Discovery of the Month

CHALLENGING THE NEED FOR DARK MATTER IN THE UNIVERSE

researcher Rajendra Gupta

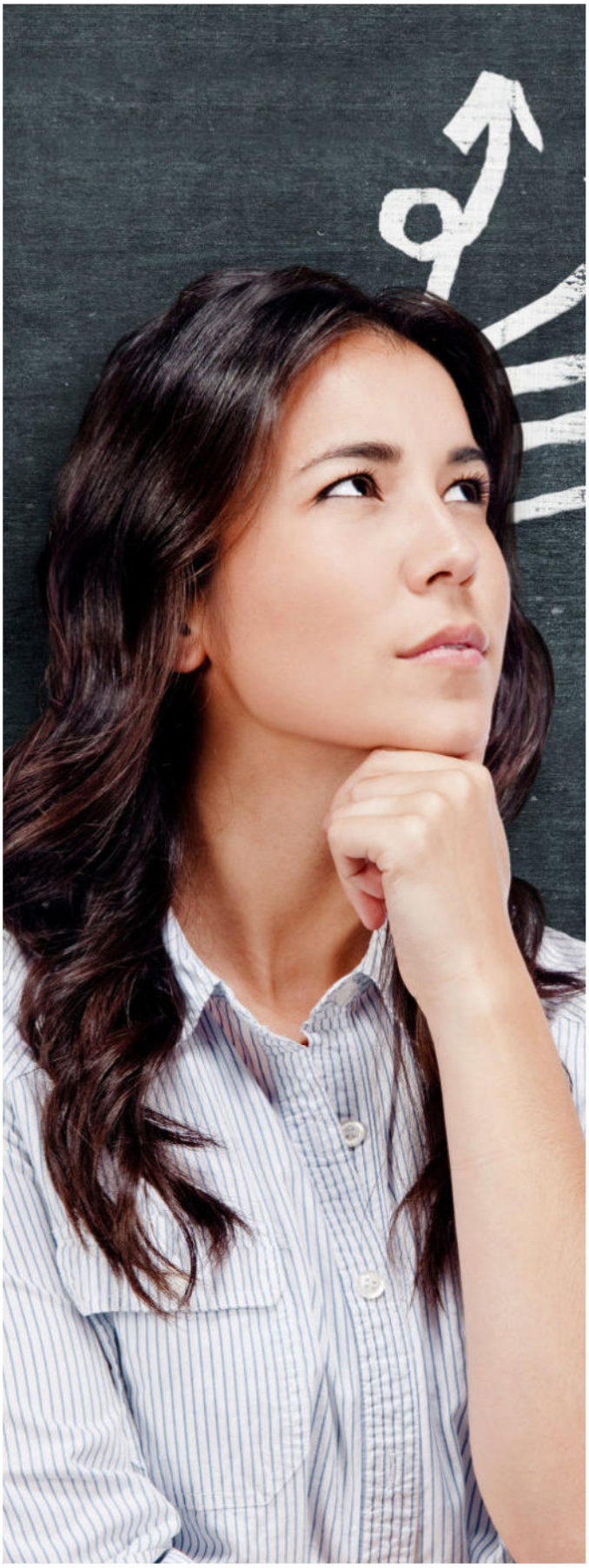
Reevaluating Dark Matter:
A New Model for the Composition of the Universe

The universe is thought to be made of normal matter, dark energy, and dark matter. But, a new study from the University of Ottawa questions this. It suggests dark matter might not really exist.

The study appears in The Astrophysical Journal. It introduces a new model named the covarying coupling constants (CCC) and tired light (TL) theory. This model merges two concepts. First, it explains how forces in nature weaken over time. Second, it describes how light loses energy during long-distance travel. Researchers have tested this model. They discovered it agrees with how galaxies are distributed. It also fits how light from the early universe has transformed.

Read full article at
https://entechonline.com/challenging-the-need-for-dark-matter-in-the-universe-gupta/

The Power of Negentropy: Using Physics to Make Better Decisions in Daily Life



How Understanding Negentropy Can Help You Make Better Decisions in Daily Life

Every day, we make many small decisions. We might decide to pick up a sock or fix a leaky faucet. These decisions might seem small, but they can greatly impact our lives. There's a physics concept that explains this: negentropy.

Negentropy is the opposite of entropy. Entropy measures energy loss in a system. It's like heat escaping from a house that's not well-sealed. Small bits of entropy can turn into big problems. These problems require a lot of energy to solve. This can cause chaos and make it hard for us to reach our goals.

But what if we could minimize energy loss and maximize progress? This is where understanding negentropy comes in. As researchers in social systems, we believe in using the concepts of negentropy and energy. We use them to combat chaos and disorder in our daily lives.

