

Technology Roundup

A NEWS BULLETIN

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Sindh Agriculture University, Tandojam

International Conference (ONLINE)
for Emerging Scholars on: Evolving Dynamics of Non-traditional Security Issues: National and International Perspectives

International Conference on Marine Science and Aquaculture (ICMSA)
Karachi

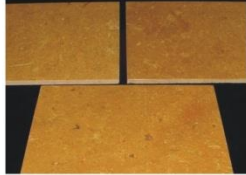
Annual Congress on Soil and Water Conservation (ACSWC) Rawalpindi

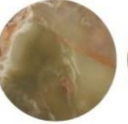
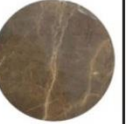
International conference on latest Medical research and Development
Quetta

International Conference: Language, Literature, Literacy: COVID and Post-COVID Times

International Conference on Strengthening Teaching and Research Capacity: Collaborative Partnership

Tech & Trade Offers



			
BLACK AND GOLD	BUBBLE LIMESTONE	BUTAK ONYX	FOSSIL BROWN
			
DARK GREEN ONYX	COFFEE BROWN	YELLOW SANDSTONE	LAKROL FANCY
			
NOVA BEIGE	MULTI GREEN ONYX	RED ONYX	YELLOW ONYX

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IT MINISTER INAUGURATES NITB FIRST-EVER DATA CENTER

Federal Minister for Information and Technology, Syed Amin ul Haq, inaugurated the first ever data center of the National Information Technology Board (NITB). The data center called ‘Staging Environment’ was built at a cost of Rs. 330 million. It comprises eight data servers with a storage capacity of 500 terabytes. Speaking at the occasion, the IT Minister said that the state of the art data center has been set up under the cyber security requirements. “Under this initiative, the NITB will help establish secure testing incubation, where testing of government institutions’ websites, mobile applications, and web portals will be possible,” the minister said. Earlier, applications and web portals testing were carried out by the National Technology Council (NTC) or any third party. He said that the establishment of the NITB center has eliminated the risk of data leaks or hack. “Supported by state of the art technology, NITB’s data center offers highly secure and effective solutions that can fulfill data security needs of ministries. The data center services guarantee secure physical and technical infrastructure which protects the most sensitive and critical data from every type of internal and external security threats,” he added.



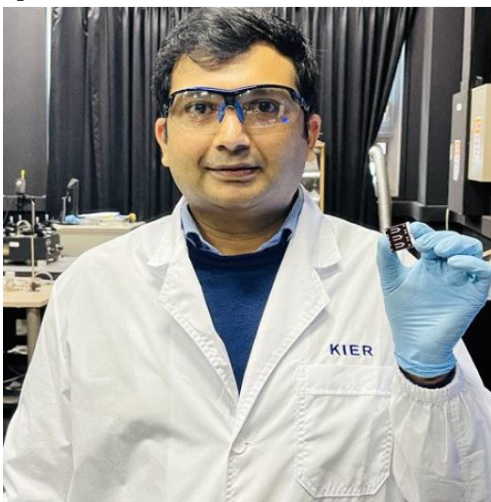
Inauguration ceremony of “Staging Environment”, Image credit:

<https://twitter.com/NationalITBoard/status/1488484473851293701/photo/1>

Source: <https://www.aboutpakistan.com/news/it-minister-inaugurates-nitbs-first-ever-data-center/>

