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Science-Switzerland, October – November 2025

News on Swiss science, technology, education and innovation

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Geneva Launches Switzerland's First Quantum Network

(University of Geneva, October 16, 2025)

The launch of the Geneva Quantum Network (GQN) represents a major step forward in quantum communication and measurement. Led by Dr. Rob Thew from the University of Geneva (UNIGE) and in partnership with entities like CERN, HEPIA, ID Quantique, ROLEX, and the Cantonal Office for Information Systems and Digital Technology (OCSIN), the team has launched the GQN; a network that not only facilitates cutting-edge quantum physics experiments but promotes cooperation in quantum technologies and boosts understanding and education around the possibilities of quantum tech. Using the OCSIN's 262 km fiber optic network, the GQN connects several institutions, demonstrating Geneva's strength in quantum technologies. The strategy involves sharing entangled photons among UNIGE, CERN, and HEPIA, implementing quantum key distribution (QKD) systems by ID Quantique, sharing ultra-precise time signals, and setting up a distributed temperature sensor across the network fibers using single photon detectors. This setup opens doors to tangible quantum technology uses, greatly improving secure communication, measurement accuracy, and synchronization.
/web/2025/00-251016-94

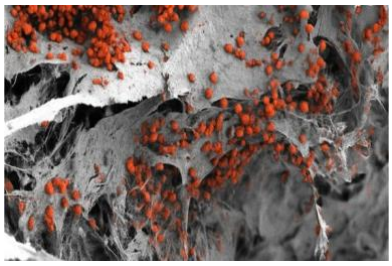
Microrobots Travel in the Blood Stream to Deliver Drugs

(ETH Zurich, November 14, 2025)

Every year, 12 million people worldwide suffer from strokes, often facing death or permanent disability due to inefficient drug delivery methods. Researchers from the Multi-Scale Robotics Lab, ETH Zurich, led by Dr. Fabian Landers, have created a microrobot that delivers drugs directly to specific body parts. This spherical capsule, with a soluble gel shell, uses iron oxide for magnetic guidance and tantalum for X-ray visibility. It dissolves to release drugs precisely where needed, promising to lower medication doses and reduce side effects like internal bleeding. The team guides this microrobot to the target area using magnets and an electromagnetic system. They load it with drugs that release when they heat the iron oxide with a high-frequency magnetic field, melting the gel shell. Injected via catheter into the bloodstream or cerebrospinal fluid, the microrobot employs a commercial guidewire and a flexible polymer gripper for precise placement. This innovation offers targeted treatment for thrombosis, infections, or tumors, potentially transforming therapy approaches and accelerating the move to human trials. ETH Zurich's method stands out for its combined magnetic and X-ray guidance, marking a leap forward in controlled drug delivery.
/web/2025/00-251114-28

Researchers Create Living Bone Marrow from Human Cells

(University of Basel, November 20, 2025)



For the first time, researchers have recreated the complex architecture of human bone marrow without using any animal tissue. A team from the University of Basel and University Hospital Basel, led by Prof. Ivan Martin and Dr. Andres Garcia Garcia, achieved this by populating an artificial ceramic structure (hydroxyapatite) with human stem cells. The result is a functional 3D construct, 8mm in diameter, that mimics the body's natural endosteal niche. Unlike previous models, this engineered tissue can sustain blood cell production for weeks. This innovation is a major leap for the 3Rs principle in research. By moving away from animal models, scientists can now test blood cancer therapies on tissue derived directly from patients, paving the way for personalized medicine.
/web/2025/00-251120-4c

1. Policy

Breaking Switzerland's Health Data Deadlock

(EPFL, October 01, 2025)

Switzerland's healthcare system is at a standstill, unable to use health data for secondary purposes due to a lack of coordination and commitment. Dr. Paola Daniore and her team at the Center for Digital Trust (C4DT), EPFL have identified this issue as a major barrier to healthcare quality, sustainability, and innovation in the nation. They stress the urgent need for a unified strategy to unlock health data's potential, warning that failure to act could widen the innovation gap and increase financial pressures. The team proposes a solution with six strategic recommendations to enable responsible health data sharing. These strategies include creating a shared vision, underlining the benefits of secondary data use, offering financial incentives, using existing metadata registries, providing risk assessment guidelines, and standardizing data use and protection rules. This approach aims to boost healthcare innovation and financial sustainability in Switzerland and serves as a model for responsible data sharing globally.
/web/2025/01-251001-4d

ETH Zurich Founds Albert Einstein School of Public Policy

(ETH Zurich, October 22, 2025)

ETH Zurich has announced the founding of the Albert Einstein School of Public Policy. Led by Prof. Tobias Schmidt, this interdisciplinary center aims to strengthen the bond between science and policy. Drawing on Einstein's vision of scientists' duty to society, this center aims to tackle global issues like climate change and AI through informed policy decisions. By encouraging dialogue and offering evidence-based support for policies, it marks a significant advancement in addressing complex global challenges. This center builds networks between scientists and policymakers through education and training, focusing on research that provides crucial information for policy decisions. It also forms strategic partnerships for key projects, aiming to apply scientific findings to vital areas such as environmental sustainability and public health.
/web/2025/01-251022-ce

2. Education

Less Screen Time in the Evening Promotes Academic Success

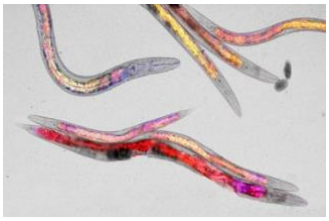
(University of Geneva, October 03, 2025)

Teenagers abiding by strict screen time rules gained an extra 40 minutes of sleep nightly, equating to nearly an extra night's sleep every week. A University of Geneva team, including Dr. Virginie Sterpenich and Kevin Mammeri, found that evening smartphone restrictions by parents significantly boost teens' sleep and grades. This research emphasizes the crucial role of sleep in cognitive, emotional health, and in warding off early psychiatric disorders such as anxiety and depression. Surveying 329 students aged 13 to 15, the study pinpointed the positive effects of strict screen time policies, such as banning phones in bedrooms and screen use in the evenings, on sleep and academic performance. The findings suggest that simple, enforceable strategies by parents and educators can significantly improve teenagers' well-being and school success, offering a simple solution for screen-related sleep issues and setting a healthier precedent for adult life.
/web/2025/02-251003-76

3. Life Science

Dietary Stress Supports Healthy Aging

(University of Basel, October 02, 2025)



Researchers at the University of Basel, led by Dr. Emmanouil Kyriakakis and Prof. Anne Spang, discovered that certain RNA molecules in food can significantly enhance the aging fitness of the nematode C. elegans. By preventing the formation of harmful protein aggregates associated with aging and diseases, these dietary RNA molecules could revolutionize our approach to diet and longevity. This finding highlights the importance of diet in healthspan, suggesting that specific dietary elements can activate the body's defenses against age-related diseases. The team used C. elegans to study the effects of a balanced diet, finding that double-stranded RNA molecules from bacteria activate gut quality-control mechanisms, enhancing autophagy. This process breaks down and recycles damaged proteins, reducing harmful protein aggregation and slowing cellular aging. The University of Basel's work opens a promising path for dietary interventions to promote healthy aging, indicating that certain foods might trigger protective mechanisms against age-related conditions in humans.
/web/2025/03-251002-4b

