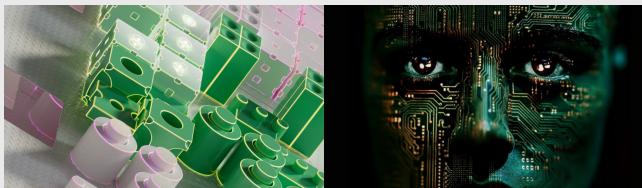


THE DEEP TECH REVOLUTION JUNE 2023







AlphaDev discovers faster sorting algorithms

New algorithms will transform the foundations of computing Digital society is driving increasing demand for computation, and energy use. For the last five decades, we relied on improvements in hardware to keep pace. But as microchips approach their physical limits, it's critical to improve the code...

o deepmind.com

MIT researchers develop self-learning language models that outperform larger counterparts

Researchers at the MIT Computer Science and Artificial Intelligence Laboratory (CSAIL) have achieved a groundbreaking advancement in language modeling in the realm of dominant large language models (LLMs). The CSAIL team has pioneered an innovative approach to language modeling that challenges the...

VB venturebeat.com



The Geopolitics Of AI Chips Will Define The Future Of Al

The following statement is utterly ludicrous. It is also true. The world's most important advanced technology is nearly all produced in a single facility. What's more, that facility is located in one of the most geopolitically fraught areas on earthan area in which many analysts believe that war...

Www-forbes-com.cdn.am...

How Could A.I. Destroy Humanity?

Researchers and industry leaders have warned that A.I. could pose an existential risk to humanity. But they've been light on the details. Last month, hundreds of well-known people in the world of artificial intelligence signed an open letter warning that A.I. could one day destroy humanity....

C nytimes.com



Keeping Moore's Law Going is Getting Complicated

There was a time, decades really, when all it took to make a better computer chip were smaller transistors and narrower interconnects. That time's long gone now, and although transistors will continue to get a bit smaller, simply making them so is no longer the point.

Spectrum.ieee.org



ADVANCED MATERIALS

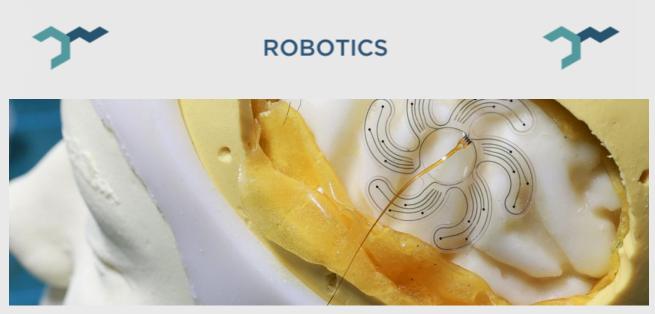




A Magical Combination - Scientists Develop a New Class of Materials

Would you rather run into a brick wall or into a mattress? The majority of people would find this decision straightforward. The hardness of a brick wall does not effectively dampen shocks or vibrations, whereas a mattress, with its softness, serves as an excellent absorber of such shocks. Interestin

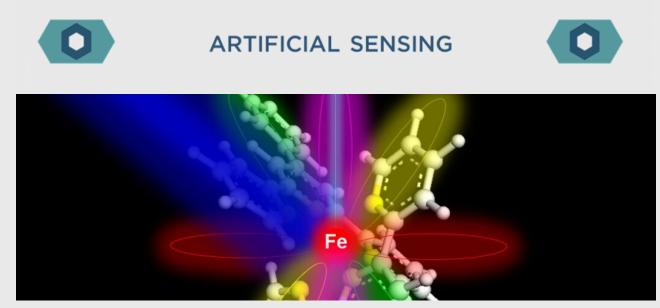
S scitechdaily.com



A Soft Robot That Can Unfurl Inside the Skull

An octopus-like soft robot can unfurl itself inside the skull on top of the brain, a new study finds. The novel gadget may lead to minimally invasive ways to investigate the brain and implant braincomputer interfaces, researchers say.