PAKISTANI SCIENTIST SETS TWO WORLD RECORDS IN SOLAR CELL TECHNOLOGY

A team comprising Pakistani and Korean scientists has developed a promising solar cell technology that sets two new world records. A team led by Dr. SeJin Ahn, principal researcher at the Korea Institute of Energy Research (KIER) and consisting of Pakistani scientists, has made this remarkable solar cell technology. Yasir Siddique, a PhD scholar at KIER and the University of Science and Technology (UST), Daejeon, South Korea, has designed and fabricated solution-processed Copper Indium Sulphur Selenide (CISSe) solar cells. The stable solution-processed, low bandgap CISSe device perfectly works as a single cell, but could also be sandwiched with other thin-film solar cell materials having suitable bandgap as top cell-like recently emerging solar cell technology of Perovskite in tandem solar cell configuration. There are many types of solar cells with varied efficiencies. The first, second and third generation of solar cells is another way to describe them. Different types of solar cells have different efficiencies, for instance traditional silicon cell has efficiency from 15 to 20 percent while concentrated solar cells could be 41 percent efficient but need focused beams at one place. However, Siddique's cell falls in the emerging trend of tandem solar technology and is now most efficient in its category. Siddique's recent innovation took three years to develop and finally the CISSe only cell allows the efficiency of 14.4 percent when it is blended with perovskite (perovskite/CISSe) cell touched the efficiency of 23.03 percent. This is the highest efficiency as compared to all solution-processed (perovskite/CISSe) solar cell categories. Siddique's record efficiency solar cell has been certified Photovoltaic test laboratory at KIER, is an ISO/IEC17025 certified test centre and accredited by Korea Laboratory Accreditation Scheme (KOLAS) which signed the ILAC-MRA (International Laboratory Accreditation Cooperation-Mutual Recognition Arrangement). The patent is to be filed soon and the studies published in the top research journal of the world "Energy and Environmental Science" have an impact factor of 38.532. "It is the single largest high impact research published from KIER, Daejeon Campus in the recent times," Yasir Siddique said.



Source and image credit:

<https://tribune.com.pk/story/2343626/pakistani-scientist-sets-two-world-records-in-solar-cell-technology>

PAKISTAN-BORN SURGEON AMONG TEAM WHO MADE HISTORY WITH PIG-TO-HUMAN HEART TRANSPLANT

Dr Mohammad Mohiuddin, MD, who is scientific and programme director of the Cardiac Xenotransplantation Programme at the University of Maryland School of Medicine (UMSOM), was directly involved in the transplantation. Karachi-born Dr Mohiuddin is also one of the leading experts on transplanting animal organs, known as xenotransplantation. He also serves as the professor of surgery at the UMSOM. “This is the culmination of years of highly complicated research to hone this technique in animals with survival times that have reached beyond nine months. The FDA used our data and data on the experimental pig to authorize the transplant in an end-stage heart disease patient who had no other treatment options,” Dr Mohiuddin said according to a statement released by the UMSOM and the University of Maryland Medical Centre (UMMC). He further added that the information and findings that the team came across during the operation will benefit the medical community in the future.



Dr Mohammad Mohiuddin, programme director of the Cardiac Xenotransplantation Programme at the University of Maryland School Of Medicine (UMSOM). Photo credit:

<https://www.medschool.umaryland.edu/profiles/Mohiuddin-Muhammad/>

“The successful procedure provided valuable information to help the medical community improve this potentially life-saving method in future patients,” he said. Dr Mohiuddin assisted Dr Bartley P Griffith, MD in transplanting the pig heart into the body of David Bennett, a Maryland resident. The transplant was a desperate highly-experimental operation agreed to by recipient Bennett, 57, because he was dying and there was no other choice available, Bennett's son told the Associated Press. Dr Mohiuddin received his MBBS degree from Karachi's Dow Medical College in 1989, according to News18.

Source:

<https://tribune.com.pk/story/2338383/pakistan-born-surgeon-among-team-who-made-history-with-pig-to-human-heart-transplant>

AKU INITIATES FIRST SOLAR POWER PROJECT ON THE CAMPUS

At the inauguration of the installation at the Sports Centre, President Sulaiman Shahabuddin said, “Agha Khan Universities’s first solar power project in Pakistan is a key step forward to realizing our environment and climate ambitions. Using renewable, clean energy brings not only cost savings but benefits people and the planet alike”.

“We are proud to say that currently, AKU is the only university and only health care provider in Pakistan with a publicly committed net zero carbon target” said AKU President Shahabuddin. Our goal is to champion good stewardship of the environment: to mitigate the effects of climate change from our activities, and support resilience in the communities we serve.”

As part of its commitment to become carbon neutral by 2030, AKU is investing in solar arrays on its campuses in Karachi. Three new solar installations will cut the University’s carbon footprint by more than 365,000 kg per year, the equivalent to 1.5 million kilometers travelled in a medium sized car.

Over the last decade, solar power has become one of the cheapest electricity sources, particularly suitable for locations such as Pakistan with a high number of sunny days. Once installed, solar energy requires no inputs, reduces operational costs and can improve the environment for the local community by reducing noise and air pollution.



Inauguration of solar power project at AKU

Source and image credit: https://www.aku.edu/news/Pages/News_Details.aspx?nid=NEWS-002685

NADRA CONVERTING ID CARDS INTO DIGITAL WALLETS

The National Database and Registration Authority (Nadra) is working to make the computerized national identity cards digital wallets under the government's Digital Pakistan vision and an update to an already existing app will likely be made available later this year.