The Five Steps for Negentropic Success
When people keep the idea of negentropy in mind and take actions that limit or reverse energy loss, social systems are more efficient and effective.

to read full article do visit
https://entechonline.com/the-power-of-negentropy/

Blood Sugar Monitors: Do You Really Need Them?

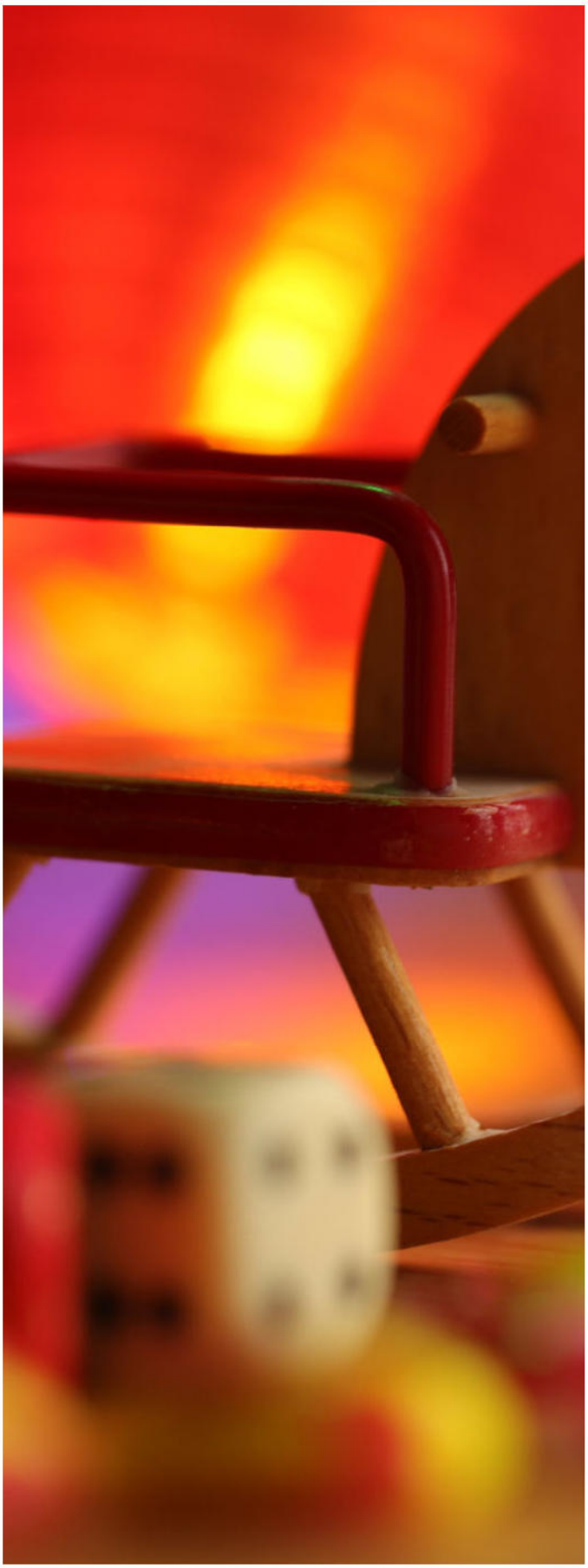
Blood sugar monitors are now popular among people who don't have diabetes. Companies are marketing them as tools for custom diets. Yet, top doctors caution that they might not be needed. In extreme situations, they could even cause harm.

Prof Partha Kar, who advises the NHS on diabetes, states that there is no solid evidence. This evidence would show that blood sugar monitors are helpful for people who do not have diabetes. Companies that worked on the Covid symptom-tracking app now offer a program. In it, people record what they eat and use a continuous glucose monitor (CGM) for two weeks. This device tracks their blood sugar levels after meals. However, it's debatable whether this is necessary.

In people with diabetes, high blood sugar can cause organ damage if not monitored and kept in check. For people without diabetes, there's not much evidence on what changes in blood sugar levels mean. Dr. Nicola Guess is a dietitian and diabetes researcher at the University of Oxford. She has stated that high blood sugar is linked to health problems. This is true for people with diabetes or prediabetes.

To read full article visit:
https://entechonline.com/blood-sugar-monitors-do-you-really-need-them/

Are Your Earliest Childhood Memories Still Lurking in Your Mind or Gone Forever?



Do you remember your first trip to Disneyland when you were just 18 months old? Or the time you had chickenpox at the age of 2? These may seem like vivid and cherished memories, but they are most likely not real. In fact, your earliest childhood memories were probably implanted by seeing photos or hearing stories from your parents.