Switching Memories On and Off with Epigenetics

(EPFL, October 03, 2025)

Turning memories on or off using an 'epigenetic switch' may revolutionize treatment for memory issues. Researchers at EPFL, led by Associate Professor Johannes Gräff, have shown that altering the epigenetic state of the Arc gene in neuron cells can directly influence memory expression in mice. This finding not only sheds light on memory storage and modification but also paves the way for treating conditions like PTSD, addiction, or neurodegenerative diseases by targeting specific cells. The EPFL team combined CRISPR gene editing and memory cell tagging techniques to manipulate the Arc gene's activity in the mouse hippocampus. By employing harmless viruses to modify Arc activity epigenetically, and conducting behavioral tests, they proved that precise epigenetic editing can change memory expression. This innovation offers new therapeutic strategies for memory-related disorders, providing hope for millions with memory dysfunction. This method, merging gene editing with neuroepigenetics, significantly advances our ability to understand and control memory on a molecular level.
/web/2025/03-251003-74

Researchers Use Ultrasound Holograms to Influence Brain Networks

(ETH Zurich, October 06, 2025)

Researchers have developed an ultrasound-based method for treating brain diseases without surgery. This new technique, led by Prof. Daniel Razansky and his team from ETH Zurich, the University of Zurich, and New York University, allows for the non-invasive stimulation of multiple brain points simultaneously, offering a more precise and safer approach to managing conditions like Alzheimer's, Parkinson's, and depression. The device, equipped with hundreds of ultrasound transducers, emits brief pulses that interact within the brain to modulate networks across several points at once. This innovation not only lowers the risk of brain damage and side effects by using reduced ultrasound intensity but also marks a significant advancement over traditional single-spot treatments. By enabling safer, more precise brain network modulation, this method could transform the treatment of neurological and psychiatric disorders.
/web/2025/03-251006-3d

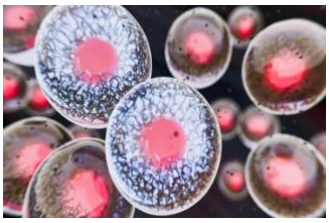
Protein Condensates Determine a Cell's Fate

(ETH Zurich, October 14, 2025)

Cells organize molecules into clusters that steer critical life decisions, a discovery which could enable new disease treatment strategies. Dr. Tom Peskett and Prof. Yves Barral from ETH Zurich found that protein condensates, large molecule clusters, are key in guiding a cell's direction. They control growth, division, and death by managing the production of proteins. Using microfluidics and light microscopy, the team observed yeast cells to see how these condensates affect cell division and aging. They successfully induced condensate formation, and discovered a method to influence cell behavior.
/web/2025/03-251014-7c

The Dose Makes the Difference in Reprogramming Cells

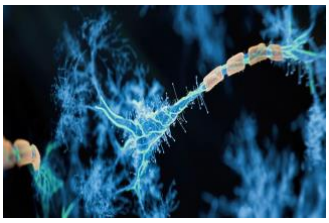
(EPFL, October 20, 2025)



A team led by Wangjie Liu and Prof. Bart Deplancke from EPFL, the Chinese Academy of Sciences, and the SIB Swiss Institute of Bioinformatics, shows that the exact dose of transcription factors decides cell fate. This finding moves from a simple on-off switch to a sophisticated dial of destiny, where slight changes in transcription factor dosage can direct cells to vastly different futures. Using a new high-throughput technique called scTF-seq, the researchers studied how transcription factors affect cell fate at the single-cell level. By incorporating a library of 384 uniquely barcoded transcription factors, controlled by doxycycline, into mouse stromal cells, they precisely mapped the dose-dependent effects on nearly 40,000 individual cells.
/web/2025/03-251020-a2

New Hope for Multiple Sclerosis Treatment

(University of Geneva, October 20, 2025)



Researchers led by Prof. Dr. Patrice Lalive from the University of Geneva and Geneva University Hospitals, in partnership with the University of Pennsylvania, have found that a small group of immune cells could be key to stopping multiple sclerosis. These cells, known as lymphocytes with the c-Met receptor, are not found in healthy individuals. They make up only 5-6% of white blood cells in the cerebrospinal fluid but can cross the blood-brain barrier and attack the brain. This discovery opens the door to therapies that could halt the disease's progression with minimal impact on the immune system. The team compared the white blood cells of around 30 people newly diagnosed with multiple sclerosis to those of healthy individuals, focusing on the role of the c-Met receptor.
/web/2025/03-251020-53

Gene Therapy Corrects Fatal Heart Condition

(University of Bern, October 22, 2025)

For the first time, researchers corrected a fatal cardiac arrhythmia caused by genetic mutations in an animal model using gene therapy, offering hope to hundreds of families facing a high risk of sudden cardiac death from conditions like SQT1 and LQT2. A team from Inselspital Bern University Hospital and the University of Bern, in partnership with the Mayo Clinic and Solid Biosciences, led by Prof. Katja Odening, developed this breakthrough gene therapy. It targets Short QT syndrome type 1 (SQT1) by suppressing the faulty KCNH2 gene and inserting a healthy version, showing potential for Long QT syndrome type 2 (LQT2) treatment as well. The researchers used AAV9 viruses to deliver this therapy directly to heart cells, using genetic switches to activate it only in those cells.
/web/2025/03-251022-90

New Research into Forgotten Alpine Oat Variety

(ETH Zurich, October 31, 2025)

After years forgotten, researchers revived the 'Hative des Alpes' oat, once popular in Switzerland, from seeds stored since 1925 at the Vavilov Institute. This oat's genetics now contribute to the first comprehensive oat gene atlas, developed by Prof. Bruno Studer's team at the Leibniz Institute of Plant Genetics and Crop Plant Research and ETH Zurich. This atlas, featuring genetic data from over 30 oat varieties including 'Hative des Alpes', simplifies the development of disease-resistant oats adapted to specific climates, boosting agricultural biodiversity. The team grew 'Hative des Alpes' oats, extracted DNA and RNA, identified all genes, and analyzed gene activity in different plant parts.
/web/2025/03-251031-a4

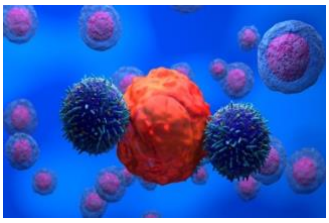
Ancient Genes Aid Plant Survival in Climate Change

(ETH Zurich, November 04, 2025)

The climate resilience of the wood pink comes from ancient gene variants. Dr. Simone Fior and Prof. Alex Widmer from ETH Zurich's Institute of Integrative Biology discovered two old genes in wood pink (Dianthus sylvestris) that control its flowering time. These genes help the plant survive in different temperatures, making it more resistant to global warming. The discovery shows how genetic diversity is crucial for species to cope with fast environmental changes. The team analyzed wood pink populations in the canton of Valais's valleys and mountains, studying a gene in 1,000 plants and observing how transplantation affected flowering and growth. Their work reveals that these ancient genes adjust flowering time, which helps survival in changing climates.
/web/2025/03-251104-3c