"In a short span, 75,000 overseas Pakistanis have processed their national identity cards (called Nicop) from the comfort of their homes by using the app, which is supported by two-factor authentication," Nadra chief Tariq Malik explained.

The app is available on both Android and iOS platforms. Mr. Malik said that with the launch of this app, Pakistan has become the first country to implement "contactless biometric" acquisition and verification using smart phone cameras. "With successful testing on 75,000 overseas Pakistanis, Nadra will go for a digital wallet," he said. Explaining the features of digital wallet, the Nadra chairman said it would be a unique digital ID.

"This innovation will revolutionize the national ID eco-system in Pakistan by ensuring public convenience, and is a leap forward putting an end to the conventional physical ID," he said.



Source and image credit: <https://www.bolnews.com/pakistan/2022/01/nadra-working-to-convert-national-id-cards-into-digital-wallets/>

SCIENTISTS DEVELOP COVID-19 TESTING LAB IN A BACKPACK

Researchers have created a simple COVID-19 testing lab that fits into a backpack providing a cheap and effective solution for low income or remote areas. The testing kit is based on a simple, non-invasive Covid-19 LAMP test and uses low-cost hardware, including a centrifuge made from recycled computer hard drives to process samples. The compact kit is relatively inexpensive to make, costing \$51 in total. It could offer an alternative testing solution for resource-poor countries or remote areas with little access to well-equipped testing labs or trained personnel to process samples. The LAMP test is a widely accepted alternative to the commonly used PCR test, has a similar sensitivity but unlike the PCR test does not require temperature cycling, only a single high temperature to amplify any potential virus RNA.



Covid-19 testing kit that fits into backpack, image credit:

<https://www.qmul.ac.uk/media/news/2022/se/scientists-develop-covid-19-testing-lab-in-a-backpack.html#:~:text=In%20a%20new%20study%2C%20published,make%2C%20costing%20%2451%20in%20total.>

This allows the test to be performed with only minimal equipment and reagents. Because the LAMP test uses saliva samples, it also avoids the need for invasive, uncomfortable nasal swabs. However, the high costs of commercially available LAMP tests, as well as the expensive lab equipment required to run them, means that current commercial approaches aren't suitable for remote locations, or in-home testing. According to the researchers, next steps will include making the kit instructions even more understandable so that people can use them regardless of their experience or language, as well as validating the kit with real patient samples. So, whilst this approach holds promise, further work is needed before the system can be implemented in real-world environments, Professor Smoukov said.

Source: <https://www.sciencedaily.com/releases/2022/01/220126143943.htm>

ROBOT PERFORMS FIRST LAPAROSCOPIC SURGERY WITHOUT HUMAN HELP

A robot has performed laparoscopic surgery on the soft tissue of a pig without the guiding hand of a human; a significant step in robotics towards fully automated surgery on humans. Designed by a team of Johns Hopkins University researchers, the Smart Tissue Autonomous Robot (STAR) is described today in *Science Robotics*. The robot excelled at intestinal anastomosis, a procedure that requires a high level of repetitive motion and precision. Connecting two ends of an intestine is arguably the most challenging step in gastrointestinal surgery, requiring a surgeon to suture with high accuracy and consistency. Even the slightest hand tremor or misplaced stitch can result in a leak that could have catastrophic complications for the patient. Working with collaborators at the Children's National Hospital in Washington, D.C. and Jin Kang, a Johns Hopkins professor of electrical and computer engineering, Krieger helped create the robot, a vision-guided system designed specifically to suture soft tissue. Their current iteration advances a 2016 model that repaired a pig's intestines accurately, but required a large incision to access the intestine and more guidance from humans. Soft-tissue surgery is especially hard for robots because of its unpredictability, forcing them to be able to adapt quickly to handle unexpected obstacles, Krieger said.