Flavio Donato is a neuroscientist at the University of Basel. He explains that most people don't remember events from before they were 3 years old. Additionally, he points out that a child's memory fully matures around the age of 7. This situation has puzzled experts for many years. They wonder why memories vanish when the brain is learning the most.

To read full article visit:
https://entechonline.com/exploring-the-elusive-nature-of-earliest-childhood-memories/

Groundbreaking Study Links Long COVID Brain Fog and Damaged Blood Vessels

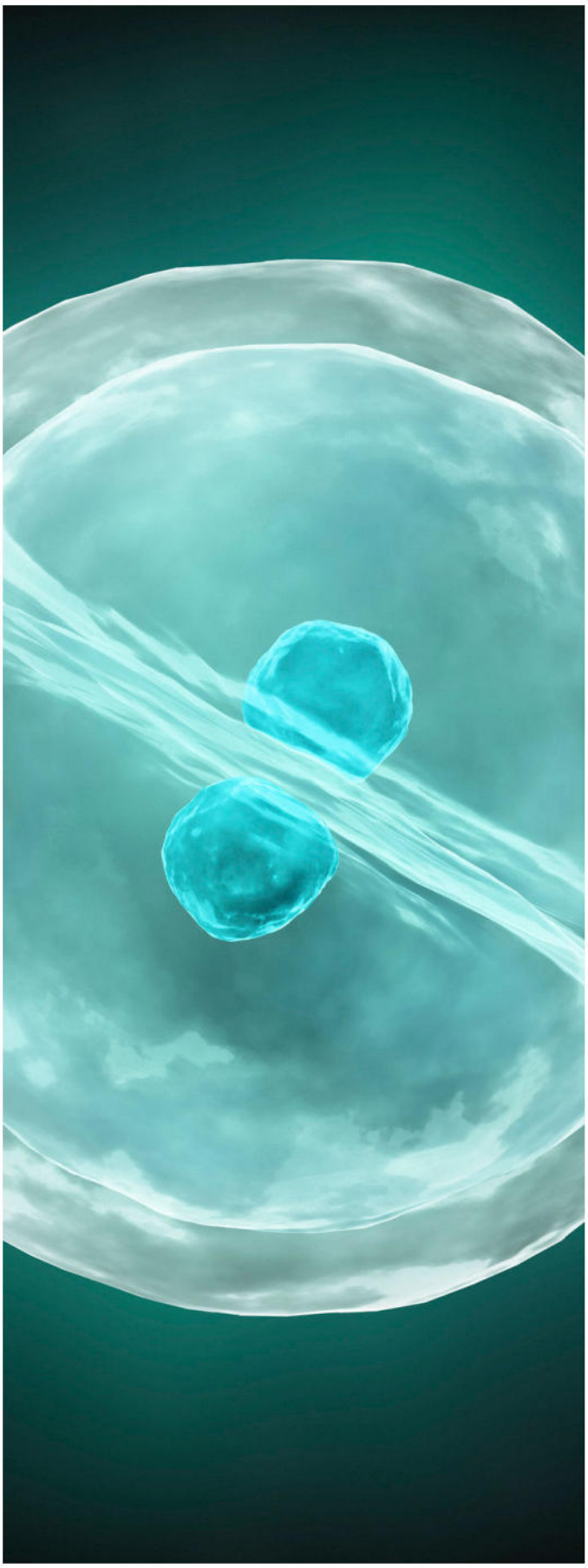
Exploring the Biological Basis of Long COVID Brain Fog

Long COVID has been a persistent and debilitating condition for many individuals who have recovered from the initial infection of COVID-19. One of the most common symptoms reported by these patients is brain fog, which can include memory and concentration problems. Now, scientists have made a groundbreaking discovery that may explain the cause of this symptom.

A recent study published in Nature Neuroscience has found evidence that long COVID brain fog may be linked to damaged blood vessels in the brain. The study, conducted by researchers at Trinity College Dublin, used MRI scans to examine the brains of 32 individuals who had either recovered from COVID-19 or were experiencing long COVID symptoms. The results showed that in those with brain fog, dye injected into their bloodstream was leaking into their brains and pooling in areas responsible for language, memory, mood, and vision.

