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NEWS ALERT

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GLOBAL

[Sapphire fiber could enable cleaner energy and air-travel](#)

The Oxford University researchers have developed a sensor made of tiny sapphire fibre that can tolerate extreme temperatures, with the potential applications for aerospace and power generation. The sapphire optical fibre -can be used to measure the temperature inside engines. The researchers passed light through a tiny cross-section, one-hundredth of a millimetre in diameter, to make a sensor reflecting predominantly a single wavelength of light to measure temperature of the engine. Using the data to adapt engine conditions in-flight has the potential to significantly reduce nitrogen oxide emissions and improve overall efficiency, reducing the environmental impact. The sapphire's resistance to radiation also gives applications in the space and fusion power industries.

[NUS partners to develop Green Tech](#)

The National University of Singapore (NUS) has entered into a Master Research Collaboration Agreement with Keppel Infrastructure Holdings Pte Ltd (Keppel Infrastructure), aimed at bolstering the corporation's low-carbon energy innovation and translational research and development of solutions in smart grid, renewables and clean energy, as well as decarbonisation technologies. The agreement will aim at creating, test-bedding, and scaling up the deployment of commercially viable innovations in distributed energy management, integration of solar photovoltaics (PV), thermal energy storage, electrical microgrids, as well as charging stations for electric vehicles (EVs) and vehicle-to-grid (V2G) trials. The selected projects are: (1) Smart AC/DC hybrid microgrid; (2) Novel EV charging strategies; (3) Innovative District cooling systems (DCS) and (4) Experimentation and laboratory proof-of-concept on enhanced seawater desalination pre-treatment technology for carbon dioxide sequestration and scalant removal.

[Nanoparticles prove effective against the yellow fever mosquito](#)

Researchers at Ohio State University may have found a way to squash the yellow fever mosquito in its juvenile stages. The study used a modified version of carbon black called Emperor 1800, which is often used to coat automobiles black. Carbon black and its safe use could help design a commercially available carbon nanoparticle (CNP) that is highly effective against insecticide-resistant mosquitoes. Tests were made of Emperor 1800 against two different strains of the yellow fever mosquito inside the lab, one extremely susceptible to typical chemical insecticides, and the other, extremely resistant to them. By applying the carbon black nanomaterials to the water during the earliest stages of the mosquito's life cycle, they were able to determine that CNPs kill mosquito larvae both quickly and efficiently. When first suspended in water, carbon black appeared equally toxic to larvae of insecticide-resistant and insecticide-susceptible mosquitoes, but the longer the carbon black was suspended in water before treating them, it became more toxic to the insecticide-resistant larvae. These new nanomaterials could be extremely beneficial to controlling the species when applied as a preventive treatment to mosquito breeding grounds. But before it can be utilized by the public,

carbon black needs to undergo rigorous safety testing for humans and the environment as a whole.

Polymer system could revolutionize drug delivery

Researchers at the University of Massachusetts Amherst recently announced that they have engineered a new class of material, called a 'polyzwitterionic complex,' or 'pZC,' which is able to both withstand the harsh acidic conditions of the stomach and then dissolve predictably in the comparatively gentle environment of the small intestine. This property could enable use of pZCs for drug delivery. In their system, two types of charged polymers, a polyzwitterion and a polyelectrolyte, associate to form a protective droplet inside of which medications can travel. The pZC not only needs to be tough enough to withstand the highly acidic low pH stomach environment, but it also has to disassemble in the much gentler, neutral conditions of the small intestine. These materials could enable more efficient delivery of the right dosages of drugs, and increase the number of medications that can be taken orally.

Novel molecule for nickel as a 'greener' photocatalyst

Researchers from University of Illinois have developed a completely novel tridentate ligand that coordinates with nickel to create a catalyst that can be directly activated by light to form a carbon-oxygen bond without the use of an additional photocatalyst. C-O bonds are prevalent in many natural products, pharmaceuticals, and agrochemicals. The new class of tridentate pyridinophane ligands (RN3) can lead to the development of new nickel catalysts and are a practical platform for detailed mechanistic studies of other nickel-catalyzed chemical reactions. The novel system could lead to catalysts based on cheaper, more abundant nickel rather than more expensive precious metals.