The STAR has a novel control system that can adjust the surgical plan in real time, just as a human surgeon would. "What makes the STAR special is that it is the first robotic system to plan, adapt, and execute a surgical plan in soft tissue with minimal human intervention," Krieger said

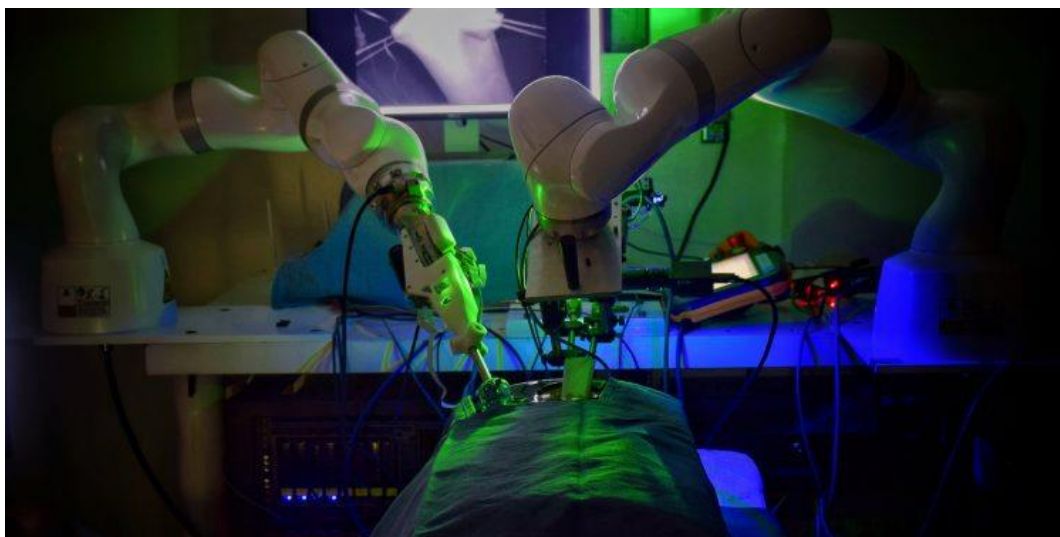


Image credit: <https://todayheadline.co/robot-performs-first-laparoscopic-surgery-without-human-help/>

Source: <https://www.sciencedaily.com/releases/2022/01/220126143954.htm>

NOVEL NANOANTIBIOTICS KILL BACTERIA WITHOUT HARMING HEALTHY CELLS

The Centers for Disease Control and Prevention (CDC) estimates more than 2.8 million Americans experience antibiotic-resistant infections each year. To address this critical issue, researchers recently investigated whether a series of novel nanoparticles can kill some pathogens that lead to infection without affecting healthy cells. Past research has shown that hydrophobicity (a molecule's ability to repel water) and hydrophilicity (a molecule's ability to attract and dissolve in water) affects cells; the more hydrophobic a substance is, the more adverse the reaction it will cause.

However, Liang said, there is no quantitative standard for how much hydrophobicity is acceptable. "Basically, you can kill bacteria when you increase hydrophobicity," Liang said. "But it will also kill healthy cells, and we don't want that." For their study, the Liang team used novel hydrophilic nanoparticles known as nanoantibiotics that were developed by Liang's laboratory. Structurally speaking, these novel nanoantibiotics resemble tiny hairy spheres, each composed of many hydrophilic polymer brushes grafted onto silica nanoparticles of different sizes. These synthetic compounds, which Liang's lab produces, are designed to kill bacteria via membrane disruptions like antimicrobial peptides do, but through a different mode of membrane remodeling that damages bacterial membranes and not mammalian cells.

Antimicrobial peptides are a diverse class of amphipathic molecules (partially hydrophilic-partially hydrophobic), which occur naturally and serve as the first line of defense for all multicellular organisms. The direct use of antimicrobial peptides as antibiotics is limited by their stability and toxicity.