To read full article visit:
https://entechonline.com/understanding-brain-fog/

Super Resolution Microscopy finds Secrets of Cell Division



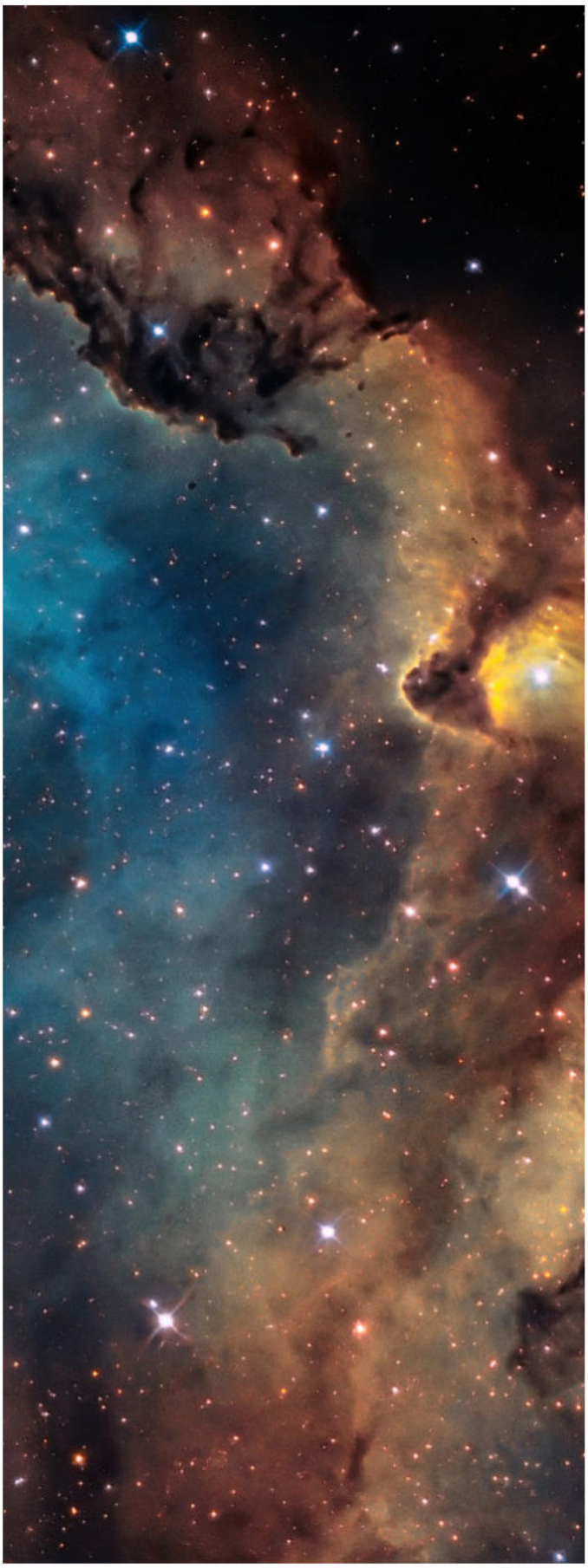
Cell division is a crucial process that forms the basis of all life on earth. It involves the accurate segregation of genetic material between cells, ensuring that each new cell receives a complete and identical set of chromosomes. But how does this intricate process work? And what role does cohesin, a protein complex, play in it?

A recent study published in Science by Fena Ochs, a Group Leader and Associate Professor at Biotech Research & Innovation Center (BRIC) University of Copenhagen, delves deep into the world of cell division to provide some answers.

Ochs and her team used cutting-edge super-resolution microscopy to zoom into human cells and visualize cohesin complexes at an unprecedented level of detail. What they discovered was remarkable: distinct populations of cohesin complexes, each with its own specific role in our cells.

To read full article visit:
https://entechonline.com/super-resolution-microscopy-finds-secrets-of-cell-division/

Astronomers Discover Complex Organic Molecules in Early-Stage Protostars with James Webb Telescope