Custom-designed Receptors Boost Cancer-fighting T Cells

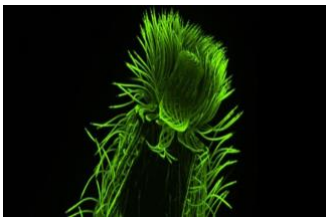
(EPFL, November 04, 2025)



Researchers at EPFL and UNIL-CHUV, led by Prof. Patrick Barth, Associate Professor Caroline Arber, have introduced a new method to fight cancer. They have created synthetic receptors, T-SenSERs, to enhance the ability of T cells to combat tumors, showing promise in lung cancer and multiple myeloma treatments. The team designed these synthetic protein receptors from scratch, resembling molecular Legos that consist of an external signal-binding domain, a middle region for signal transmission, and an internal domain to activate T cells. This innovation may help develop more effective cancer treatments by leveraging synthetic biology to navigate the challenges of the tumor microenvironment, and it offers new hope for targeted therapies that could vastly improve patient outcomes.
/web/2025/03-251104-e4

Unveiling Plankton's Hidden Worlds in Stunning Detail

(University of Geneva, November 05, 2025)



For the first time, scientists at the University of Geneva and the European Molecular Biology Laboratory (EMBL) have revealed the complex nanoscale architecture of plankton, Earth's vital life engines. The team, led by Dr. Armando Rubio Ramos, Dr. Hiral Shah, and Dr. Felix Mikus, used Ultrastructure Expansion Microscopy to examine over 200 eukaryotic microbial species, uncovering intricate three-dimensional details. Using a new microscopy technique that expands biological samples in a gel, the researchers overcame traditional imaging limits, allowing them to see inside cells in unprecedented detail.
/web/2025/03-251105-50

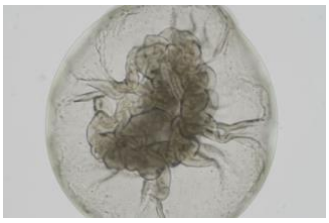
Targeted Diet Enhances Effects of New Childhood Cancer Therapy

(University of Zurich, November 06, 2025)

Researchers at the University of Zurich and the University Children's Hospital Zurich, led by Prof. Dr. Raphael J. Morscher, have introduced a promising therapy for childhood cancer. They combine the drug DFMO with a diet lacking arginine and proline, significantly reducing tumor growth and causing cancer cells to mature into normal nerve cells. The team used a drug-diet synergy, employing DFMO to stop cancer cell growth and a specific diet to enhance the effect. In pre-clinical mouse models, this approach markedly decreased tumor size or caused regression. With plans for clinical trials and international collaboration, this innovative method could transform the fight against one of the deadliest childhood cancers.
/web/2025/03-251106-1e

Advancing Cancer Treatment with Personalized Mini Tumors

(University of Bern, November 10, 2025)



The ORION project is rethinking cancer treatment by developing patient-specific tumor organoids. Led by Associate Professor Jérôme Charmet and Dr. Marianna Kruithof-de Julio, the team from Haute Ecole Arc Ingénierie, University of Bern, and 22 partners, create 'minitumors' for personalized medicine. Using a smart microfactory controlled by AI at the MicroLean Lab, the researchers can replicate real tissue complexity in these minitumors. This process enables precise treatment testing and faster cancer drug development, closely mirroring the original tumor's complexity. The collaboration combines AI and microfabrication techniques, setting a new standard in personalized oncology solutions.
/web/2025/03-251110-4c

New Iron Compound Doubles Absorption Efficiency

(ETH Zurich, November 11, 2025)

Iron deficiency, impacting 2 billion people worldwide, may see a revolutionary treatment thanks to ETH Zurich researchers. Prof. Raffaele Mezzenga and Prof. Michael Zimmermann have developed a dietary supplement that the body absorbs nearly twice as efficiently as standard iron supplements. In a clinical study with 52 anemic women in Thailand, the new compound showed nearly double the absorption efficiency of iron sulfate, the current standard. ETH Zurich's development offers a major step forward in nutritional science, introducing a tasteless, colorless solution that integrates seamlessly into daily diets, potentially cutting down the global prevalence of iron deficiency and anemia.
/web/2025/03-251111-ad

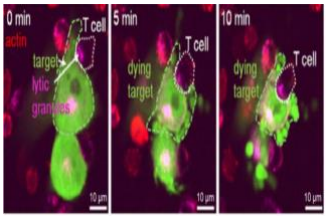
Brain Stimulation Improves Vision Recovery after Stroke

(EPFL, November 19, 2025)

Patients have begun to experience the world in new ways thanks to a team led by Dr. Estelle Raffin and Dr. Michele Bevilacqua from EPFL and the University of Geneva. They developed a non-invasive brain stimulation therapy that greatly improves vision in patients with hemianopia, a condition following strokes. The researchers conducted a placebo-controlled, double-blind clinical trial that combined visual training with cross-frequency transcranial alternating current stimulation (cf-tACS). This method effectively reorganizes brain communication to mimic natural patterns, targeting the primary visual cortex and motion-sensitive area with alpha and gamma waves. Their innovative approach could transform visual rehabilitation and significantly enhancing life quality for stroke survivors.
/web/2025/03-251119-0d

CAR-T Cells: A Glimmer of Hope for Glioblastoma

(University of Geneva, November 24, 2025)



A breakthrough in CAR-T cell technology shows promise for treating glioblastoma, a brain cancer previously resistant to immunotherapies. Researchers from the University of Geneva and Geneva University Hospitals, led by Dr. Valérie Dutoit and Dr. Denis Migliorini, have improved CAR-T cells' longevity in mice by identifying and counteracting three markers of cell exhaustion. The team enhanced CAR-T cells to precisely target glioblastoma cells by identifying specific proteins like PTPRZ1 and the Tenascin-C protein, without harming healthy cells. Their work, which includes real-time imaging to watch CAR-T cells attack glioblastoma cells, sets the stage for human clinical trials. This approach could revolutionize the treatment of this and potentially other aggressive cancers by focusing on cell exhaustion and tumor environment targeting.
/web/2025/03-251124-bf

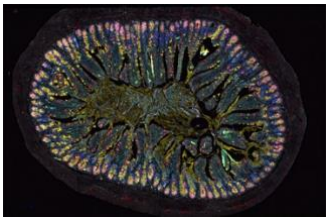
A New Ally Against Breast Cancer Metastases

(University of Basel, November 25, 2025)

Dexamethasone, typically used to ease cancer therapy side effects, now shows promise in fighting therapy-resistant breast cancer metastases. A team from the University of Basel and University Hospital Basel, led by Dr. Madhuri Manivannan and Prof. Mohamed Bentires-Alj, found that dexamethasone lowers liver metastases and increases survival in mice with estrogen receptor-positive (ER+) breast cancer. This drug activates the glucocorticoid receptor, which decreases the production of the estrogen receptor, aiding certain breast cancer treatments. Their study used mice with therapy-resistant ER+ tumors and patient-derived tumor tissues grown as organoids to test dexamethasone's impact on estrogen receptor levels. This approach not only offers a new way to fight metastatic breast cancer but also suggests repurposing an established drug to target resistant metastases. The University of Basel's work could change treatment for patients with specific tumor types, offering new hope against a difficult aspect of breast cancer.
/web/2025/03-251125-5e

