men's javelin final. Neeraj's throw of 88.13m in his fourth attempt secured him of not only a podium finish but also ended India's 29-year-long wait for a medal at the World's after Anju Bobby George's bronze medal finish in the women's long jump way back in 2003.

Read more at: <u>https://www.hindustantimes.com/sports/neeraj-chopra-s-historic-88-13m-throw-gives-india-first-ever-silver-in-world-athletics-championships-101658625829833.html</u>

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