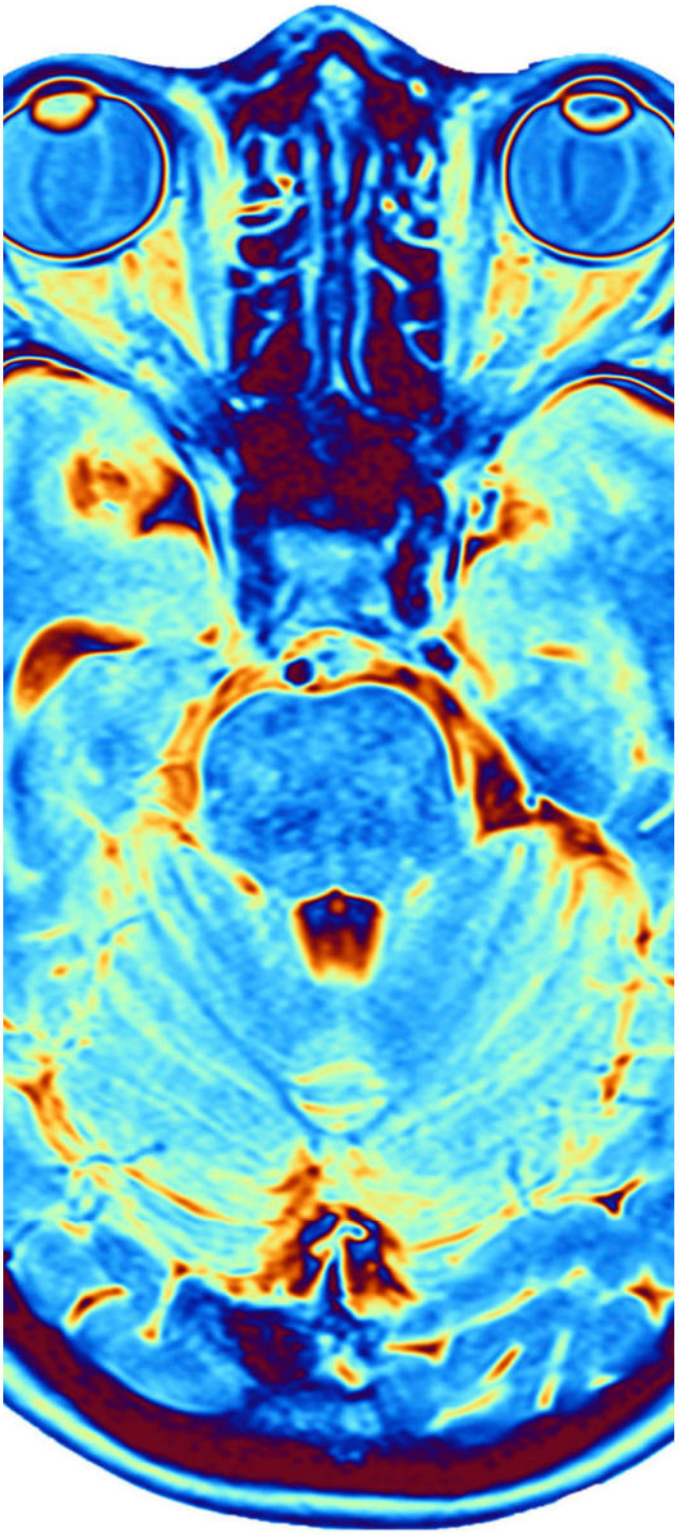
Origin of life can be traced before the birth of planet!

On March 13, 2024, a team of international astronomers using the NASA/ESA/CSA James Webb Space Telescope made a groundbreaking discovery. They found a variety of molecules, ranging from simple ones like methane to more complex compounds like acetic acid and ethanol, in early-stage protostars where planets have not yet formed. This finding has significant implications for our understanding of the origins of life in the universe.

The presence of complex organic molecules (COMs) in the solid phase in protostars was first predicted decades ago through laboratory experiments. However, it was not until now that these molecules have been individually identified and confirmed to be present in interstellar ices thanks to the unprecedented spectral resolution and sensitivity of Webb's Mid-InfraRed Instrument (MIRI). The discovery was made as part of the JOYS+ (James Webb Observations of Young ProtoStars) program.

To read full article visit:
https://entechonline.com/origin-of-life-can-be-traced-before-the-birth-of-planet/

Revolutionary NIRE Method Allows Long-Term and Multi-Scale Brain Imaging



Innovative Nanosheet Method Revolutionizes Brain Imaging for Multi-scale and Long-Term Studies

The human brain is a complex network of billions of neurons that work together to enable higher-order functions such as cognition and behavior. To understand these functions, it is crucial to study how neural activity is coordinated across different regions of the brain. While techniques like functional magnetic resonance imaging (fMRI) can provide insights into brain activity, they have limitations in terms of the amount of information they can show at a given time and area.

However, a team of researchers from the Exploratory Research Center on Life and Living Systems (ExCELLS) and the National Institute for Physiological Sciences (NIPS) has developed a new method for in vivo brain imaging that allows for large-scale and long-term observation of neuronal structures and activities in awake mice. This groundbreaking method, called the "nanosheet incorporated into light-curable resin" (NIRE) method, uses fluoropolymer nanosheets covered with light-curable resin to create larger cranial windows.

To read full article visit:
https://entechonline.com/exploring-the-benefits-of-multi-scale-brain-imaging/

Mark Your Calendars: Total Solar Eclipse on 8 April 2024!

Quick Facts About the Total Solar Eclipse on 8 April 2024

The year 2024 will be an exciting one for sky watchers and astronomy enthusiasts as a total solar eclipse will occur on 8 April. This rare celestial event is not to be missed, so mark your calendars and start planning now!

Where Will it Be Visible?

The total solar eclipse on 8 April 2024 will be visible in parts of North America, including Mexico, United States, and Canada. The path of totality – where the total eclipse can be seen – will stretch from Texas to Maine in the US.

If you're not in this path, don't worry! A partial eclipse will still be visible in other parts of North America and even in some parts of South America.

How Long Will it Last?

