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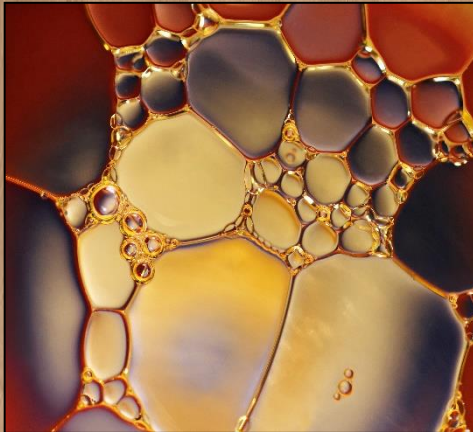
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SCIENCE



Credit: Pxhere

From Windows 98 to Mars 2022: Major upgrade for 19-year-old Martian Water-Spotter.

(June 26, 2022)

The MARSIS instrument on the European Space Agency's Mars Express spacecraft, is receiving a major software upgrade that will allow it to see beneath the surfaces of Mars and its moon Phobos in more detail than ever before. Launched 19 years ago, on June 2, 2003, the orbiter has spent almost two decades studying Earth's neighbor and revolutionizing our understanding of the history, present, and future of Mars.



*Credit: Spacecraft image: ESA/ATG
medialab*

Read more at:

<https://scitechdaily.com/from-windows-98-to-mars-2022-major-upgrade-for-19-year-old-martian-water-spotter/>

Remarkable intelligence: octopus and human brain share the same “jumping genes”.

(June 26, 2022)

New research has identified an important molecular analogy that could explain the remarkable intelligence of the invertebrates. In a recent study, it was discovered that the neural and cognitive complexity of octopus originated from a molecular analogy with the human brain. The research shows that the same ‘jumping genes’ are active both in the human brain and in the brain of two species of octopuses. A discovery that could help us understand the secret of the intelligence of these remarkable organisms.

Read more at:

<https://scitechdaily.com/remarkable-intelligence-octopus-and-human-brains-share-the-same-jumping-genes/>

Hubble captures a glittering hoard in an astronomical treasure trove.

(June 26, 2022)



Credit: ESA/Hubble & NASA, R. Cohen

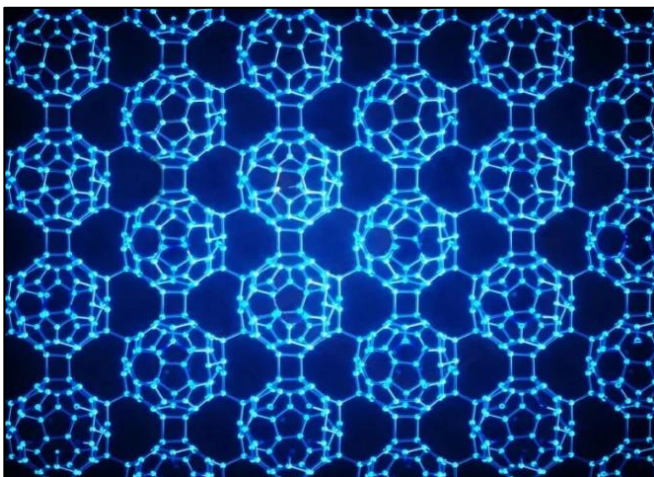
The sparkling globular cluster NGC 6569 in the constellation Sagittarius is captured by the NASA/ESA Hubble Space Telescope. Hubble explored the heart of the cluster with both its Wide Field Camera 3 and Advanced Camera for Surveys, revealing a glittering hoard of stars in this astronomical treasure trove. Because of the intense gravitational attraction of these closely packed clusters of stars, globular clusters have a regular spherical shape with a densely populated center — as can be seen in the heart of this star-studded image.

Read more at:

<https://scitechdaily.com/hubble-captures-a-glittering-hoard-in-an-astronomical-treasure-trove/>

Scientists synthesize new carbon material: A two-dimensional monolayer polymeric fullerene.