AI may detect earliest signs of pancreatic cancer

An artificial intelligence (AI) tool developed by Cedars-Sinai investigators accurately predicted who would develop pancreatic cancer based on what their CT scan images looked like years prior to being diagnosed with the disease. The findings may help prevent death through early detection of one of the most challenging cancers to treat. The AI tool was trained to analyze these pre-diagnostic CT images from people with pancreatic cancer and compare them with CT images from 36 people who didn't develop the cancer. The investigators reported that the model was 86% accurate in identifying people who would eventually be found to have pancreatic cancer and those who would not develop the cancer. The AI model picked up on variations on the surface of the pancreas between people with cancer and healthy controls. These textural differences could be the result of molecular changes that occur during the development of pancreatic cancer. The investigators are currently collecting data from thousands of patients at healthcare sites throughout the U.S. to continue to study the AI tool's prediction capability.

MIT develops paper-thin loudspeaker

Massachusetts Institute of Technology engineers created an ultrathin loudspeaker that can turn any rigid surface into a high-quality, active audio source. The fabrication process can enable the thin-film devices to be produced at scale. This thin-film loudspeaker produces sound with minimal distortion while using a fraction of the energy required by a traditional loudspeaker.

The hand-sized loudspeaker the team demonstrated, which weighs about as much as a dime, can generate high-quality sound no matter what surface the film is bonded to. To achieve these properties, the researchers used a simple fabrication technique of three basic steps. Used this way, the thin-film loudspeaker could provide active noise cancellation in clamorous environments, such as an airplane cockpit, by generating sound of the same amplitude but opposite phase; the two sounds cancel each other out. The flexible device could also be used for immersive entertainment, perhaps by providing three-dimensional audio in a theater or theme park ride. And because it is lightweight and requires such a small amount of power to operate, the device is well-suited for applications on smart devices where battery life is limited.

[New era of Mitochondrial Genome Editing](#)

Researchers from the Institute for Basic Science developed a new gene-editing platform called transcription activator-like effector-linked deaminases, or TALEs. TALEs are base editors capable of performing A-to-G base conversion in mitochondria. The researchers created TALEs by fusing three different components. One interesting aspect of TALEs is TadA8e's ability to perform A-to-G editing in mitochondria, which possess double-stranded DNA (dsDNA). In addition to tweaking the components of TALEs, the researchers also developed a technology that is capable of both A-to-G and C-to-T base editing simultaneously, as well as A-to-G base editing only. The group demonstrated this new technology by creating a single cell-derived clone containing desired mtDNA edits. In addition, TALEs were found to be neither cytotoxic nor cause instability in mtDNA. Also, there was no undesirable off-target editing in nuclear DNA and very few off-target effects in mtDNA. The researchers now aim to further improve the TALEs by increasing the editing efficiency and specificity, eventually paving the way to correct disease-causing mtDNA mutations in embryos, fetuses, newborns, or adult patients. The group is also focusing on developing TALEs suitable for A-to-G base editing in chloroplast DNA, which encodes essential genes in photosynthesis in plants.

COVID-19

COVID-19 (WORLD)

[COVID-19 can directly infect and damage human kidney cells](#)

According to biomedical engineers and virologists at Duke University, the virus that causes COVID-19, SARS-CoV-2, can directly infect a specialized type of kidney cell via multiple binding sites and hijack the cell's machinery to replicate, causing injury and COVID-19-associated kidney disease. The discovery helps explain why acute kidney injury is observed in patients with severe COVID-19. The team observed that the live version of the virus had a strong affinity for podocytes. Once the virus infected the cells, it damaged the podocytes, causing their long, finger-like structures, which help filter blood, to retract and shrivel. If the injuries to the cells were too severe, the podocytes would die. Beyond the structural damage, the virus could hijack the machinery of the podocytes to produce additional viral particles that could spread to infect additional cells. Now the team hopes to expand their work to study how the different variants of SARS-CoV-2 behave in kidney cells.