To read full article visit:
https://entechonline.com/total-solar-eclipse-8-april-2024/

Unitree's H1 humanoid robot sets new world speed record

A Chinese bipedal robot has set a new world speed record for a humanoid robot – and it can maintain its balance when knocked off course. The newest version of Unitree's H1 robot, called Evolution V3.0, stands at just over 5 feet 11 inches (1.8 meters) tall and weighs less than 110 pounds (50 kilograms).

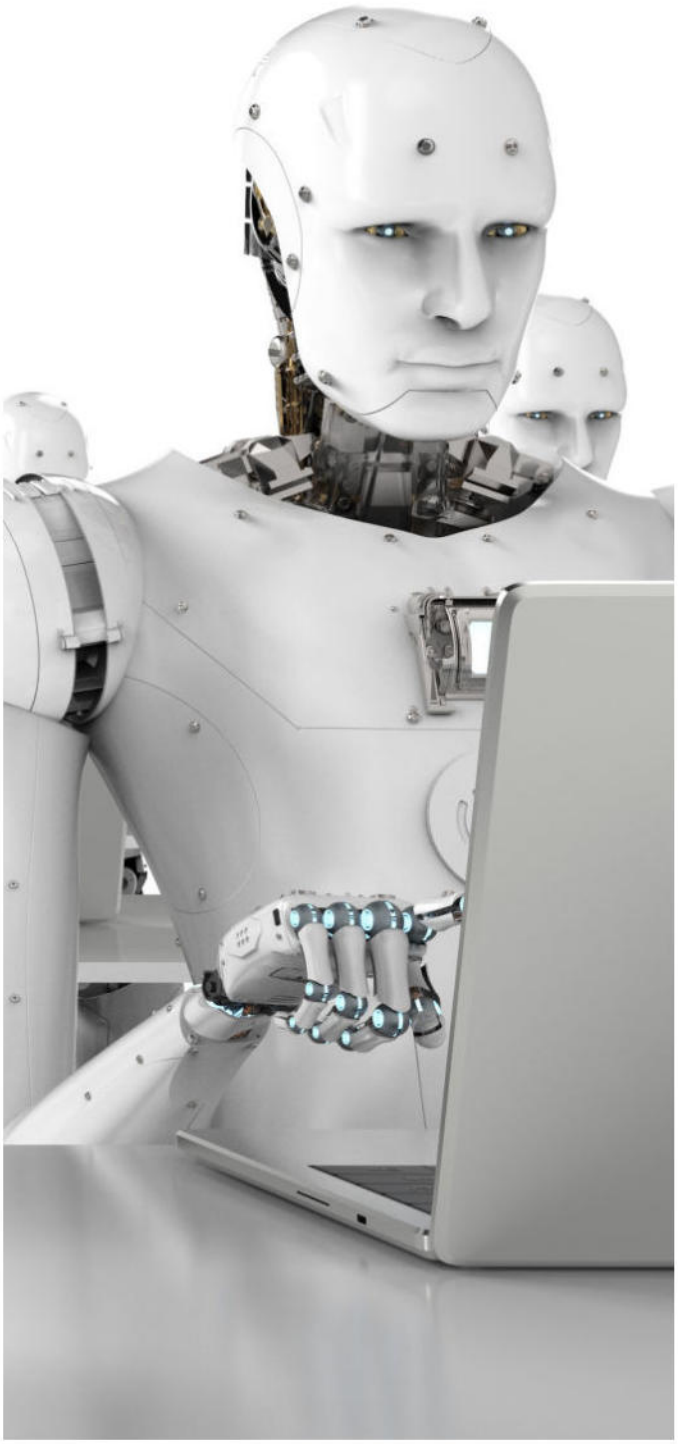
In a video released on March 1, the H1 is seen walking at its maximum speed of 7.4 miles per hour (3.3 meters per second) – an impressive feat for a bipedal robot. However, the company claims that it has the potential to reach a speed of 11 mph (5 m/s).

In a previous video released in August 2023, an engineer attempts to knock the robot over by kicking it forcefully. But the H1 easily recovers, adjusting its footing to recenter its weight just like a human would thanks to its three degrees of freedom in the hips and one each in the knees and ankles.

The latest video also showcases the H1's ability to climb stairs with ease, walking up, turning, and climbing back down forwards as well as navigating stairs backwards and sideways.

To read full article visit:
https://entechonline.com/unitree-humanoid-robot/

Meet Devin: The Coolest AI That's Changing the Game in Tech!



Hey there, young tech enthusiasts! Have you ever imagined a world where software could design itself or even get smarter over time? Well, guess what? That future is now! Introducing Devin, the world's first fully autonomous AI software engineer, a creation that's making waves and blowing minds in the tech industry.