(June 28, 2022)



Credit: Ella Maru Studio

Recently, scientists developed a new interlayer bonding cleavage strategy to prepare a two-dimensional monolayer polymeric fullerene. The researchers prepared magnesium intercalated C60 bulk crystals as the precursor to the exfoliation reaction. They, then utilized a ligand-assisted cation exchange strategy to cleave the interlayer bonds into bulk crystals, which led to the bulk crystals being exfoliated into monolayer nanosheets.

Read more at:

<https://scitechdaily.com/scientists-synthesize-new-carbon-material-a-two-dimensional-monolayer-polymeric-fullerene/>

Sea corals found to be a source of an elusive “anti-cancer” compound.

(June 29, 2022)



Credit: Bailey Miller.

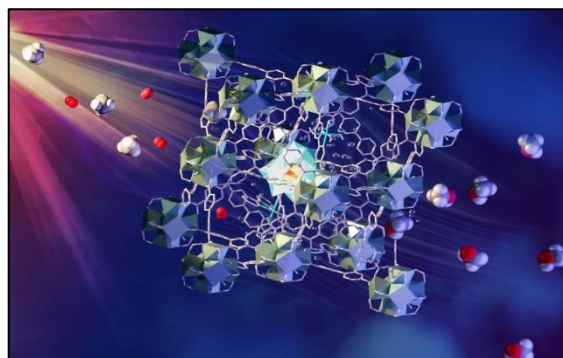
Researchers at the University of Utah Health report that easy-to-find soft corals—flexible corals that resemble underwater plants—make the elusive compound in preliminary studies for treating cancer. The breakthrough opens the door to generating the compound in big enough quantities for rigorous testing, which could one day result in a new cancer-fighting tool.

Read more at:

<https://scitechdaily.com/sea-corals-found-to-be-a-source-of-an-elusive-anti-cancer-compound/>

Scientists discover “holy grail of catalysis” – converting methane into methanol using light.

(June 30, 2022)



Credit: ORNL/Jill Hemman

An international team of researchers, led by scientists at the University of Manchester, has developed a fast and economical method of converting methane, or natural gas, into liquid methanol at ambient temperature and pressure. To help observe how the process works and how selective it is, the researchers used neutron scattering at the VISION instrument at Oak Ridge National Laboratory’s Spallation Neutron Source.

Read more at:

<https://scitechdaily.com/scientists-discover-holy-grail-of-catalysis-converting-methane-into-methanol-using-light/>

ARTS



Credit: Pxhere

PM Modi presents black pottery pieces, Dokra art, ittar bottles to G-7 leaders in Germany.

(June 28, 2022)

Prime Minister Narendra Modi, on a two-day visit to Germany for the G-7 summit, presented special gifts to all the G-7 leaders, highlighting India's rich traditional art and culture. Gulabi Meenakari brooch, Kashmiri silk carpet, and marble inlay table top were some of the few special gifts presented by him to foreign leaders.

Read more at:

<https://indianexpress.com/article/lifestyle/art-and-culture/pm-modi-germany-g7-summit-leaders-gifts-black-pottery-dokra-art-gulabi-meenakari-7995401/>

Stunning Roman mosaics return home to new Israeli museum.

(June 28, 2022)

A series of exceptional 1,700-year-old Roman mosaics have returned home to Israel, where the collection went on public display for the first time Monday after more than a decade touring the world's top museums. The mosaics were first discovered in the central city of Lod in 1996 but the Israel Antiquities Authority only fully unearthed the enormous, well-preserved artworks in 2009. The collection stretches 17 meters by nine meters.



Credit: AP Photo/Oded Balilty

Read more at:

<https://indianexpress.com/article/lifestyle/art-and-culture/stunning-roman-mosaics-return-home-to-new-israeli-museum-7996076/>

Sam Gilliam, abstract artist of drape paintings, dies at 88.

(June 29, 2022)



Credit: Gabriella Demczuk/The New York Times

Sam Gilliam, a pioneering abstract painter best known for his lusciously stained Drape paintings that took his medium more fully into three dimensions than any other artist of his generation, and who in 1972 became the first Black artist to represent the United States at the Venice Biennale, died at his home in Washington. Gilliam was twice an anomaly. As a Black artist, he was largely ignored by the upper levels of the art world until late in his career.