Why the 'Gut Brain' Plays a Central Role for Allergies

(University of Bern, November 27, 2025)

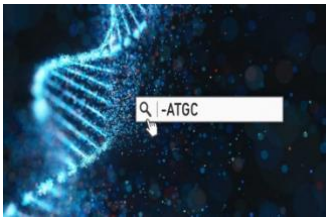


The 'gut brain' plays a key role in health and immunity, far beyond aiding digestion. A team led by Dr. Manuel Jakob and Prof. Christoph Klose has found that the intestinal nervous system, through the vasoactive intestinal peptide (VIP), controls the intestinal barrier and prevents allergy-like immune responses. This regulation ensures the healthy development of intestinal stem cells, paving the way for new treatments for allergies, chronic inflammatory bowel diseases, and irritable bowel syndrome. Using a mouse model, the researchers showed how specific nerve cells in the gut interact with intestinal stem cells via VIP. This interaction is crucial for controlling the immune response and maintaining the intestinal barrier. This finding could lead to more effective treatments for various gastrointestinal and immune disorders. The University of Bern's work suggests that diet may directly affect these regulatory mechanisms, offering a new perspective on treating gastrointestinal and immune-related conditions.
/web/2025/03-251127-1b

4. Nano / Micro Technology / Material Science

MetaGraph: A Search Engine for DNA

(ETH Zurich, October 09, 2025)



An ETH Zurich team led by Dr. Gunnar Rätsch and Dr. Andre Kahles has created 'MetaGraph,' a tool that speeds up DNA data searches. The tool could boost the pace and efficiency of genetic research, particularly in vital areas like antibiotic resistance and the study of emerging pathogens. The researchers improved data structuring with indices, enabling a full-text search of DNA or RNA sequences. They managed to compress data about 300 times using mathematical graphs, allowing for faster, cheaper genetic analysis.
/web/2025/04-251009-61

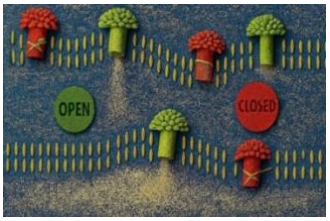
Stretching the Limits of Electronic Fibers

(EPFL, November 05, 2025)

The future of wearable electronics has advanced significantly with a new method from EPFL researchers, including Dr. Stella Laperrousaz and Associate Professor Fabien Sorin. They have developed electronic fibers that can stretch over ten times their original length while maintaining sensitivity. The manufacturing process embeds liquid metal into a preform, which then stretches into long, flexible fibers. By adjusting the liquid metal droplets within an elastomer, the team can control the fibers' electrical properties, making areas conductive or insulating as needed. Stretching applies shear stress, breaking the droplets in a controlled manner to keep the electrical integrity of the fibers.
/web/2025/04-251105-4b

Nanopores Act Like Electrical Gates

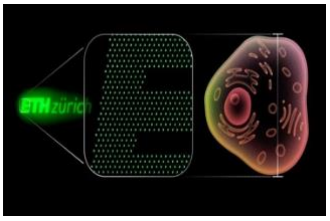
(EPFL, November 13, 2025)



Researchers, including Prof. Dr. Matteo Dal Peraro and Prof. Dr. Aleksandra Radenovic from EPFL, have engineered biological nanopores to mimic the brain's learning process. By altering the electrical charges within the pores, the team controlled the flow of ions through these tiny channels, akin to how neurons adjust their strength. The study introduces the notion of 'learning' nanopores for advanced biotechnological applications. Through testing 26 variants with alternating voltage signals, the researchers identified behaviors mirroring synaptic gating and directional flow. These findings suggest that structural adjustments in nanopores, prompted by charge imbalances, can replicate neural synapse functions.
/web/2025/04-251113-db

Manufacturing the World's Tiniest OLEDs

(ETH Zurich, November 25, 2025)



An ETH Zurich team led by Dr. Tommaso Marcato and Jiwoo Oh have created the smallest organic light-emitting diodes (OLEDs) in the world, 50 times smaller than current top-end OLEDs. Leveraging silicon nitride, a unique ceramic, the researchers crafted extremely thin and strong membranes to support these tiny OLED pixels, which are 3,000 times thinner than those produced by traditional methods. This process, which is compatible with existing chip manufacturing techniques, allows for the significant shrinking of OLEDs in a single step. This technology has applications in holography, mini lasers, medical imaging and optical data transmission.
/web/2025/04-251125-d9

5. Information & Communications Technology

PathFinder Algorithm Flaw Uncovered

(EPFL, October 06, 2025)

Researchers at EPFL, the University of Novi Sad, Faculty of Sciences, and AMD, led by Shashwat Shrivastava, have found a critical flaw in the PathFinder algorithm, a key tool in Field-Programmable Gate Array (FPGA) routing since the late 1990s. The flaw, causing unnecessarily large routing trees, could lead to overlaps and failures in FPGA designs, crucial for industries like telecoms, automotive, aerospace, and particle physics. The team devised a method to isolate small, complex issues within real circuits to assess PathFinder's efficiency accurately. By testing controlled examples, they pinpointed the algorithm's weaknesses and experimented with altering the sequence of branch creation in routing trees.
/web/2025/05-251006-d8

Security Flaw in Confidential Cloud Environments Exposed

(ETH Zurich, October 14, 2025)

ETH Zurich researchers, led by Assistant Professor Shweta Shinde, have exposed a critical vulnerability in AMD's confidential computing technology. Named RMPocalypse, it allows attackers to bypass security defenses of AMD computer chips and access protected data with a 100% success rate. This flaw affects cloud services from major providers like Microsoft Azure, Google Cloud, and Amazon Web Services, jeopardizing the security of sensitive data in many sectors, such as in healthcare and finance. The team discovered this vulnerability by examining the Reverse Map Table (RMP), a key component of AMD's security architecture, which was inadequately secured during virtual machine startup. The flaw enabled attackers with remote access to evade security measures, manipulate the virtual machine, and potentially inject harmful code.
/web/2025/05-251014-27

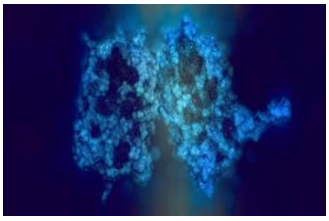
Reinventing Computer Technology for Data Center Efficiency

(EPFL, October 22, 2025)

A team led by Prof. Babak Falsafi, Prof. Mathias Payer, Prof. David Atienza, Prof. Abhishek Bhattacharjee, and Prof. Boris Grot from EPFL, Yale University, and The University of Edinburgh is reinventing server technology with Midgard, a new approach to virtual memory management. Their innovation reimagines virtual memory design to significantly boost server performance and efficiency, tackling server memory underutilization and promising substantial carbon footprint reductions for data centers. Midgard uniquely compartmentalizes virtual memory, enabling swift location of program workspaces and rapid, energy-efficient access checks. The method eliminates virtual memory performance bottlenecks and maintains strict security standards. EPFL and its partners, through Midgard, are setting a new benchmark in server technology, ensuring faster, more efficient, and secure data center operations.
/web/2025/05-251022-1b

