

Weekly Update

1. China's 'New' JH-XX Bomber Is a Stealth Mystery

The Chinese stealth bomber has arrived and shaken the Americans. China's military power has reached its peak with the JH-XX stealth bomber; a bomber that challenges the military capabilities of the United States. However, no photo of this mysterious bird has been released yet.

Source: The National Interest

<https://nationalinterest.org/blog/buzz/chinas-new-jh-xx-bomber-stealth-mystery-211343>

2. Researchers find enormous viruses that consume arctic algae that melt ice

Scientists will do more research to better understand the ecosystem, so they can determine which hosts the viruses infect and make sure they attack algae. These algae are the same algae that melt the ice. In both dark ice and red ice, signs of active giant viruses were found. This is the first time they have been found on surface snow and ice, which have an abundance of pigmented microscopic algae.

Source: neo Science hub

<https://neosciencehub.com/researchers-find-enormous-viruses-that-consume-arctic-algae-that-melt-ice/>

3. A Researcher's Model Suggests We're Connected to an Anti-Universe

The idea also does not violate one of the fundamental laws of physics, CPT symmetry, which is a nice bonus for any theory trying to explain the expansion of the universe. Relative entropy requires two states, in this case, the universe and its companion anti universe. Current explanations of physics are not based on intuitive concepts, so scientists are looking for other explanations to explain the expansion of the universe.

Source: Popular Mechanics

<https://www.popularmechanics.com/space/deep-space/a61007855/anti-universe-expansion/>

4. EXOPLANETS, BIOMEDICINE, AND RECOGNIZING FACES 2024 KAVLI PRIZE ANNOUNCEMENT

The Norwegian Academy of Sciences has announced eight scientists in the fields of astrophysics, nanoparticles and neuroscience as winners of the 2024 Kavli Prizes. The Kavli Foundation is one of the foundations active in the field of science development, founded by Norwegian-American physicist, entrepreneur and science advocate Fred Kavli.

Source: The Kavli Prize

<https://www.kavliprize.org/exoplanets-biomedicine-and-recognizing-faces>

5. Brain Cells May Actually Try to Predict The Future During Sleep

The researchers trained the mice to run back and forth on an elevated track with a reward placed at either end, and observed how the activity of their hippocampal neurons "increased" in the process. The researchers found that when the mice encounter a new environment, the spatial representations that form in their brains remain roughly stable for several hours after sleep.

Source: ScienceAlert

<https://www.sciencealert.com/brain-cells-may-actually-try-to-predict-the-future-during-sleep>

6. Treasure trove of relics retrieved from ancient shipwrecks in South China Sea

The team of scientists previously discovered 890 ancient artifacts from the shipwreck, including copper coins, porcelain and pottery. During this period, vast landscapes and works of art with flowers and birds were seen as images that glorified the new dynasty and reflected its generosity, virtue and greatness. The National Cultural Heritage Administration released photos of the discovered treasures, as well as pictures of a float that was retrieving artifacts from the sea floor with the help of a robotic claw.

Source: Bastille Post Global

<https://www.bastillepost.com/global/article/3910816-treasure-trove-of-relics-retrieved-from-ancient-shipwrecks-in-south-china-sea>

7. Battery breakthrough sees electricity harvested from soil

This technology offers a green alternative to existing methods of powering sensors and other Internet of Things (IOT) devices, which farmers are now increasingly using to increase productivity, reduce costs and maximize yields.

Source: Independent

<https://www.independent.co.uk/tech/battery-soil-bacteria-bactory-renewable-energy-b2559795.html>

8. Artificial amber stores data in DNA long-term

One gram of DNA can hold up to 215 petabytes (215 million gigabytes) of data. A special combination of monomers used to pull DNA into circular structures is designed at the center, with a waterproof layer on the outside. DNA is a much denser data storage facility than anything designed by humans, but the problem is that its structure is fragile.

Source: New Atlas

<https://newatlas.com/technology/artificial-amber-dna-data-storage/>

9. Cosmic kidney disease: an integrated pan-omic, physiological and morphological study into spaceflight-induced renal dysfunction

The study involved samples from 11 laboratory mice and 5 humans who were exposed to space travel. According to the study, scientists aboard the International Space Station floating in low Earth orbit may experience musculoskeletal degeneration and neurological, eye and heart problems within a few weeks of their journey.

Source: nature communications

<https://www.nature.com/articles/s41467-024-49212-1>

10. 'Once in a lifetime' nova explosion may create new star in the night sky tonight

Astronomers also say that in some star systems, such as Northern Titus, the two stars are so close to each other that stellar material is constantly flowing from the red giant to the white dwarf. Scientists' calculations show that this star system has exploded before in 1946, and this time when it explodes again, the brightest scene will probably be seen 24 hours later.

Source: UNILAD

<https://www.unilad.com/technology/space/nova-explosion-new-star-created-night-sky-nasa-851587-20240613>