Read more at:

<https://indianexpress.com/article/lifestyle/art-and-culture/sam-gilliam-abstract-artist-of-drape-paintings-dies-at-88-7997490/>

Glastonbury makes a visually arresting return.

(June 29, 2022)



Credit: Matt Cardy/Getty Images

Glastonbury, the world-famous art and music festival set within 900 acres of the British countryside, made a sensational return this weekend after a two-year pandemic-induced hiatus. Boasting the title of the largest green-field festival in the world, it has long been an

important pillar of the UK's art and culture scene. This year, Glastonbury celebrate its belated 50th anniversary with performances by former Beatle Paul McCartney and disco luminary Diana Ross.

Read more at:

<https://edition.cnn.com/style/article/glastonbury-2022-highlights-photos/index.html>

NFT art expo comes to Kochi.

(June 29, 2022)

14 artists from all over the country, who are proficient in the NFT space, have come together at Kochi's Cafe Papaya for an art exhibition to showcase their vibrant, animated and interactive works. Titled 'Myths and Memes', the exhibition has been organised by 101 India. "NFT Art unlocks enormous possibilities with the shift from Web 2.0 to Web 3.0. It will dissolve geographical boundaries in art and its trade. Through NFT Art, they too can exhibit their creativity and get remunerated," said Vimal Chandran, curator of the exhibition.



An artwork at the exhibition.

Read more at:

<https://www.newindianexpress.com/cities/kochi/2022/jun/29/nft-art-expo-comes-to-kochi-2470816.html>

'Stylish' makeover: Pazhassiraja museum to be more interactive.

(July 2, 2022)

The renovated Pazhassiraja Archaeological Museum at East Hill was inaugurated by Ports, Museums, Archaeology and Archives Minister Ahamed Devarkovil. The makeover includes QR codes that can be scanned to obtain additional information, screens displaying inscriptions, souvenir shop selling replicas, models of ancient stoneworks and publications. The museum is a repository of archaeological department's findings and scientific research conducted during the days of British Raj.

Read more at:

<https://www.newindianexpress.com/states/kerala/2022/jul/02/stylish-makeover-pazhassiraja-museum-to-be-more-interactive-2471938.html>

TECHNOLOGY



Credit: Unsplash

Stronger security for smart devices to efficiently protect against powerful hacker attacks.

(June 26, 2022)

MIT researchers recently published a paper which demonstrated that analog-to-digital converters in smart devices, which encode real-world signals from sensors into digital values that can be processed computationally, are vulnerable to power side-channel attacks. Now engineers show that analog-to-digital converters are also susceptible to a stealthier form of side-channel attack, and describe techniques that effectively block both attacks. Their techniques are more efficient and less expensive than other security methods.



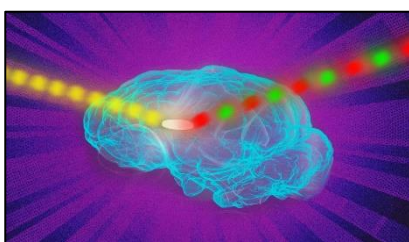
Credit: MITNews

Read more at:

<https://scitechdaily.com/stronger-security-for-smart-devices-to-efficiently-protect-against-powerful-attacks/>

MIT engineers boost signals from fluorescent sensors – offering unique glimpse inside living cells.

(June 27, 2022)



Credit: MIT News

MIT engineers have now devised a solution to dramatically improve the signal emitted by fluorescing nanosensors, which could aid with cancer diagnosis or monitoring. Using a novel photonic technique, they invented for exciting any fluorescent sensor, they were able to significantly improve the fluorescent signal. According to the researchers, this type of technology might allow fluorescent

sensors to be used to track specific molecules inside the brain or other tissues deep within the body, for medical diagnosis or monitoring drug effects.