[COVID-19 antibody measurement technology to rapidly assess virus blocking efficacy](#)

Researchers at George Mason University have developed the hybrid alphavirus-SARS-CoV-2 pseudovirus system, that can quickly and quantitatively measure the ability of one's antibodies to block SARS-CoV-2 and its variants in vitro. The pseudovirus system can robustly express reporter genes in cells within hours to rapidly measure neutralizing antibodies. Ha-CoV-2 pseudovirus was utilized against the COVID-19 virus and its variants including Alpha, Delta, and Omicron, as well as the currently emerging omicron BA.2 variant. This cutting-edge technology reduces a typical two-day process down to a few hours and can measure antibodies' strength to neutralize SARS-CoV-2 or a particular variant. The technology could have a multitude of virus monitoring applications. Currently, the team is applying the technology to measure neutralizing antibodies from immune-compromised people after their vaccination, in hope to gain detailed information so that educated decisions can be made regarding the need for booster shots.

Researchers detect coronavirus particles with 'slow light'

Scientists from the Gwangju Institute of Science and Technology have developed a novel biosensing platform to detect and quantify viral particles using a simple optical microscope and antibody proteins. Existing methods for detecting and diagnosing COVID-19 are either expensive and complex or inaccurate. The key element of GTIP is the Gires-Tournois "resonance structure," a film made from three stacked layers of specific materials that produce a peculiar optical phenomenon called "slow light." When nanometer-sized virus particles affect the resonance frequency of GTIP in their immediate vicinity it causes a vivid color change in the reflected light. This when viewed through the microscope, shows the virus particle clusters like "islands" of a different color compared to the background. To ensure selectivity, the researchers coated the top layer of GTIP with antibody proteins specific to SARS-CoV-2. Since optical microscopes are widely available, the method could become a valuable diagnostic and virus research tool. Furthermore, GTIP can be applied in case of any other binding agents to visualize all kinds of particles that interact with light.

Long-COVID among 30 percent of those treated for COVID-19

University of California - Los Angeles Health Sciences research finds that 30 percent of people treated for COVID-19 developed Post Acute Sequelae of COVID-19 (PASC), most commonly known as 'Long COVID.' People with a history of hospitalization, diabetes, and higher body mass index were most likely to develop the condition, while those covered by Medicaid, as opposed to commercial health insurance, or had undergone an organ transplant were less likely to develop it. Of the people with long COVID studied, the most persistent symptoms were fatigue and shortness of breath (31 percent and 15 percent, respectively) in hospitalized persons, and loss of sense of smell (16 percent) in outpatients. Potential weaknesses in the study include the subjective nature of how patients rated their symptoms, the limited number of symptoms the researchers evaluated, and limited information about patients' pre-existing conditions. This study illustrates the need for further studies of Long COVID disease trajectory.

COVID-19 Pneumonia increases dementia

A new study from the University of Missouri School of Medicine shows patients hospitalized with COVID-19 pneumonia have a higher risk of developing dementia than those with other types of pneumonia. They analysed data from 1.4 billion medical encounters prior to July 31, 2021 and selected patients hospitalized with pneumonia for more than 24 hours. Among

10,403 patients with COVID-19 pneumonia, 312 (3 percent) developed new onset dementia after recovering, compared to 263 (2.5 percent) of the 10,403 patients with other types of pneumonia diagnosed with dementia. According to the study, the risk of new onset dementia was more common in COVID-19 pneumonia patients over the age of 70. The type of dementia seen in survivors of COVID-19 infection mainly affects memory, ability to perform everyday tasks and self-regulation. Language and awareness of time and location remained relatively preserved. The median time interval between infection and dementia diagnosis was 182 days for COVID-19 patients. The study only included new onset dementia associated with hospital admission during a short follow-up period. The findings suggest a role for screening for cognitive deficits among COVID-19 survivors.