Limits of Current AI Models for Drug Design Exposed

(University of Basel, October 30, 2025)



Researchers from the University of Basel, including Prof. Markus Lill, Dr. Matthew Masters, and Dr. Amr Mahmoud, found that although AI models like AlphaFold and RosettaFold can predict protein structures, they fail to grasp the physical chemistry governing protein-ligand interactions. This flaw reduces their effectiveness in drug development, particularly with proteins not in their training data. The Basel team tested the AI models by changing protein amino acid sequences and ligand structures to challenge the AI's prediction abilities. Despite significant alterations that should have blocked binding, the AI still predicted interactions incorrectly, relying on pattern recognition over understanding physicochemical principles. This discovery underlines the need to incorporate physical chemistry into AI models to enhance their accuracy in drug development.
/web/2025/05-251030-43

6. Energy / Environment

Navigating Vanadium's Volatility for Green Energy

(Paul Scherrer Institute, October 07, 2025)

Despite vanadium's key role in green energy storage, its market suffers from high price volatility and supply issues, deterring mining investments. Researchers Benjamin Rogers and Prof. Sarbajit Banerjee from the Paul Scherrer Institute and ETH Zurich have created a dynamic database, with the aim to make the vanadium market more stable and reliable. This tool aims to encourage investments and inform policy decisions by providing up-to-date information on vanadium's global economy, tackling its market and supply challenges. The team gathered and analyzed data on vanadium ore deposits, mining volumes, demand, processing methods, and prices from worldwide industry sources. They integrated this information into a constantly updated 'living global map' of vanadium. This innovation promises more dependable vanadium production, essential for the wide use of vanadium redox flow batteries. These batteries are crucial for the power grid's stability and the consistent supply of electricity from renewable sources.
/web/2025/06-251007-78

Green Electronics Thanks to Biodegradable Circuit Boards

(EMPA, October 08, 2025)

Researchers at Empa, TNO and PROFACTOR, led by Dr. Thomas Geiger, have created a sustainable, wood-based alternative for printed circuit boards (PCBs). This new substrate, made from biodegradable materials, challenges traditional epoxy resin-based PCBs, offering a greener solution to electronic waste. Demonstrating its viability, the team successfully integrated these eco-friendly circuit boards into devices like computer mice, showcasing their potential to reduce the environmental toll of electronics. The process starts by extracting lignin and hemicellulose from wood to produce lignocellulose. This material is then ground with water until the cellulose fibers form thin fibrils. These fibrils undergo hornification, where they are compressed and dried, with lignin, which serves as a natural glue, resulting in a solid, durable board. This innovation not only makes electronic components sustainable but also lessens the ecological impact of disposing of electronic gadgets.
/web/2025/06-251008-d9

Airborne Particles: Urban vs Rural Health Risks

(EMPA, October 23, 2025)

Oxidative stress from airborne particles is up to three times higher in urban areas with heavy traffic compared to rural areas. This difference underscores the urgent need for emission reductions to protect health. Led by Dr. Gaelle Uzu and Dr. Cécile Tassel, researchers from Grenoble Alpes University, Empa, and the Paul Scherrer Institute have shown how these particles vary greatly in their ability to cause oxidative stress. The team analyzed around 11,500 measurements of particulate matter's oxidative potential from 43 European sites using two standardized methods. This effort has resulted in the most detailed database on particulate oxidative potential available. The data not only supports the development of future regulatory standards but also improves the accuracy of air pollution exposure assessments.
/web/2025/06-251023-36

Time Alters the Impact of Invasive Species on Ecosystems

(University of Bern, October 27, 2025)

Associate Professor Madhav P. Thakur and teams from the University of Bern, University of Konstanz, and Norheast Forestry University discovered that while invasive plants initially decrease native plant diversity, their effect on soil properties like organic carbon and total nitrogen weakens within 6 to 10 years. They also found evidence suggesting invasive species might increase soil greenhouse gas emissions, indicating a complex link with climate change. By analyzing 2,223 results from 775 studies, the researchers showed how factors such as the duration of an invasion and the comparison of native to non-native diversity influence biodiversity and ecosystem functions.
/web/2025/06-251027-d1

Air Pollution Can Contribute to Obesity and Diabetes

(University of Zurich, October 27, 2025)

Breathing in fine particles from air pollution harms the body's metabolic health by disrupting brown adipose tissue, crucial for burning calories and regulating blood sugar. A team led by Prof. Francesco Paneni and Dr. Sanjay Rajagopalan from the University of Zurich and Case Western Reserve University found that long-term exposure to PM2.5 pollution alters gene regulation in this tissue through epigenetic changes, spotlighting how pollutants foster metabolic diseases like insulin resistance. Their work underscores the importance of clean air strategies to counteract the metabolic risks of air pollution.
/web/2025/06-251027-c3

How Climate-damaging Nitrous Oxide Forms in the Ocean

(University of Basel, November 04, 2025)

Despite its reputation as a party drug or dental anesthetic, nitrous oxide significantly contributes to global warming, with an impact nearly 300 times that of CO2. Researchers from the University of Basel, led by Dr. Claudia Frey, found that marine microorganisms turn nitrate into nitrous oxide at higher oxygen levels than previously believed, especially in the presence of organic material like dead algae. During a six-week voyage along the California and Mexico coasts, Dr. Frey's team collected Pacific Ocean water samples from large hypoxic zones at various depths. By analyzing these samples onboard, the team gained vital insights into the environmental factors that boost nitrous oxide production. This research not only advances climate modeling accuracy but also enhances our understanding of the ocean's influence on global warming.
/web/2025/06-251104-85

How Electric Cars and Heat Pumps Can Help Switzerland Implement its Energy Strategy

(EMPA, November 17, 2025)

By 2050, smartly managed heat pumps and electric cars could cut the net electricity imports of Switzerland by 20%, equal to the annual use of 0.5 million households. A team led by Dr. Siobhan Powell and Dr. Federica Bellizio from ETH Zurich and EPFL found that these technologies can strengthen the Swiss electricity system by aligning energy use with renewable production, reducing grid stress, and cutting electricity imports and costs. This shift to intelligent energy use is key to meeting Switzerland's goal for a carbon-neutral energy supply by 2050. The researchers analyzed around 50 Swiss grid areas to see how electric cars and heat pumps could best use their flexibility. They showed that smart power use can match the variable nature of renewable energy, decreasing reliance on imported electricity.
/web/2025/06-251117-b0

7. Engineering / Robotics / Space

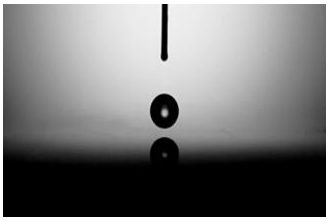
Raging Winds on Mars

(University of Bern, October 10, 2025)