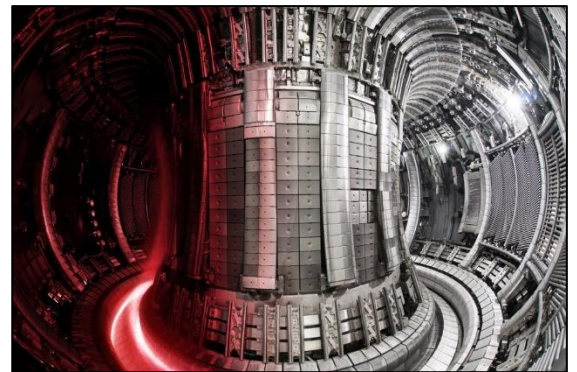
Read more at:

<https://scitechdaily.com/mit-engineers-boost-signals-from-fluorescent-sensors-offering-unique-glimpse-inside-living-cells/>

Major breakthrough puts dream of unlimited, clean nuclear fusion energy within reach.

(June 29, 2022)

In a sustained five-second burst, researchers in the EUROfusion consortium released a record-breaking 59 megajoules (MJ) of fusion energy inside a giant, doughnut-shaped machine called a tokamak. This was almost triple the previous 21.7 MJ record set at the same facility in 1997, with the results touted as “the clearest demonstration in a quarter of a century of the potential for fusion energy to deliver safe and sustainable low-carbon energy.”



Credit: UKAEA

Read more at:

<https://scitechdaily.com/major-breakthrough-puts-dream-of-unlimited-clean-nuclear-fusion-energy-within-reach/>

India and Japan discuss cooperation in 5G, cybersecurity at fourth bilateral cyber dialogue.

(June 30, 2022)



Credit: Pixabay

The Ministry of External Affairs (MEA) said both sides discussed important areas of bilateral cyber cooperation and reviewed the progress achieved in the areas of cybersecurity and information and communication technologies. It said the discussions included developments in cyber domain and mutual cooperation in the area during discussions at the United Nations and other multilateral and regional fora.

Read more at:

<https://gadgets360.com/internet/news/5g-technology-india-japan-cybersecurity-cooperation-information-communication-technology-3115238>

DRDO tests Made-In-India autonomous plane to add more fire power.

(July 1, 2022)

The first flight of the Autonomous Flying Wing Technology Demonstrator was carried out successfully by the Defence Research and Development Organisation (DRDO) from the Aeronautical Test Range, Chitradurga, Karnataka. Operating in a fully autonomous mode, the aircraft exhibited a perfect flight, including take-off, way point navigation and a smooth touchdown.



Credit: Ministry of Defence

Read more at:

<https://www.news18.com/news/tech/drdo-tests-made-in-india-autonomous-plane-to-add-more-fire-power-5475217.html>

Apple co-founder Steve Jobs to be given posthumous award by US President.

(July 2, 2022)



Credit: Creative Commons

Steve Jobs, Co-founder and CEO of Apple is going to be awarded the Medal of Freedom posthumously by the US President on July 7. US President Joe Biden will be awarding Steve Jobs and 16 more personalities with the highest honour. "These 17 Americans demonstrate the power of possibilities and embody the soul of the nation — hard work, perseverance, and faith," the White House said in a statement.

Read more at:

<https://www.news18.com/news/tech/apple-co-founder-steve-jobs-to-be-given-posthumous-award-by-us-president-5478319.html>

SPORTS

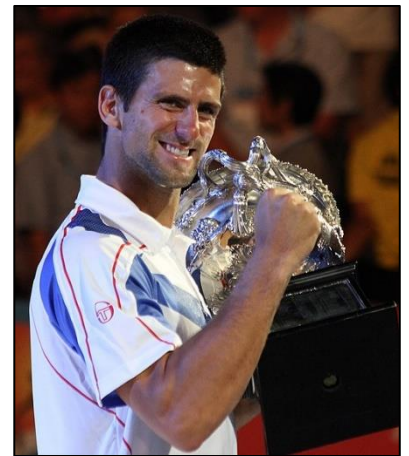


Credit: Pxhere

Novak Djokovic becomes 1st player to win 80 matches in all four Grand Slams.

(June 27, 2022)

Novak Djokovic became the first player in history to win 80 matches in all four Grand Slams when he defeated Kwon Soon-woo 6-3, 3-6, 6-3, 6-4 on Centre Court for his 80th win in Wimbledon. Djokovic overcame the 81st-ranked Korean Kwon Soon-woo to reach the Wimbledon second round. The defending champion, bidding for his fourth Wimbledon title in a row, looked out-of-sorts at times against Kwon, even dropping a set to his opponent.