COVID-19 (INDIA)

[Plasma based green disinfectants can limit spread of COVID-19](#)

A team of scientists from the Life Sciences and Physical Sciences divisions from the Institute of the Advanced Study in Science and Technology (IASST) has demonstrated that the plasma generated by cold atmospheric pressure (CAP) has the potential to deactivate SARS-CoV-2 spike protein. The scientists passed plasma forming gases such as Helium, Argon, and Air through a high voltage electric field which led to the formation of a stable plasma with a mixture of ions, and electrons emitting a pink glow of CAP inside the reaction chamber. The research shows that short-lived highly reactive oxygen and nitrogen species (ROS/RNS) generated in the plasma led to complete deactivation of the SARS-CoV-2 Spike protein occurring within 2 min of CAP treatment. The RT-PCR analysis has also established that CAP can deactivate the RNA of the SARS-CoV-2 virus. They showed that the CAP, a plasma-based disinfection method, is a better alternative to environmentally hazardous chemical-based decontamination methods

INDIA – SCIENCE & TECHNOLOGY

[Curcumin used to create highly efficient electrode](#)

A team of researchers from India and the United States has combined curcumin, a molecule that was first extracted from the roots of *Curcuma longa* (turmeric), and gold nanoparticles to create an electrode that requires 100 times less energy to efficiently convert ethanol into electricity. Ethanol, an alcohol made from corn or other agricultural-based feeds, is safer and easier to transport than hydrogen because it is a liquid. The research team focused on the fuel cell's anode, where the ethanol or other feed source is oxidized. Instead of using conducting polymers, metal-organic frameworks, or other complex materials to deposit the gold on the surface of the electrode, the researchers used curcumin to decorate gold nanoparticles to stabilize them, forming a porous network around the nanoparticles. The next step is to scale the process up and work with industrial partners to actually make the fuel cells and build stacks of fuel cells for the real applications. The electrode's unique properties could lend itself to future applications in sensors, supercapacitors and more, See details here: <https://www.sciencedirect.com/science/article/abs/pii/S2211285522000519>.

[ISRO-IISc develop prototype of bacteria-infused bricks for Martian, lunar soil](#)

A team of researchers from the Indian Institute of Science (IISc), Bengaluru has collaborated

with the Indian Space Research Organisation (ISRO) to develop a prototype for bricks made of Martian and lunar soil, using bacteria, nickel chloride, guar gum, and urea. The new method demonstrates a proof of concept for a sustainable way to build bricks for construction in situ, on Mars and the Moon, using available soil known as regolith. For Martian soil, the study was performed on a standard material that simulates this for research, called Mars soil simulant, procured from Florida. For the moon's soil, a lunar soil simulant was used, manufactured by ISRO. The mixture for the brick is a slurry made out of the respective soil simulant and guar gum, a fibre extracted from the guar bean that's native to the Indian subcontinent. This gum and nickel chloride were mixed along with the bacterium *Sporosarcina pasteurii* to increase the strength of these biologically grown bricks. The advantage of the new method is reduced porosity of the bricks, which is achieved by bacteria seeping into pores and binding the brick together with mineralised proteins.

[IISER physicists develop new method to retrieve encoded structure in light](#)

A group of physicists from Pune has demonstrated a novel experimental protocol that optimises retrieval and transfer of optical information and energy at the scale of a microchip. Among the many uses of this method can be in optimising fibre and optical communications used for day-to-day internet and telecommunication-based services. With electronics and communication devices getting downsized with each passing day, information decoding technologies that can act at microchip or smaller levels are required. Information can be encoded and transmitted using structured light. World over, research to develop methods to store and retrieve this information is currently on. The team experimentally retrieved spin angular momentum and orbital angular momentum of light through scattering using silver nanowire. In their experimental configuration, silver nanowires facilitate better interaction with light due to their metallic nature. This can be best suitable in decoding the information, that too, at the microchip levels. It can be used to read and retrieve information at micro scales