Winds on Mars can reach speeds of up to 160 km/h, far exceeding previous estimates and revealing a new aspect of the Martian atmosphere. This discovery by Dr. Valentin Bickel and his team from the University of Bern and the German Aerospace Center (DLR) shows that dust devils and surrounding winds lift a significant amount of dust into the atmosphere, affecting the climate and future exploration of Mars. The team's use of deep learning to analyze over 50,000 images from Mars cameras has provided insights into atmospheric and surface conditions crucial for planning future missions.
/web/2025/07-251010-d8

Oil Droplet Defies Gravity on Vibrating Surface

(EPFL, October 21, 2025)



Researchers at EPFL have found that a silicon oil droplet can continuously bounce on a solid surface, driven by the changes of its own shape. This finding, led by Lebo Molefe, Dr. Tomas Fullana, François Gallaire, and John Kolinski, suggests a new method for managing tiny liquid amounts in industries like pharmaceuticals, where accuracy and chemical purity are crucial. Previously, scientists believed that such bouncing required a liquid bath, but the EPFL team's work with a vibrating mica surface shows that a droplet can maintain this motion for minutes or potentially indefinitely at room temperature without breaking. In their experiments, the team dropped a 1.6-millimeter silicon oil droplet onto the vibrated surface and observed two behaviors: one similar to a basketball's bounce, and another where the droplet rapidly moved up and down, staying above the surface thanks to a thin air cushion.
/web/2025/07-251021-bb

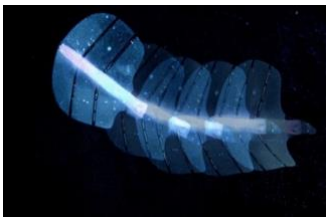
Zebrafish Secret to Swift Swimming

(EPFL, October 24, 2025)

Researchers at EPFL and Duke University have reverse-engineered zebrafish brains. Led by Prof. Auke J. Ijspeert, Dr. Eva Naumann, and Dr. Xiangxiao Liu, they found that a small area of the retina generates most neural signals for zebrafish behavior. They identified two new neuron types that are key for the fish's reaction to stimuli and discovered that vision alone allows zebrafish to stabilize in flowing water. They developed a bio-inspired robot and a simulation that accurately replicates zebrafish visual processing, from the retina to the spinal cord, using data from live larval zebrafish. This study provides a new, open-source platform for future research in visuomotor coordination across species.
/web/2025/07-251024-d5

Ultrasound-Powered Silicone Muscles for Robotics

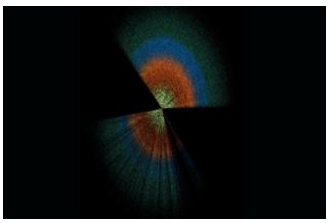
(ETH Zurich, October 30, 2025)



Researchers at ETH Zurich have created a 'stingraybot,' that uses sound for movement and delivers drugs during surgeries. The team, led by Assistant Professor Daniel Ahmed, Zhiyuan Zhang, and Zhan Shi, crafted artificial muscles from silicone and microbubbles, controllable by ultrasound. This enables programmable deformation for uses like gripper arms, tissue patches, targeted drug delivery, and advanced robots, promising less invasive procedures and precise medication delivery. Using a casting mold, they produced a silicone membrane with microbubbles in tiny pores on its underside. Ultrasound waves make these bubbles oscillate, driving the muscle to move in specific patterns, from uniform curves to wave-like motions. This breakthrough could enable devices that navigate and operate with unprecedented precision and flexibility in challenging environments, such as within the human body, significantly advancing biocompatible, flexible, and wirelessly controlled medical devices.
/web/2025/07-251030-4b

Dark Matter Aligns with Classical Physics

(University of Geneva, November 04, 2025)

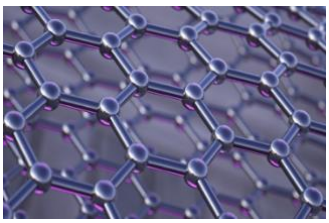


Researchers have shown that dark matter, making up five times more of the Universe than ordinary matter, follows the classical laws of physics. A global team led by the University of Geneva's Associate Professor Camille Bonvin, Associate Professor Isaac Tutusaus, and Dr. Nastassia Grimm-Thieme, found that dark matter moves into gravitational wells just like ordinary matter, adhering to Euler's equations. This discovery limits the possibility of an unknown force affecting dark matter, indicating it behaves like ordinary matter on a large scale. The team analyzed galaxy velocities and gravitational well depths across the Universe to check if dark matter and ordinary matter respond similarly to gravity. Their findings suggest that any unknown force on dark matter would be no more than 7% as strong as gravity. This insight into how dark matter and gravity interact clears up some of the mysteries surrounding galaxy formation and evolution.
/web/2025/07-251104-a0

8. Physics / Chemistry / Math

Twisted Graphene Reveals Exotic Superconductivity

(EPFL, October 02, 2025)



Researchers have unlocked double-dome superconductivity in twisted trilayer graphene (MATTG) using an electric field, which marks a significant advance in quantum materials. This breakthrough, led by Prof. Mitali Banerjee and teams from EPFL, the University of Zurich, the University of Basel, the University of Oxford and the Japan National Institute for Material Science, shows for the first time that it's possible to control this rare superconductivity by adjusting the electric field. Such control over superconductivity in MATTG brings new possibilities in quantum device development and offers insights into unconventional superconductivity of 2D materials. The process involved stacking three graphene layers, twisting the middle one by about 1.55 degrees, and enclosing them between insulating hexagonal boron nitride layers. By attaching electrodes and gates, the team could manipulate electron density and apply an electric displacement field. Their experiments at near absolute zero temperatures revealed superconductivity regions that could enable the creation of advanced quantum devices and the exploration of new states of matter. This method of modulating superconductivity through electric fields suggests new possibilities for high-temperature superconductors and practical quantum technologies.
/web/2025/08-251002-eb

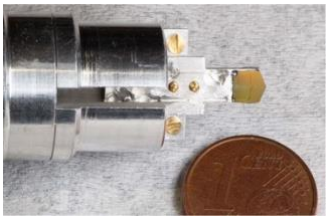
New 3D Printing Method 'Grows' Ultra-strong Materials

(EPFL, October 09, 2025)

Researchers at EPFL, led by Dr. Yiming Ji and Assistant Professor Daryl Yee, have developed a new 3D printing method that grows metals and ceramics in a hydrogel, creating dense, complex structures. This method boosts the strength and reduces the shrinkage of materials, potentially enabling new possibilities in energy, biomedical, and sensing technologies. Materials made with this technique can withstand 20 times more pressure than those produced by traditional methods, demonstrating a major improvement in durability and precision. The team uses a vat photopolymerization technique, modifying it to work with a water-based hydrogel instead of conventional light-sensitive resins. They build a 3D scaffold in the hydrogel, infuse it with metal salts that convert into nanoparticles, and allow for repeated infusions to achieve high metal concentrations. Heating then removes the hydrogel, resulting in a dense, strong metal or ceramic object.
/web/2025/08-251009-67

Bridging Light, Microwaves and Electrons for Precision Calibration

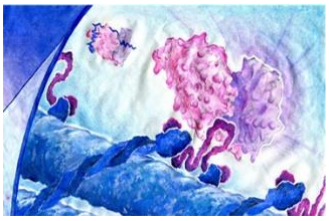
(EPFL, October 30, 2025)