Credit: Creative Commons

Read more at:

<https://indianexpress.com/article/sports/tennis/novak-djokovic-becomes-1st-player-to-win-80-matches-in-all-four-grand-slams-7994791/>

Deepak Hooda, Sanju Samson register highest T20I partnership for India.

(June 28, 2022)



Credit: Twitter/BCCI

Deepak Hooda and Sanju Samson registered the highest T20I partnership for India with 176 runs, breaking the record of the 165-run stand of Rohit Sharma and KL Rahul against Sri Lanka in Indore in 2017. On their way to this unique record, Hooda and Samson's partnership became the 9th highest in all men's T20Is, the highest second wicket partnership in all men's T20Is and the highest partnership for India for any wicket in men's T20Is. This is also the

second highest score against Ireland by any side. It is preceded by only 252/3 which Scotland scored.

Read more at:

<https://indianexpress.com/article/sports/cricket/deepak-hooda-sanju-samson-register-highest-t20i-partnership-for-india-7997088/>

Babar Azam surpasses Virat Kohli as world No. 1 T20I batter for longest period.

(June 29, 2022)

Pakistan captain Babar Azam has surpassed India's Virat Kohli in becoming the world No. 1 T20I batter for the longest period of time after he maintained his top spot in the latest ICC T20 batting rankings. Kohli was the No.1 ranked T20I batter for a total of 1,013 days during his reign last decade, but Babar has now surpassed this number following his long-standing stay at the top.



Credit: Michael Steele/Getty Images

Read more at:

<https://timesofindia.indiatimes.com/sports/cricket/news/babar-azam-surpasses-virat-kohli-as-world-no-1-t20i-batter-for-longest-period/articleshow/92542965.cms>

India vs Ireland, 2nd T20I: Deepak Hooda's maiden century helps India beat Ireland by 4 runs to pocket series 2-0.

(June 29, 2022)



Credit: BCCI

Deepak Hooda hit a master-class maiden century as India survived a mighty scare before defeating Ireland by four runs in a nail-biting high-scoring second T20 International to sweep the two-match series. Hooda scored 104 off 57 balls to become only the fourth Indian to hit a T20 International ton, while Sanju Samson contributed 77 off 42 balls to power India to a mammoth 225 for seven after opting to bat.

Read more at:

<https://timesofindia.indiatimes.com/sports/cricket/news/india-vs-ireland-2nd-t20i-deepak-hoodas-maiden-century-helps-india-beat-ireland-by-4-runs-to-pocket-series-2-0/articleshow/92528996.cms>

Neeraj Chopra breaks his own national record with 89.94m throw at Stockholm Diamond League, finishes 2nd.

(June 30, 2022)

Neeraj Chopra returned to Diamond League action for the first time in 4 years in style as he broke his own national record for the second time in a month. Neeraj finished 2nd at the Stockholm Diamond League with a massive throw of 89.94m. Tokyo Olympics champion Neeraj Chopra nearly achieved his mission of throwing 90m as he hurled the javelin to his personal best distance in his first attempt in the Diamond League.



Credit: Reuters

Read more at:

<https://www.indiatoday.in/sports/other-sports/story/neeraj-chopra-breaks-his-own-national-record-with-89-94m-throw-at-stockholm-diamond-league-finishes-2nd-1968763-2022-06-30>

PV Sindhu crashes out of Malaysia Open Super 750 with quarterfinal loss to Tai Tzu Ying.

(July 1, 2022)

PV Sindhu crashed out in the quarterfinals of the Malaysia Open Super 750 with a 21-13, 15-21, 13-21 loss to Tai Tzu Ying. Sindhu was quickly able to tie the score at 7-7 with the 28-year-old and managed to break away and secure a four-point lead. But Tzu Ying bounced back remarkably after the first game loss. Ultimately, Tzu Ying proved to be too much for the Indian shuttler and secured the second game with a score of 21-15.

Read more at:

<https://www.indiatoday.in/sports/badminton/story/pv-sindhu-crashes-out-of-malaysia-open-super-750-with-quarterfinal-loss-to-tai-tzu-ying-1969033-2022-07-01>

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