IN BRIEF

[Highly efficient Heat Engine](#)

Researchers at MIT have developed a new Thermo Photo-Voltaic (TPV) system to capture higher-energy photons from a higher-temperature heat source, thereby converting energy more efficiently. The new cell is fabricated from three main regions: a high-bandgap alloy, which sits over a slightly lower-bandgap alloy, underneath which is a mirror-like layer of gold. The first layer captures a heat source's highest-energy photons and converts them into electricity, while lower-energy photons that pass through the first layer are captured by the second and converted to add to the generated voltage. Any photons that pass through this second layer are then reflected by the mirror, back to the heat source, rather than being absorbed as wasted heat. Over a range of 1,900 to 2,400 degrees Celsius, the new TPV cell maintained an efficiency of around 40 percent. On average, steam turbines reliably convert about 35 percent of a heat source into electricity, but require complex moving parts resistant to heat damage and fatigue.

[Modified CAR T therapy offers hopes for treating acute myeloid leukemia](#)

Massachusetts General Hospital (MGH) researchers have developed a novel treatment strategy that has the potential to bring the life-saving benefits of chimeric antigen receptor T-cell therapy (CAR T) to patients with acute myeloid leukemia (AML) the most common form of leukemia in adults. The method involves a combination of drug therapy to expand the number of targets on tumor cells, and an engineering approach to help the therapy adhere

more tightly and durably to those targets. The team found that CAR T effectiveness against AML in animal models was enhanced by using the FDA-approved AML drug azacitidine which increased the number of CD70 antigens on cancer cell surfaces. In addition, the CAR used in this study relies on a kind of a natural molecular bond known as a ligand to bind tightly to the antigen, thereby avoiding the possibility that the immune system would recognize the tumor-killing machinery as foreign and try to reject it. Also the team modified CAR T cell to enable it to bind tighter to the tumor and kill it more effectively. The team hopes to offer the new CAR T cell product to patients with acute myeloid leukemia soon.

[Converting seawater to drinking water](#)

MIT researchers have developed a portable desalination unit, weighing less than 10 kilograms, that can remove particles and salts to generate drinking water. The suitcase-sized device, which requires less power to operate than a cell phone charger, can also be driven by a small, portable solar panel, which can be purchased online for around \$50. It automatically generates drinking water that exceeds World Health Organization quality standards. The device relies on a technique called ion concentration polarization (ICP), which applies an electrical field to membranes placed above and below a channel of water. The membranes repel positively or negatively charged particles -- including salt molecules, bacteria, and viruses -- as they flow past. The charged particles are funneled into a second stream of water that is eventually discharged. The process removes both dissolved and suspended solids, allowing clean water to pass through the channel. Since it only requires a low-pressure pump, ICP uses less energy than other techniques. The researchers incorporated a second process, known as electrodialysis, to remove remaining salt ions. The optimal setup includes a two-stage ICP process, with water flowing through six modules in the first stage then through three in the second stage, followed by a single electrodialysis process. This minimized energy usage while ensuring the process remains self-cleaning. The researchers also created a smartphone app that can control the unit wirelessly and report real-time data on power consumption and water salinity. In field tests, in about half an hour, the device had filled a plastic drinking cup with clear, drinkable water. The prototype generates drinking water at a rate of 0.3 liters per hour, and requires only 20 watts of power per liter.

[Inexpensive paper sensor accurately identifies pathogenic bacteria](#)