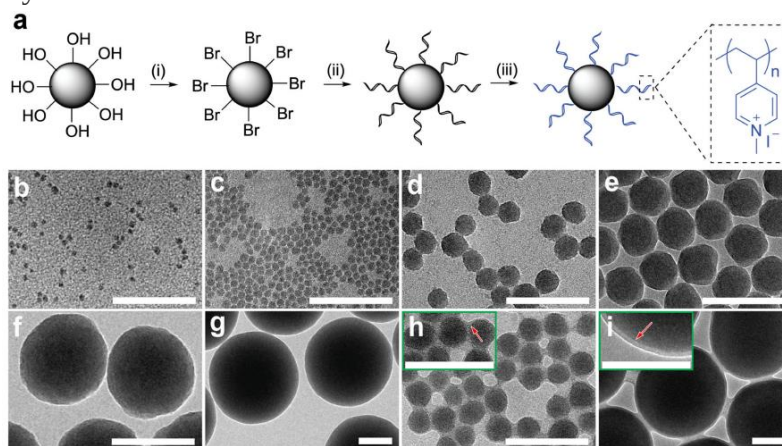


Image credit: <https://doi.org/10.1038/s41467-021-27193-9>

Source: <https://www.sciencedaily.com/releases/2022/01/220120091216.htm>

NEW TECHNOLOGY THAT CAN PREVENT TRADITIONAL SURGERY

There is a new treatment possibility, precisely targeting health problems that often lie deep within the body without the need for invasive traditional surgery. The pioneering field of interventional radiology is opening up new treatment possibilities, precisely targeting health problems that often lie deep within the body – without the need for invasive traditional surgery. Diagnostic and interventional radiologist and the founder of The Microsurgery Dr. Gary Sudwarts, who practices at a number of Netcare hospitals, said: “Today, micro-invasive treatments are helpful for a wide range of conditions, from fibroids, prostatic enlargement, advanced pelvic cancers, and delivering cancer treatments to a diverse array of interventional radiology procedures in the chest and abdomen.”

Using imaging equipment, including specialized x-rays, a thin catheter wire is inserted into an artery through a tiny puncture in the patient’s skin and carefully directed to the relevant site in the body for treatment. In the case of artery embolisation procedures, tiny particles are released at the site to starve the lesion of blood supply, causing it to wither and become harmless. Chemo-embolisation procedures deliver a dose of chemotherapy right to the blood vessels supplying the tumor.



Image credit: <https://innotechtoday.com/surgery-tech/>

Source: <https://www.citizen.co.za/news/3007308/new-radio-technology-that-can-prevent-traditional-surgery/>

FUEL CELLS AND GAME-CHANGING TECH TO REMOVE 99% OF CARBON DIOXIDE FROM AIR

Yan, Henry Belin du Pont Chair of Chemical and Biomolecular Engineering, has been working for some time to improve hydroxide exchange membrane (HEM) fuel cells, an economical and environment friendly alternative to traditional acid-based fuel cells used today. But HEM fuel cells have a shortcoming that has kept them off the road as they are extremely sensitive to carbon dioxide in the air. Essentially, the carbon dioxide makes it hard for a HEM fuel cell to breathe. This defect quickly reduces the fuel cell's performance and efficiency by up to 20%, rendering the fuel cell no better than a gasoline engine.

Yan's research group has been searching for a workaround for this carbon dioxide conundrum for over 15 years. A few years back, the researchers realized this disadvantage might actually be a solution for carbon dioxide removal. "Once we dug into the mechanism, we realized the fuel cells were capturing just about every bit of carbon dioxide that came into them, and they were really good at separating it to the other side," said Brian Setzler, assistant professor for research in chemical and biomolecular engineering and paper co-author. While this isn't good for the fuel cell, the team knew if they could leverage this built-in "self-purging" process in a separate device upstream from the fuel cell stack, they could turn it into a carbon dioxide separator. "It turns out our approach is very effective. We can capture 99% of the carbon dioxide out of the air in one pass if we have the right design and right configuration," said Yan.

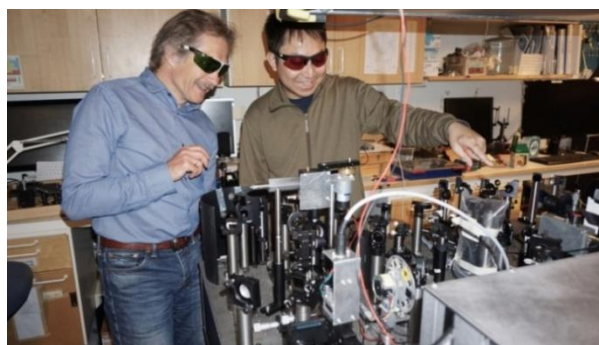


Image credit: <https://darik.news/delaware/new-game-changing-technology-removes-99-of-co2-from-the-air/202202491100.html>