Researchers at EPFL, led by Prof. Tobias Jan Kippenberg, Dr. Thomas LaGrange, and Dr. Fabrizio Carbone, have created a new calibration technique for electron spectrometers. By incorporating a silicon nitride (Si_3N_4) microresonator chip into a transmission electron microscope, they have achieved a 20-fold increase in accuracy compared to traditional methods. This advancement opens new doors for detailed studies of material properties, chemical bonds, and quantum effects at the nanoscale. The team's method involves shining a continuous-wave laser on the silicon nitride microresonator chip and locking the laser frequency with an optical frequency comb. This process causes free electrons near the chip to interact with the laser's electromagnetic field, modifying the electron spectrum into a comb-like pattern. Such interaction allows for ultra-precise electron spectrometer calibration.
/web/2025/08-251030-52

How Chromosomes Separate Accurately

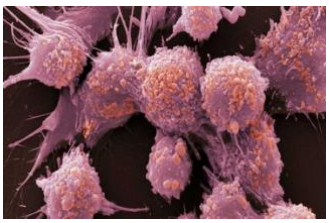
(University of Geneva, November 14, 2025)



Researchers from the University of Geneva, National Cancer Institute (NCI), and University of California, San Francisco, led by Prof. Andreas Boland and team, have shown how the enzyme separase cuts the cohesin complex during chromosome separation. This discovery provides a structural map of separase's interaction with SCC1, pinpointing cleavage and docking sites. It opens new paths for cancer treatment by targeting chromosome segregation, aiming to stop cancer's uncontrolled cell division. Using advanced cryo-electron microscopy, the team visualized the separase-SCC1 interaction in detail, identifying where separase cuts SCC1 and the sites that enhance stability before cleavage. The study presents groundwork for developing inhibitors to block cohesin cleavage, a promising strategy for cancer therapy.
/web/2025/08-251114-7c

Gene Scissors in Camouflage Mode Help in the Search for Cancer Therapies

(ETH Zurich, November 21, 2025)



ETH Zurich researchers, led by Prof. Nicola Aceto and Dr. Massimo Saini, have discovered that suppressing two genes, AMH and AMHR2, significantly reduces breast cancer metastasis in mice. This breakthrough, achieved through a new CRISPR screen that avoids the immune response, could transform metastatic cancer treatment by enabling targeted therapies. This method not only improves the accuracy of CRISPR screens in mice but also sets the stage for its use in humanized mouse models.
/web/2025/08-251121-a5

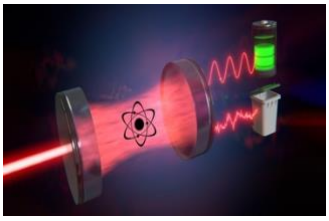
Why Some Volcanoes Don't Explode

(ETH Zurich, November 24, 2025)

Researchers at ETH Zurich, led by Prof. Olivier Bachmann, have found that shear forces, not just pressure drops, can cause gas bubbles in magma, changing how we predict volcano eruptions. This insight challenges the common belief that explosive magma always leads to violent eruptions. It highlights the role of shear forces in determining a volcano's eruption style, offering a new perspective on volcanic activity and hazard assessment. The team used a viscous liquid rich in carbon dioxide to mimic molten rock, observing gas bubble formation under shear forces. Supported by computer simulations, their results show shear forces in volcanic conduits significantly influence eruptions.
/web/2025/08-251124-0d

Bridging Thermodynamics and Quantum Systems

(University of Basel, November 26, 2025)



Researchers at the University of Basel, led by Prof. Patrick Potts, Dr. Max Schrauwen, and Dr. Aaron Daniel, have developed a new method to apply thermodynamic principles to quantum systems. They distinguished between work and heat by observing laser light in a cavity filled with atoms, marking a significant step towards a unified thermodynamic framework for quantum mechanics. The team studied cavity resonators, where laser light bounces between mirrors and partially exits the cavity. They identified 'work' as the ability of coherent laser light to charge a quantum battery and 'heat' as the effect of partially incoherent laser light. This distinction, based on the coherence of laser light, paves the way for advancements in quantum thermodynamics, crucial for quantum technologies and understanding the quantum-classical transition in large systems.
/web/2025/08-251126-ce

10. Economy, Social Sciences & Humanities

A New Prototype E-Voting System Solves the Coercion Problem

(EPFL, October 29, 2025)

Researchers at EPFL have developed Votegral, a cutting-edge e-voting system that addresses the major challenges of coercion in electronic voting. By cutting down the vote counting algorithmic time for such coercion-resistant systems from over 1700 years to just 14 hours for one million ballots, Votegral introduces a practical method that is poised to change how we conduct elections globally. The EPFL team, led by Louis-Henri Merino and Associate Professor Bryan Ford, used advanced cryptographic techniques to allow voters under pressure to generate fake credentials and cast counterfeit votes, which are filtered out during the tallying, ensuring only valid votes are counted. This breakthrough, together with improvements in cryptographic proof generation and performance tuning, not only secures and privatizes the voting process but also makes it scalable and feasible for widespread use, allowing future elections to be universally accessible and free from manipulation.
/web/2025/10-251029-f1

Uncertainty's Silver Lining: A Key to Social Harmony

(ETH Zurich, November 20, 2025)

ETH Zurich researchers, led by Dr. Ruri Takizawa have discovered that simply reframing uncertainty as an opportunity can dramatically improve attitudes toward social diversity and lower support for right-wing populist parties. This finding challenges the common assumption that fear of the unknown inevitably drives political polarization and division. Instead, the study suggests that changing our mindset toward uncertainty offers a powerful, accessible tool for strengthening democratic resilience. By viewing the unknown as a space for potential rather than a threat, individuals may also become more open to tackling complex global challenges like climate change and technological disruption. The team tested this theory during Germany's parliamentary elections with 745 participants. They split the subjects into two groups: both answered the same survey, but the test group first watched a short presentation highlighting the benefits of uncertainty, featuring scientific examples and a speech by Steve Jobs. This brief intervention sparked a lasting shift in perspective: participants who saw the video were significantly less likely to support authoritarian narratives than those who did not.
/web/2025/10-251120-d5

Takeda Inaugurates Advanced Hemophilia Production Site in Neuchâtel

(RTS Info, November 27, 2025)

Takeda Pharmaceutical Company has officially inaugurated its expanded production facility in Neuchâtel, marking the completion of a CHF 200 million investment. The ceremony, attended by Federal Councilor Guy Parmelin, unveiled a new high-tech aseptic filling line dedicated to hemophilia medications. This milestone secures Switzerland's critical role in Takeda's global network, where the Neuchâtel site operates 24/7 to supply over 70 markets. The expansion also positions Neuchâtel as a pioneer in the 'Factory of the Future.' The site is implementing cutting-edge 'digital twin' technology, which uses real-time data to simulate and optimize production processes to eliminate bottlenecks. By integrating high-degree automation and AI-driven efficiency, Takeda aims to maximize the yield of complex biological treatments, ensuring that life-saving therapies reach patients faster and more reliably than ever before.
/web/2025/10-251127-c4