University of Nebraska scientists have engineered an inexpensive, paper-based test that can rapidly identify multiple types of bacteria. They used a complex blend of microbiology, chemistry, and artificial intelligence (AI) to create a testing platform that is suitable for use in remote low-resource environments such as field hospitals and rural clinics. The "simple" platform, the size of a 3 x 5 card, the paper sensor is "arrayed" with a grid of small circles on which the bacterial specimens to be tested are applied. The research team designed and synthesized fluorescent dyes that can "sense" the subtle biochemical differences of each type of bacterium and turn those differences into different fluorescent signals. Four different fluorescent dyes are dried onto four circles on the array comprising a single test. A bacterial specimen, is placed on each of the four circles and the dyes are activated with ultraviolet light resulting in the four dyes each sending out five fluorescent signals for a total of 20 fluorescent signals per test. A fluorescent plate reader scans the 20 fluorescent signals, which vary depending on the interaction of the dyes with the outer membrane of the bacteria. A state-of-the-art AI program—in the form of an artificial neural network—was trained to recognize the subtle but specific pattern of fluorescent intensities created by each type of bacteria. The result is a "signature" fluorescent pattern that is transferred from the reader into the artificial neural network program, which identifies the type of bacteria. The team tested the system using a collection of 16

bacterial species. The system correctly identified the 16 species more than 90% of the time, that could provide a healthcare worker in the field valuable information about the specific bacteria in an infected individual allowing for precise, prompt antibiotic treatment. The test also determined whether the bacteria was gram positive or negative with 95% accuracy. Every aspect of the test was designed for potential use in even the most remote parts of the world, Photolithography was used to "photo-stamp" the grid of circles onto the paper card—a rapid and inexpensive way to manufacture thousands of cards. In testing the cards remained stable for up to six months, making them ideal for shipping and distribution to remote areas.

RESOURCES AND EVENTS

[WHO Global Centre for Traditional Medicine launched in India](#)

Prime Minister Narendra Modi on 19 April laid the foundation stone of the World Health Organization (WHO) Global Centre for Traditional Medicine in Jamnagar, India. Prime Minister of Mauritius Pravind Kumar Jugnauth and Dr Tedros Ghebreyesus, Director-General, World Health Organization (WHO) were present. The Global Centre for Traditional Medicine (GCTM) will be the first and only global outpost centre for traditional medicine across the world. It will emerge as an international hub of global wellness. The WHO and the Government of India, signed an agreement on 25 March to establish the Centre in Gujarat. A big database of traditional medicines from every nation is among the key features of the mega centre. The database will help in properly documenting traditional medicines and act as a global repository. This facility, supported by an investment of USD 250 million from India, aims to harness the potential of traditional medicine from across the world through modern science and technology to improve health. The GCTM shall focus on four main strategic areas: evidence and learning; data and analytics; sustainability and equity; and innovation and technology to optimize the contribution of traditional medicine to global health. The Centre aims to channel the potential of traditional medicine by integrating it with technological advancements and evidence-based research. While Jamnagar will serve as the base, the new Centre aims to engage and benefit the world.

[India has signed documents on space cooperation with 60 countries](#)

India's Department of Space is currently working with nations like Russia, the US, France, Japan and Israel in the domain of space science and technology. This is in line with the state-run Indian Space Research Organisation's (ISRO) efforts towards pursuing cooperation with space agencies of other nations, by carrying out joint missions, sharing expertise in applications of space technology, organising International events in India, etc. Till date, India has signed space cooperation documents with agencies of 60 countries and five multinational bodies, revealed the Department of Space Annual Report for 2021-22 which lists out some of the major areas of cooperation between ISRO and foreign space agencies. These include the NASA-ISRO Synthetic Aperture Radar (NISAR) mission, training of Indian astronaut candidates at Gagarin Cosmonaut Training Centre, Russia, Human Spaceflight and Space Situational Awareness (SSA) activities with France, and cooperation with JAXA of Japan in lunar exploration, satellite navigation and Earth observation. ISRO and the European Space Agency (ESA) are working on network and operations support for Indian missions, such as Chandrayaan-3, Aditya L1, etc. India-Australia space cooperation seeks to establish ISRO's transportable ground station at Australia's Cocos-Keeling island (CKI) for Gaganyaan mission. ISRO and Israel Space Agency (ISA) are discussing ISA's Electric Propulsion System (EPS) in ISRO's small satellite.

Canada announces a new innovation agency.

