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SCIENCE


Credit: Pxhere

Perseverance rover's quest: Uncovering mars' magnetic secrets through record-keeping rocks.

(June 27, 2023)


Credit: NASA/JPL-Caltech

NASA's Perseverance rover is trying to collect a conglomerate rock sample from Mars to help scientists understand the planet's geological history and its magnetic field activity. These conglomerate rocks provide insights into a variety of geological events, erosional processes, and environmental changes and are key to conducting the "conglomerate test" that reveals magnetization events. The results of this test could potentially explain the thin Martian atmosphere by indicating the activity period of the Martian magnetic field.

Read more at:
https://scitechdaily.com/perseverance-rovers-quest-uncovering-mars-magnetic-secrets-through-record-keeping-rocks/

Foundation of all known life: Webb telescope makes first detection of crucial carbon molecule.

(June 27, 2023)

Scientists have detected a new carbon compound, methyl cation, in space for the first time using NASA's James Webb Space Telescope. This compound, crucial in forming complex carbon-based molecules, was found in a young star system in the Orion Nebula. The discovery could enhance our understanding of life's potential development beyond Earth. This molecule, never before

seen in space, is believed to be a cornerstone of interstellar organic chemistry. Carbon compounds form the foundations of all known life, and as such are of particular interest to scientists working to understand both how life developed on Earth, and how it could potentially develop elsewhere in our universe. As such, the study of interstellar organic (carbon-containing) chemistry is an area of keen fascination to many astronomers.

Read more at:
https://scitechdaily.com/foundation-of-all-known-life-webb-telescope-makes-first-detection-of-crucial-carbon-molecule/

Over 57,000 years old – Scientists discover oldest known neanderthal cave engravings.

(July 1, 2023)

Credit: Kristina Thomsen

According to a recent study published in the journal PLOS ONE by Jean-Claude Marquet and colleagues from the University of Tours, France, the oldest engravings made by Neanderthals have been discovered on a cave wall in France. Over the past few decades, research has shed light on the cultural sophistication of Neanderthals.

Read more at:
https://scitechdaily.com/over-57000-years-old-scientists-discover-oldest-known-neanderthal-cave-engravings/

Saving the rainforests: A clean alternative to one of the world's most common ingredients.

(July 1, 2023)

MIT students David Heller, Shara Ticku, and Harry McNamara founded C16 Biosciences to produce a sustainable alternative to environmentally-damaging palm oil. Their product, created through fermenting sugars with oil-producing yeast, aims to tackle the massive deforestation and greenhouse gas emissions associated with palm oil production. The company, backed by MIT funding initiatives, now produces metric tons of the oil and has launched a consumer cosmetic brand, Palmless.

Read more at:
https://scitechdaily.com/saving-the-rainforests-a-clean-alternative-to-one-of-the-worlds-most-common-ingredients/

ARTS

Credit: Unsplash

Colonial Bengal explored through ‘pat’ paintings at DAG’s art show in Delhi.

(June 30, 2023)

Businessmen and soldiers, artists and memsahibs, all drawn to Bengal’s riches in wealth and culture, flocked to it. It led to an extraordinary mingling that resulted in the flourishing of art that drew inspiration from everywhere while remaining true to its local tradition of technique. Legend has it that administrator Job Charnock ‘founded’ the city of Calcutta at the site of three extant villages, near the banyan tree where he liked to smoke his hubble-bubble.

Read more at:
https://www.thehindu.com/entertainment/art/colonial-bengal-explored-through-pat-paintings-at-dags-art-show-in-delhi/article67022428.ece

Commemorating 75 years of Bombay’s Progressive Artists’ Group: A preview

(July 1, 2023)

Credit: The Hindu

In the annals of Indian art history, one group stands out for the indelible mark it left on the creative landscape. The Progressive Artists’ Group, formed in 1947, revolutionized the art scene in Modern India. As the group completes 75 years, an exhibition showcasing the works of its six original members — Maqbool Fida Husain, Sayed Haider Raza, Francis Newton Souza, Krishnaji Howlaji Ara, Sadanand K. Bakre, and Hari Ambadas Gade, is on at the Triveni Kala Sangam.

Read more at:
https://www.thehindu.com/entertainment/art/commemorating-75-years-of-bombays-progressive-artists-group-a-preview/article67018479.ece

TECHNOLOGY

Credit: Unsplash

Taking Quantum Security to New Heights: A New Secure and Fast Source-DI QRNG Protocol.