Source: <https://www.sciencedaily.com/releases/2022/02/220203161122.htm>

BREAKTHROUGH IN CONVERTING CARBON DIOXIDE INTO FUEL USING SOLAR ENERGY

A research team has shown how solar power can convert carbon dioxide into fuel, by using advanced materials and ultra-fast laser spectroscopy. The breakthrough could be an important piece of the puzzle in reducing the levels of greenhouse gases in the atmosphere in the future. The sunlight that hits Earth during one hour corresponds roughly to humanity's total energy consumption for an entire year. Our global carbon dioxide emissions are also increasing. Using the sun's energy to capture greenhouse gases and converting it into fuel or another useful chemical, is a research focus for many today. However, there is still no satisfactory solution, but an international research team has now revealed a possible way forward. "The study uses a combination of materials that absorb sunlight and use its energy to convert carbon dioxide. With the help of ultra-fast laser spectroscopy, we have mapped exactly what happens in that process," says Tõnu Pullerits, a chemistry researcher. "The conversion to carbon monoxide requires two electrons. When we discovered that photons with blue light create long-lived electrons with high energy levels, we could simply charge COF (covalent organic framework) with electrons and complete a reaction," says Kaibo Zheng, a chemistry researcher. "We have completed two initial steps with two electrons. Before we can start thinking about a carbon dioxide converter, many more steps need to be taken, and probably even our first two must be refined. But we have identified a very promising direction to take," concludes Tõnu Pullerits.



Tõnu Pullerits and Kaibo Zheng demonstrating the laser spectroscopy setup used in the study (image credit: <https://www.lunduniversity.lu.se/article/breakthrough-converting-co2-fuel-using-solar-energy>)

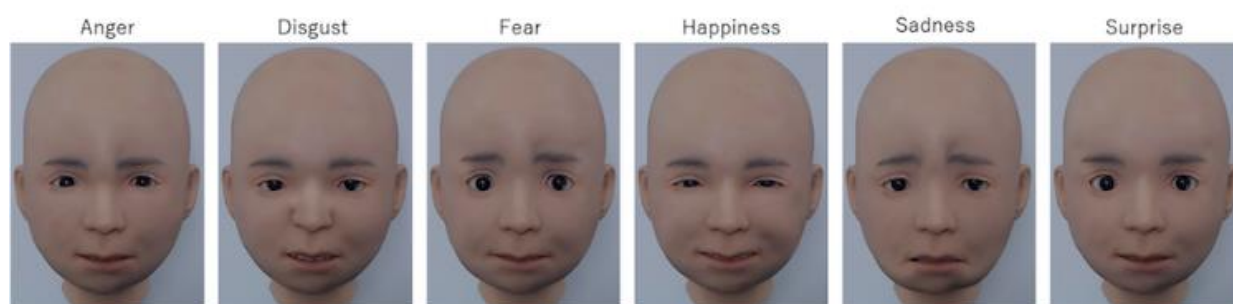
Source: <https://www.technologynetworks.com/tn/news/breakthrough-for-conversion-of-co2-to-fuel-using-solar-energy->

INTRODUCING NIKOLA, THE EMOTIONAL ANDROID KID

Researchers from the RIKEN Guardian Robot Project in Japan have made an android child named Nikola that successfully conveys six basic emotions. The new study, published in *Frontiers in Psychology*, tested how well people could identify six facial expressions—happiness, sadness, fear, anger, surprise, and disgust—which were generated by moving “muscles” in Nikola’s face. This is the first time that the quality of android-expressed emotion has been tested and verified for these six emotions.

Inside Nikola’s face are 29 pneumatic actuators that control the movements of artificial muscles. Another 6 actuators control head and eyeball movements. Pneumatic actuators are controlled by air pressure, which makes the movements silent and smooth. The team placed the actuators based on the Facial Action Coding System (FACS), which has been used extensively to study facial expressions. Past research has identified numerous facial action units—such as ‘cheek raiser’ and ‘lip pucker’—that comprise typical emotions such as happiness or disgust, and the researchers incorporated these action units in Nikola’s design.

“In the short term, androids like Nikola can be important research tools for social psychology or even social neuroscience,” says Sato. “Compared with human confederates, androids are good at controlling behaviors and can facilitate rigorous empirical investigation of human social interactions.” As an example, the researchers asked people to rate the naturalness of Nikola’s emotions as the speed of his facial movements was systematically controlled. They researchers found that the most natural speed was slower for some emotions like sadness than it was for others like surprise.