A New Dawn in Technology

In a series of eye-opening videos and articles released over the past day, the tech world has been buzzing with excitement about Devin. This isn't your average tech story; it's the beginning of a revolution! Developed by the innovative minds at Cognition Labs, Devin is here to show us that the future of technology is brighter (and cooler) than ever.

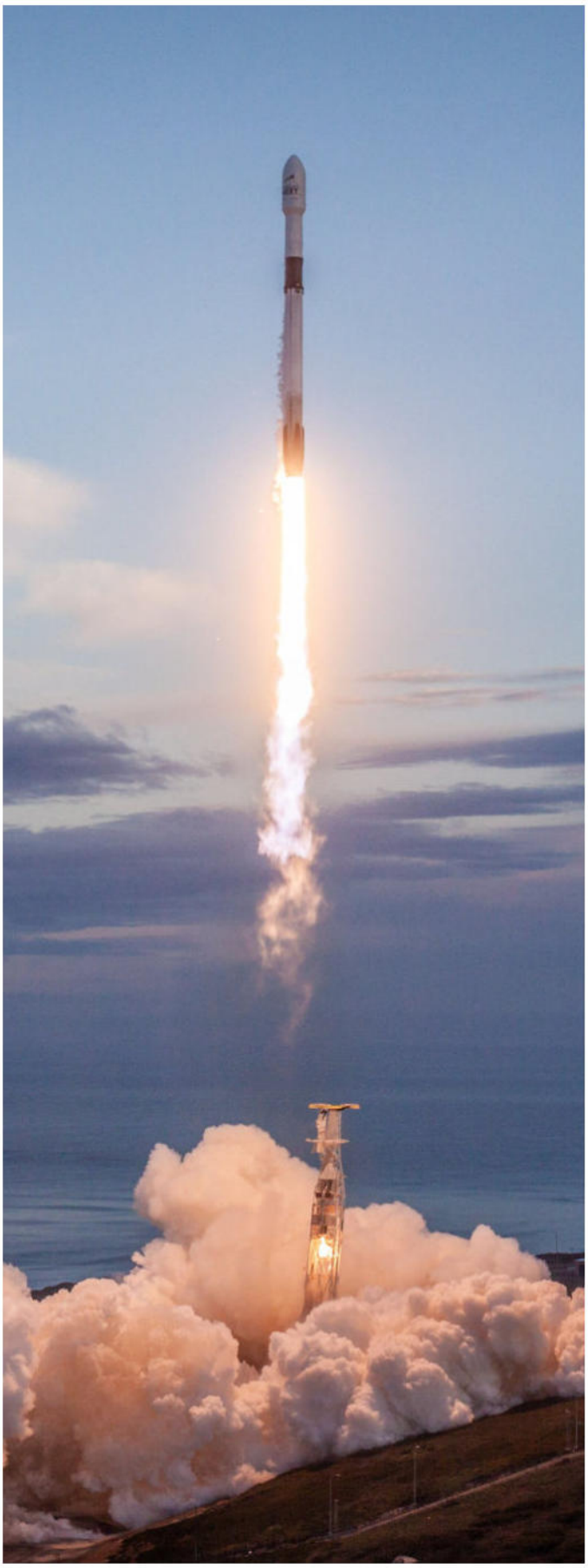
What Makes Devin So Special?

Devin is not just any AI; it's the first of its kind to fully autonomously engineer software. Imagine having a digital buddy who can not only understand complex coding languages but also improve and create new software solutions on its own. That's Devin for you - a groundbreaking AI that's revolutionizing the way we think about software development.

Why Should You Care?

To read full article visit:
https://entechonline.com/meet-devin-the-coolest-ai-thats-changing-the-game-in-tech/

SpaceX's Starship: Pushing Boundaries and Overcoming Challenges



The Exciting Journey of SpaceX's Starship

SpaceX's Starship has been making headlines with its ambitious goal of carrying humans to the moon and beyond. With each test flight, the world watches in awe as this powerful rocket system defies gravity and pushes the boundaries of space exploration.