(June 27, 2023)

In a study recently published in Advanced Photonics, researchers from Nanjing University recently proposed and experimentally demonstrated a secure and fast source-DI QRNG protocol that is simple and efficient for practical implementation. The source-DI QRNG in this work is realized through single-photon detection technology assisted by entangled photons. The random numbers are extracted by a process that measures the arrival time of a photon from a pair of time–energy entangled photons. The time–energy entangled photon pairs are produced from a spontaneous parametric down-conversion (SPDC) process.

Read more at:
https://scitechdaily.com/taking-quantum-security-to-new-heights-a-new-secure-and-fast-source-di-qrng-protocol/

NASA's Laser Communications Relay: Showcasing the Future of Space Data Transmission.

(June 27, 2023)

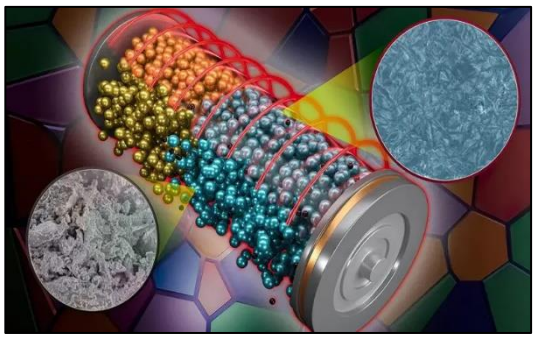
After a successful year of experiments, NASA's Laser Communications Relay Demonstration (LCRD) project showcases the future of space data transmission. Utilizing infrared light, LCRD enables transmissions packed with 10 to 100 times more data than traditional radio wave systems. The success of LCRD and its upcoming extension, ILLUMA-T, indicates laser communication could greatly enhance future space missions by providing more efficient and robust data relay capabilities.

Read more at:

https://scitechdaily.com/nasas-laser-communications-relay-showcasing-the-future-of-space-data-transmission/

Igniting Performance: Small tweak doubles charging speeds in solid-state batteries.

(July 1, 2023)



Credit: Andy Sproles

Oak Ridge National Laboratory (ORNL) scientists found that a small tweak created big performance improvements in a type of solid-state battery, a technology considered vital to broader electric vehicle adoption. These batteries use a solid electrolyte instead of a potentially flammable liquid. When the battery charges or operates, ions move between electrodes through the electrolyte between them.

Read more at:
https://scitechdaily.com/igniting-performance-small-tweak-doubles-charging-speeds-in-solid-state-batteries/

Pioneering quantum simulations on photonic chips: A new era in quantum computing.

(July 1, 2023)

Researchers at the University of Rochester have developed a chip-scale optical quantum simulation system using controlled photon frequency to simulate complex natural phenomena at the quantum level, reducing the physical footprint and resource requirements of traditional methods. This innovation, heralding a quantum-correlated synthetic crystal, could pave the way for more complex future simulations.

Read more at:
https://scitechdaily.com/pioneering-quantum-simulations-on-photonic-chips-a-new-era-in-quantum-computing/#google_vignette

SPORTS

Credit: Unsplash

West Indies tumbles out of tournament for first time since inception.

(July 1, 2022)

Credit: AP

Two-time champions West Indies on July 1 crashed out of the race to qualify for the upcoming 2023 50-over World Cup in India, after Scotland shocked them by seven wickets in a Super Six match of the qualifier, in Harare.The champions of 1975 and 1979 editions, this is the first time in the 48 years of tournament history that West Indies won't feature among the top 10 teams in limited overs cricket.

Read more at:
https://www.thehindu.com/sport/cricket/icc-world-cup-2023-west-indies-tumbles-out-of-tournament-for-first-time-since-inception/article67031361.ece

Duleep Trophy 2023: Central Zone has East Zone, needing 300 for a win, on the mat.

(July 1, 2022)

Central Zone was in the driving seat on day three of the Duleep Trophy quarterfinal against East Zone at the Alur (1) Cricket Ground here on Friday. After failing to build on its openers' solid effort amidst three fiery spells from Ishan Porel, Central folded up for 239 in its second essay. It set up a 300-run target before Saurabh Kumar (four for 33) gnawed at the East top-order, leaving it 69 for six at stumps.

Read more at:
https://www.thehindu.com/sport/cricket/duleep-trophy-2023-quarterfinals-central-zone-vs-east-zone-day-3/article67028746.ece#

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