The facial expressions produced by the android Nikola for six basic emotions, image credit:

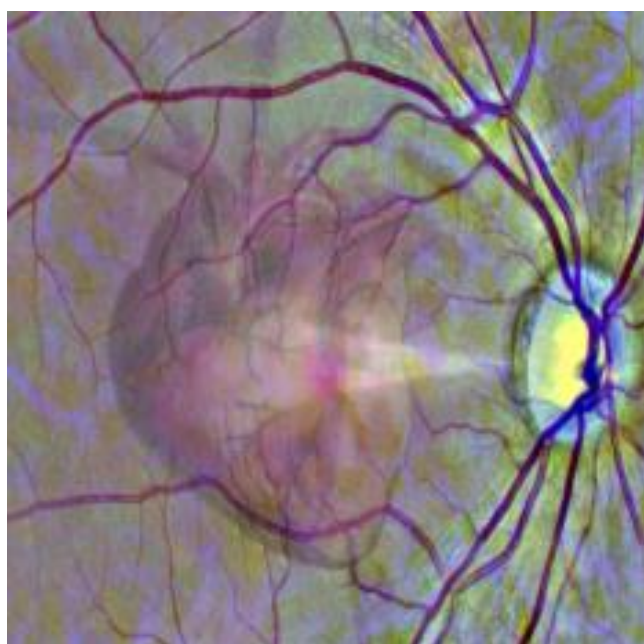
<https://www.frontiersin.org/articles/10.3389/fpsyg.2021.800657/full>

Source: https://www.riken.jp/en/news_pubs/research_news/pr/2022/20220210_1/index.html

USING THE EYE AS A WINDOW INTO HEART DISEASE

Scientists have developed an artificial intelligence (AI) system that can analyze eye scans taken during a routine visit to an optician or eye clinic and identify patients at a high risk of a heart attack. Doctors have recognized that changes to the tiny blood vessels in the retina are indicators of broader vascular disease, including problems with the heart. In the research, deep learning techniques were used to train an AI system to automatically read retinal scans and identify those people who, over the following year, were likely to have a heart attack. In the research, led by the University of Leeds, deep learning techniques were used to train the AI system to automatically read retinal scans and identify those people who, over the following year, were likely to have a heart attack. Deep learning is a complex series of algorithms that enable computers to identify patterns in data and to make predictions. Writing in the journal *Nature Machine Intelligence*, the researchers report that the AI system had an accuracy of between 70% and 80% and could be used as a second referral mechanism for in-depth cardiovascular investigation.

The use of deep learning in the analysis of retinal scans could revolutionize the way patients are regularly screened for signs of heart disease.



A scan of the eye can be a window into heart health, image credit: <https://www.leeds.ac.uk/news-technology/news/article/5000/ai-can-identify-heart-disease-from-an-eye-scan>

Source: <https://www.sciencedaily.com/releases/2022/01/220125112548.htm>

NEW TECHNIQUE WILL IMPROVE THE CONSTRUCTION OF ICE ROADS AND BRIDGES

A new study found that measuring the time it takes for a radar pulse to travel from a satellite to the sea surface and back again can reveal the thickness of river ice and dates when it is safe to travel on ice roads and bridges in Arctic regions.

Many northern communities in Canada rely on the network of ice roads built on frozen lakes and rivers to transport goods and for food security. However, the sustainability of these roads is at risk due to climate warming causing shorter ice seasons and thinner ice. Researchers from the University of Waterloo used the technique called radar altimetry, which also helps in understanding the ways frozen rivers enhance interconnection and supplies to various cities with ice covers. River ice is a major component of the planet's ecosystem that plays a key role in the functioning of the aquatic system and affects the operation of hydropower stations as well as construction and navigation. Researchers from the University of Waterloo used the technique called radar altimetry, which also helps in understanding the ways frozen rivers enhance interconnection and supplies to various cities with ice covers. River ice is a major component of the planet's ecosystem that plays a key role in the functioning of the aquatic system and affects the operation of hydropower stations as well as construction and navigation. The study shows that various factors can affect the radar return echoes and consequently the accuracy of the river ice thickness retrievals in arctic regions. "One of the main advantages of satellite altimetry compared with imaging synthetic aperture radar is the relative ease in processing the measurements over the large hemispheric-scale domain," Duguay said.