The Canadian government has announced that it will invest Can\$1 billion (about US\$780 million) over the next five years to create a funding agency focused on innovation in science and technology. The unit will be modelled on innovation agencies in Finland and Israel. The budget also includes a number of other innovation measures, including a Can\$15-billion Canada Growth Fund aimed at stimulating private investment in low-carbon industries and restructuring supply chains. A 2018 initiative created innovation ‘superclusters’: five industry-led public-private collaborations scattered around the country that focus on specific areas, such as artificial intelligence and ocean-based technologies, in which Canada is globally competitive. The superclusters have had mixed success so far, but were awarded Can\$750 million in the fiscal year 2022 budget to continue their work for another six years. The Canadian government plans to announce more details about the agency before the end of the year, after further consultations with stakeholders.

SCIENCE POLICY AND DIPLOMACY

Indo-Finnish Virtual Network Centre on Quantum Computing 18/

Finland Minister of Economic Affairs, Mika Lintila and Union Minister of State (Independent Charge) Science & Technology, Dr Jitendra Singh and announced the decision to establish an Indo-Finnish Virtual Network Centre on Quantum Computing. India is keen to develop research collaborations with Finnish R&D institutions and technology collaboration with Finnish Industry especially focusing on the following technology domains and application of Quantum Computing in areas such as: Sustainable Energy Technologies (generation, conversion, storage and conservation), Environment and Clean Technologies, Biobased Economy, BioBanks and Bio based materials for different applications, Water and Marine Technologies, Food & Agri Technologies, Affordable Healthcare (including, Pharmaceuticals and Biomedical Instrumentation), Technologies for Advanced Manufacturing, Integration of AI and Machine Learning in all domains. Delegates from India and Finland discussed possible areas of cooperation in quantum computing and a roadmap for the collaborative virtual Centre of Excellence (CoE) that has been planned to be set up.

India-EU Trade and Technology Council Launched

India and the European Union (EU) on Monday launched the India-EU Trade and Technology Council, a strategic mechanism to tackle challenges at the nexus of trade, trusted technology, and security. The agreement on launching the council was reached at a meeting between Prime Minister Narendra Modi and European Commission President Ursula von der Leyen. The body will also deepen cooperation between the two sides on trade and technology. The Trade and Technology Council will provide the political steer and the necessary structure to operationalise political decisions, coordinate technical work, and report to the political level to ensure implementation and follow-up in areas important for the sustainable progress of the Indian and European economies. Establishing the EU-India Trade and Technology Council is a key step towards a strengthened strategic partnership for the benefit of all peoples in the EU and India.

EU steps up solar power cooperation with India

During a visit to Delhi, Commission president Ursula von der Leyen made moves to help both India and the EU reduce reliance on Chinese-made solar panels. She stressed the need to secure global supply chains for the materials that make solar panels. Next month, the EU will present a new solar strategy, she confirmed. India is also seeking to expand its solar manufacturing capacity, as it relies on China for imports. India and the EU already have a history of cooperating on solar power. In 2015, France and India founded the International Solar Alliance (ISA) to drive deployment of solar power, particularly in poorer countries.

India and UK Cyber Partnership for Vision 2030

India and the United Kingdom reiterated commitment to a partnership for vision 2030 for an open, accessible and peaceful cyberspace that will bring a more secure Indo-Pacific. The cyberspace would be a digital living bridge that allows citizens, students and businesses of the two countries to interact and promote shared prosperity. In May 2021, India and UK agreed to an Enhanced Cyber Security Partnership. Through the recent commitment, both countries outline their commitment to a joint programme on cyber governance, deterrence, resilience and capacity building. India and the United Kingdom are working in close cooperation under the Counter Ransomware Initiative. They will continue to work closely with industry and through international standards organisations to ensure Internet of Things connectable devices are secure by design. Efforts will be made to increase the availability and diversity of cyber skills in our workforce and promote people-to-people and educational links to enhance awareness in the domain of cyberspace. They sought to work in collaboration with industry to deliver shared responsibilities to improve online safety and protect users online, working together with multi-stakeholders.

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