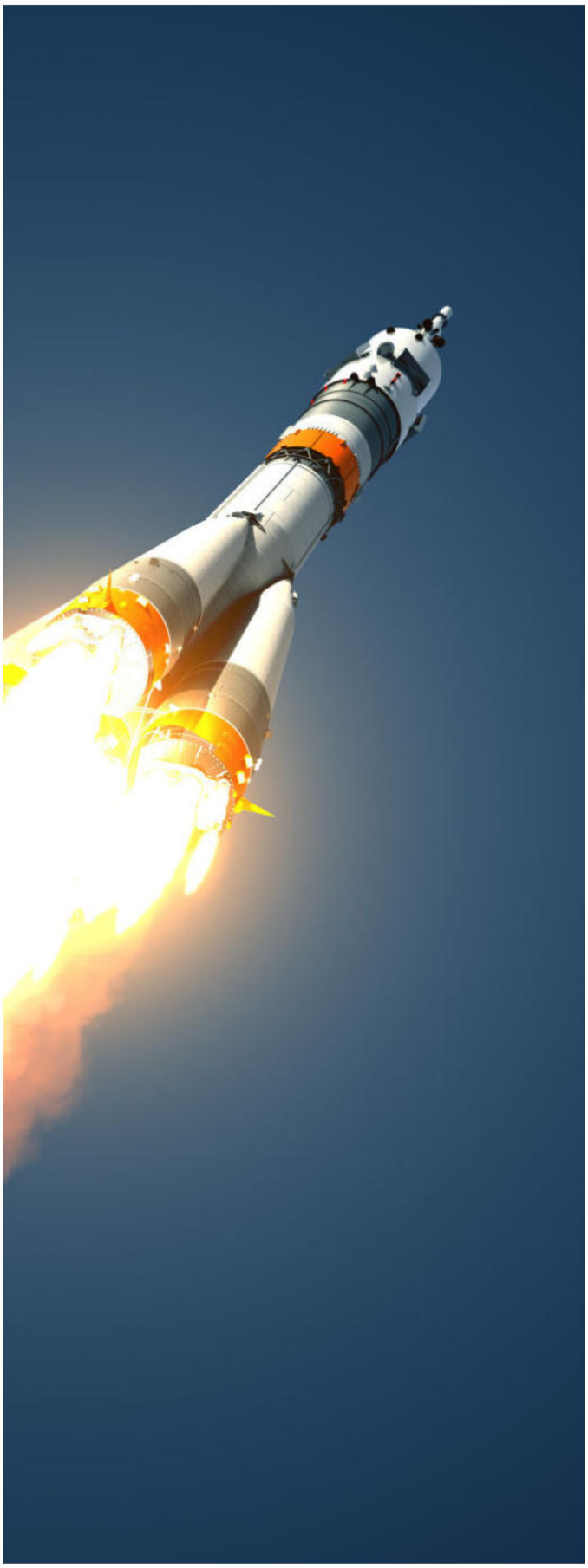
But with great power comes great risk, as seen in the first two test flights that ended in explosions. However, SpaceX sees these incidents not as failures but as opportunities to gather crucial data and improve their technology for future flights.

This week, another Starship soared from the Starbase facility in Texas, with hopes that it would be third time lucky. And while the flight ended prematurely and likely broke apart, it still achieved multiple milestones that pave the way for future success.

A Step Closer to Space Exploration

To read full article visit:
https://entechonline.com/spacexs-starship-iii/h/

Japanese Rocket Explosion: Inaugural Launch Failure Examined



A Japanese rocket exploded on its first trip to space. It blew up just after takeoff. This incident highlights the dangers and achievements in space travel. People worldwide saw the rocket, full of hope, turn into a huge fireball after it started to rise.

A Sudden Catastrophe at Lift-Off

Japan was on its way to lead in satellite deployment. However, a rocket from Space One, a key player in Japan's growing private space industry, exploded. Seconds after takeoff, the rocket broke apart in the sky, turning into smoke and fire near the launchpad. This incident is a major setback for Space One. Japan's Space Agency is now closely investigating the cause of the disaster.

A Step Back or Valuable Lesson for Space One?

The ongoing investigations are making us wonder. We're thinking about how this fiery event has affected Space One. We're also considering its impact on Japan's space agency's goals.. Riskin, an expert, emphasizes the importance of learning from such incidents. In space exploration, these setbacks are viewed not as failures but as important steps toward success.

To read full article visit:
https://entechonline.com/japanese-rocket-explosion/

Xiaomi's Electric Car Launch: Disrupting the Market with Innovative Technology

In a major move into the automotive industry, Chinese technology giant Xiaomi has announced that it will begin deliveries of its first electric vehicle (EV) this month. The car, called the Speed Ultra 7 (SU7), is expected to be priced competitively and will be available for purchase at 59 stores in 29 cities across China.

This launch comes at a time when the EV market in China is becoming increasingly competitive, with companies like BYD and Tesla vying for dominance in the world's largest car market. Xiaomi's CEO Lei Jun has set ambitious goals for the company, stating that they aim to become one of the top five car makers in the world.

The SU7 boasts super electric motor technology that allows it to accelerate faster than some Tesla and Porsche EVs. But Xiaomi is not just relying on performance to attract customers – they are also banking on their shared operating system with their phones and other devices to appeal to existing customers.

To read full article visit:
https://entechonline.com/xiaomis-electric-car/