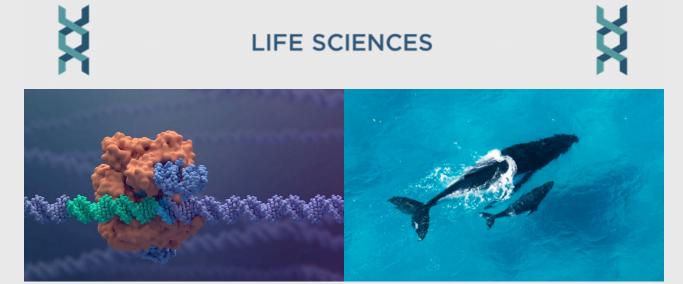
Spectrum.ieee.org



Scientists' report world's first X-ray of a single atom

A team of scientists from Ohio University, Argonne National Laboratory, the University of Illinois-Chicago, and others, led by Ohio University Professor of Physics, and Argonne National Laboratory scientist, Saw Wai Hla, have taken the world's first X-ray SIGNAL (or SIGNATURE) of just one atom....

by phys.org



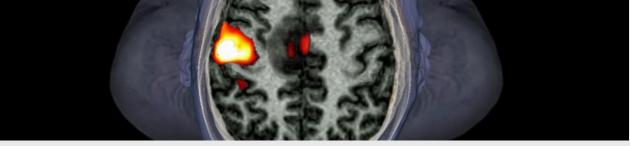
Molecular Scissors Are Making the Cut ... in Clinical Trials

It was only a matter of time. Once genome editing tools established themselves in biomedical science-advancing enterprises such as the development of cell lines, the dissection of disease mechanisms, and the identification of drug targets-they were bound to have their potential tested in clinical...

Mysterious Paradox of How Whales **Avoid Cancer Has a New Solution**

Giant whales have little cancer relative to their body size. It's a biological mismatch known as Peto's paradox, which describes how large, longlived animals, despite having trillions more cells than humans or tiny critters, don't develop more cancers. Cancer is a disease of runaway cell division,...

S sciencealert.com



Brain imaging: fMRI advances make scans sharper and faster

Last October, the neuroimaging community was abuzz with excitement. Researchers in South Korea seemed to have overcome one of the biggest limitations of functional magnetic resonance imaging (fMRI), a popular method for studying the human brain. Jang-Yeon Park, an author of the study, had been...

nature.com

GEN genengnews.com



Mathematical model that 'changed everything' turns 25

More than 25 years ago, Professor Steven Strogatz and then-graduate student Duncan Watts, Ph.D. '97, embarked on research so daring in its interdisciplinarity, and so broad in its reach, that at first they didn't tell anyone about it.

🖲 news.cornell.edu

Toichiro Kinoshita: the theorist whose calculations of g-2 shed light on our understanding of nature

Robert P Crease pays tribute to the late Toichiro "Tom" Kinoshita, who played a key role in the development of quantum electrodynamics In both his personal and his professional life, the pioneering theoretical physicist Toichiro "Tom" Kinoshita forged the steadiest of paths through the most...





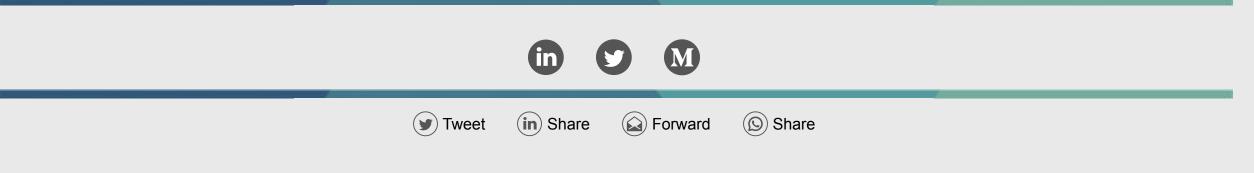
Hawking his voice - then lost his own "Can you hear me alright?" I ask Brad Story at the start of a video call. To utter a simple phrase like this, I would learn later, is to perform what is arguably the most intricate motor act known to any species: speech.

BI bigthink.com

Was Never Built

Computation is a familiar concept most of us understand intuitively. Take the function f() = +3. When x is three, f(3) = 3 + 3. Six. Easy. It seems obvious that this function is computable. But some functions aren't so simple, and it's not so easy to determine if they can be computed, meaning they...

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