Image credit: <https://uwaterloo.ca/news/media/new-technique-will-improve-construction-ice-roads-and>

Source: <https://www.sciencedaily.com/releases/2022/02/220210084948.htm>

NEW RESEARCH AT AUSTRALIA AIMS TO END THE REFRIGERATION OF VACCINES

The World Health Organization estimates that at least 50 % of vaccines are wasted globally each year, with a lack of facilities and temperature control the major cause. Recently published in *Acta Biomaterialia*, CSIRO researchers encapsulated live virus vaccines with a dissolvable crystalline material called MOFs (metal organic frameworks), which protected the integrity of the vaccines for up to 12 weeks and at temperatures as high as 37 degrees Celsius. Without refrigeration the vaccines would otherwise last only a few days. CSIRO scientist and immunologist, Dr Daniel Layton, said the breakthrough science would now focus on proving the approach for other animal and human vaccines, including mRNA COVID-19 vaccines. “Vaccination is undoubtedly one of the most effective medical interventions, saving millions of lives each year, however delivering vaccines, particularly to developing countries, is challenging because they often lack the cold storage supply chains required to keep the vaccine viable,” Dr Layton said.



Dr Daniel Layton at CSIROs ACDP (image credit: <https://www.csiro.au/>)

"This breakthrough has the potential to enable more affordable and equitable access to vaccines across the world." The research focused on two different types of live viruses as proofs of concept, a Newcastle Disease vaccine designed to protect poultry and a strain of Influenza A. When MOFs were formed around the vaccines they helped protect the vaccine molecules from heat stress. A solution was then used that dissolved the MOF for administration of the vaccine. CSIRO senior scientist Dr Cara Doherty said MOFs were the perfect material for protecting vaccines from temperature variations.

Source: <https://www.csiro.au/en/news/News-releases/2022/News-Release-CSIRO-Research-to-end-vaccine->

FORTHCOMING TECH EVENTS

1st international conference on Plant Protection Sciences (ICPPS-2022)
Sindh Agriculture University,
Tandojam
Start date: 2022-03-29
End date: 2022-03-30
<https://icpps.sau.edu.pk/>

International Conference (ONLINE) for Emerging Scholars on: Evolving Dynamics of Non-traditional Security Issues: National and International Perspectives

Start date: 2022-03-29
End date: 2022-03-31
<https://fjwu.edu.pk/fjwu-events/international-conference-online-for-emerging-scholars-on--evolving-dynamics-of-non-traditional-security-issues-national-and-international-perspectives/>

International Conference on Marine Science and Aquaculture (ICMSA)
Karachi
Start date: 2022-03-01
End date: 2022-03-02
<http://universal-conference.com/Conference/25647/ICMSA/>

Annual Congress on Soil and Water Conservation (ACSWC)
Rawalpindi
Start date: 2022-03-05
End date: 2022-03-06
<http://worldresearchsociety.com/Conference/33222/ACSWC/>

International conference on latest Medical research and Development
Quetta
Start date: 2022-04-16
End date: 2022-04-17
<http://universal-conference.com/Conference/25804/ICMRD/>

Conferences to be held in May 2022 and onwards

International Conference: Language, Literature, Literacy: COVID and Post-COVID Times
Start date: 2022-05-10
End date: 2022-05-12
<https://fjwu.edu.pk/fjwu-events/international-conference-language-literature-literacy-covid-and-post-covid-times/>

International Conference on Strengthening Teaching and Research Capacity: Collaborative Partnership in Social Sciences
Start date: 2022-08-16
End date: 2022-08-18
<https://fjwu.edu.pk/fjwu-events/international-conference-on-strengthening-teaching-and-research-capacity-collaborative-partnership-in-social-sciences/>

TECH AND TRADE OFFERS

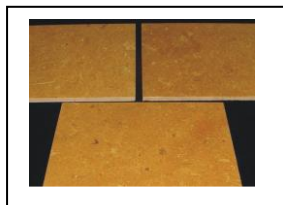
S.M.B. Marble

About S.M.B. Marble

S.M.B. Marble is the leading supplier and exporter of Pakistani marble tiles. Established in 1994, this company enjoys an excellent reputation of providing high-quality service following an innovative development in the Natural Stone business in Pakistan. Furthermore, thanks to its own complete manufacturing site designed by Italian firm, S.M.B. Marble turns out to be one of the leading marble tiles manufacturer in Pakistan.

Our products:

- Black and gold (Michelangelo) marble is top exported to China, Italy, USA & UAE from Pakistan. Recommended Applications: Flooring, Cladding, Counter Tops, Exterior, Interior, Table Tops Finishes.
- Golden Camel stone Add eye-catching attention to your home and leaving room.



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