11. Start-ups / Technology Transfer / IPR / Patents

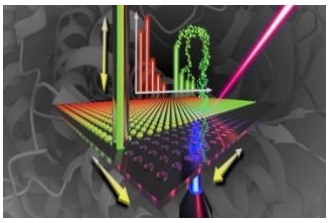
New Smartphone Architecture Enhances User Security

(ETH Zurich, October 02, 2025)

ETH Zurich's spin-off Soverli, under Dr. Ivan Puddu and Dr. Moritz Schneider, has developed a method to enhance smartphone security and user data control with a single button. This innovative software architecture segments a smartphone into various isolated domains, ensuring data privacy and security. It allows users to create private areas on their phone that the operating system cannot access. The team has also created a controller that operates independently of the device's manufacturer and operating system. This controller can generate isolated domains, switch between them, and manage access to the phone's hardware components. By enabling apps or separate operating systems to run independently from the main OS, this architecture secures communication in emergencies and safeguards sensitive information for businesses and public entities.
/web/2025/11-251002-ee

Faster Drug Testing with Thousands of Tiny Droplets

(ETH Zurich, October 20, 2025)



Researchers at ETH Zurich, led by Dr. Maximilian Breitfeld and Dr. Claudius Dietsche, have developed a method to create up to 100,000 tiny droplets on a single glass plate for biochemical testing. This technique saves up to five kilograms of non-recyclable plastic per experiment and boosts efficiency, precision, and sustainability in drug development and enzyme analysis. It represents a major advancement by reducing chemical and plastic waste, answering the call for more sustainable scientific methods. The method coats a glass plate with hydrophilic points that attract droplets containing enzymes and substrates for precise analysis. An automated process quickly generates these droplets, avoiding manual pipetting. A surrounding oil bath protects against evaporation and contamination. Researchers can vary the droplet composition to explore enzyme reactions or test active ingredients on cells.
/web/2025/11-251020-d3

Swallowable Bioprinter to Repair Damaged Tissue

(EPFL, October 21, 2025)

Imagine swallowing a pill that repairs ulcers or hemorrhages in your body without surgery. The world's first ingestible bioprinter, MEDS, developed by EPFL researchers Dr. Sanjay Manoharan and Prof. Vivek Subramanian, makes this possible. This pill-sized device travels through the gastrointestinal tract, depositing bio-ink on damaged tissues, offering a non-invasive treatment for soft tissue injuries. This innovation promises to significantly improve recovery times and patient outcomes by avoiding invasive surgeries. The MEDS device works like a ballpoint pen but uses a living bio-gel as ink, released through a spring tip. An external near-infrared laser activates it, and an external magnet precisely steers it, all monitored by x-ray fluoroscopy. Tested in simulated gastric tissue and live rabbits, it effectively repaired artificial ulcers and sealed simulated hemorrhages.
/web/2025/11-251021-6f

An ETH Spin-off Aims to Bring Gene Scissors to The Clinic

(ETH Zurich, October 28, 2025)

Dr. Lilly van de Venn and Prof. Jacob Corn from ETH Zurich have pioneered a method that uses a cancer drug to boost the detection of unintended changes in DNA during CRISPR/Cas gene editing, potentially making gene therapies safer. Their technique requires just a few cells from a biopsy, improving the precision and efficiency of gene therapy risk assessments by enabling a more accurate identification of off-target effects. By ensuring the MRE11 protein stays fixed, the HT-DISCOVER project's method sets a new standard for routinely pinpointing unwanted genome alterations with unparal-leled accuracy.
/web/2025/11-251028-a2

Microcatheter Delivers Therapies to The Tiniest Blood Vessels

(EPFL, October 28, 2025)

The MagFlow microcatheter, half the size of traditional microcatheters and powered by blood flow, is set to revolutionize therapy delivery to the smallest blood vessels, offering new treatment possibilities for complex cardiovascular and neurological conditions. Developed by the team at MicroBioRobotic Systems Laboratory (MICROBS), EPFL, and various hospitals, led by Associate Professor Mahmut Selman Sakar and Dr. Lucio Pancaldi, MagFlow's design minimizes vessel wall contact by harnessing the blood stream's kinetic energy. MagFlow operates with two bonded polymer sheets that inflate to deliver medical liquids, guided precisely by the OmniMag platform, which aligns a magnetic field according to a doctor's stylus movements. Tests have successfully used MagFlow to catheterize arteries in pigs' heads, necks, and spines for delivering contrast and embolizing agents.
/web/2025/11-251028-d6

12. General Interest

Uncovering Gut Health Secrets: Consistency Matters

(EPFL, October 15, 2025)

Eating fruits, vegetables, and grains regularly is as crucial as their consumption for a diverse gut microbiota. This finding by Rohan Singh and his team from EPFL and the University of California, San Diego, comes from analyzing dietary habits through a simple stool sample. By using machine learning, the researchers can now predict the relationship between a person's diet and their gut bacteria with up to 85% accuracy. The team analyzed nutritional data from nearly 1000 'Food & You' cohort participants with the MyFoodRepo app.
/web/2025/12-251015-e2

Why Deep Sighs are Actually Good for Us

(ETH Zurich, October 21, 2025)

Over half of premature babies suffer from respiratory distress. However, researchers from ETH Zurich, alongside international teams, have found that deep sighs could offer relief by decreasing lung fluid's surface tension. This process beneficially restructures the fluid's layers, improving lung flexibility and easing breathing by lowering resistance during lung movements. Such findings could enhance the treatment of adult lung failure. The team, including Maria Clara Novaes Silva and Prof. Jan Vermant, simulated normal and deep breathing in the lab, and analyzed lung fluid tension.
/web/2025/12-251021-0f

Upcoming Science and Technology Related Events

International Conference on Recent Innovations in Engineering and Technology
January 16-17
https://theiier.org/Conference/26469/ICRIET/
Industrial Products & Engineering
Hotel Allegra Kloten

Euroconference on Rock Physics and Rock Mechanics
January 19-23
https://euroconf26.epfl.ch
Scientific, Research & Development
Eurotel Victoria Les Diablerets

Conference on Policy Process Research
January 20-23
https://policyprocessresearch.org
Scientific, Research & Development
University of Bern

HEM Bürgenstock Conference 2026
January 23-24
https://www.hem-suisse.ch/
Scientific, Research & Development
KKL Luzern

Swiss Industrial Chemistry Symposium
January 30
https://scg.ch/
Industrial Products & Engineering, Scientific, Research & Development
Biozentrum University of Basel

AgentCon - Zurich
February 4
https://globalai.community/
IT, Web & Electronic, AI, Scientific
Swiss Life AG Zurich

Swiss Microbiomes Forum
February 5
https://nccr-microbiomes.ch/
Life Sciences, Research & Development
EPFL Rolex Learning Center Lausanne

Applied Machine Learning Days EPFL
February 10-13
https://2025.appliedmldays.org
IT, Web & Electronic, AI, Scientific
SwissTech Convention Center Lausanne

Swiss Hydrogen Summit
February 25-26
https://h2-summit.ch/
Power, Renewable & Storage Energy
The Dolder Grand Zurich

Front Conference Zurich
February 27
https://frontconference.com/
IT, Web & Electronic, AI, Scientific, Research & Development
Alte Papierfabrik Zurich

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