

NEWSPAPER HIGHLIGHT

In the 1966 Hollywood film, *Fantastic Voyage*, a group of scientists enter the bloodstream of a colleague to remove a blood clot from his brain, by shrinking themselves and their submarine, *Proteus*, to the size of a cell. This element of science fiction is on its way to becoming a reality, as recent research aims at moving microbots into the bloodstream to deliver drugs. Speaking of this work, Varun Sridhar from Max Planck Institute for Intelligent Systems (MPIIS), Stuttgart, Germany, says, "Our work has shown that it is possible to use light as a fuel to move microbots in realbody conditions with intelligent drug delivery that is selectively sensitive to cancer cells."

The twentieth century gave us new materials synthesised in the lab. We can now have "designer molecules," where we formulate a wish list of properties for material (say, desired tensile strength as well as flexibility) and seek to not merely discover, but also "construct," molecules that exhibit such properties. Generating molecules computationally involves the use of Artificial Intelligence (AI) and machine learning algorithms that require large datasets to train on. Now, researchers from Massachusetts Institute of Technology (MIT) and International Business Machines (IBM) have together devised a method to generate molecules computationally which combines the power of machine learning with what are called graph grammars.

The grand explanation physicists use to describe how the universe works may have some major new flaws to patch, after a fundamental particle was found to have more mass than scientists thought. The physicists at the lab crashed particles together over ten years and measured the mass of 4 million W bosons. These subatomic particles are responsible for a fundamental force, and they exist for only a fraction of a second before they decay into other particles.

Spinosaurus and its kin had dense bone walls similar to a penguin suggesting that it spent lots of time in the water and hunted in it. Researchers compared the bones of spinosaurids with those from an array of living and extinct marine mammals, aquatic reptiles and water loving birds. They found that Spinosaurus could swim underwater.

ARCTIC COUNCIL

1. Established in 1996, the Arctic Council is a leading high-level intergovernmental forum that addresses issues faced by governments in the region and the indigenous people of the Arctic. It promotes cooperation, coordination and interaction among the Arctic States, Arctic Indigenous peoples and other Arctic inhabitants on common Arctic issues.

2. Members - As per the Ottawa Declaration, 8 states are defined as Members of the Arctic Council. The members are Canada, Denmark, Finland, Norway, Iceland, Russia, Sweden and the USA. Besides these, 6 organizations representing the indigenous people of the Arctic region is granted the status of permanent participants. Other countries or national groups are considered observer states (38).

3. All decision-making happens through consensus between the 6 members, and in consultation with the permanent participants. The 6 Working Groups carry out the Council's activities. Arctic Contaminants Action Program. Arctic Monitoring and Assessment Programme. Conservation of Arctic Flora and Fauna. Emergency Prevention, Preparedness and Response. Protection of the Arctic Marine Environment Sustainable Development Working Group.

4. **India is currently an Observer member on the Arctic Council. Recently, the government unveiled India's Arctic policy document. It says India aspires to have a permanent presence, more research stations and establish satellite ground stations in the Arctic region.**

BANARSI PASHMINA

1. The premium Pashmina products prepared by the highly skilled Khadi weavers of Varanasi were launched by Chairman of the Khadi and Village Industries Commission (KVIC). This is for the first time that Pashmina products are being produced outside the Himalayan highlands of Leh-Ladakh and Jammu & Kashmir.

2. KVIC will be selling the "Made-in-Varanasi" Pashmina products through its showrooms, outlets and through its online portal. The journey of Pashmina production in Varanasi begins with collection of raw Pashmina wool from Ladakh and which is brought to Delhi for de-hairing, cleaning and processing.

3. The processed wool, in the form of roving, is brought back to Leh where it is handspun into yarn by women Khadi artisans on modern Charkhas provided by KVIC. The finished yarn is then sent to Varanasi where it is woven by trained Khadi weavers into final Pashmina products.

GURU NABHA DASS

1. Punjab government announced gazetted holiday on the birth anniversary of Guru Nabha Dass, a 16th century saint, taking it out from list of restricted holidays. A restricted holiday is a list of holidays additional to the gazetted list from which a government employee can choose two to observe each year.

2. Guru Nabha Dass was born in 1537 at village Bhadrachalam on the bank of Godavari River in Khammam district, which is in Telangana. He belonged to Mahasha or doom or dumna community, which is one of the Schedule Caste communities. People from this community are also known as Nabhadassias, who are known for making baskets and grain storage containers with bamboo.

3. Nabha Dass was 5 years old when his parents passed away. Two religious gurus - Agar Dass and Keel Dass - who were passing through his village took the orphan child to a temple at Ghalta Dham, which is now main pilgrimage of Nabhadassias, at Jaipur (Rajasthan). Since childhood Guru Nabha Dass, whose original name was Narayan Dass, had an inclination towards spirituality.

4. **Guru Nabha Dass wrote 'Bhagatmal' in 1585. It has the life history of around 200 saints ranging from the Satyug to the Kalyug era. He died in 1643. Connection with Punjab - Guru Nabha Dass used to visit village Pandori in Punjab where people of Doom community live.** 5. Some gurus of the

Ozone has been found to have a major impact on climate change. A study published in Nature Climate Change showed that the levels of ozone in the upper and the lower atmosphere were responsible for nearly one third of the warming of waters, which borders Antarctica in the twentieth century.

Six personnel of the Border Security Force (BSF) sustained injuries when they crossed a herd of wild elephants during an anti-Naxal training session in the Chandaka Wildlife Sanctuary in Odisha. As part of the joint training session with the Special Operation Group (SOG), Odisha's elite anti-Naxal force, BSF personnel were at the wildlife sanctuary on Friday night. The training session was meant for acclimatising the personnel to a dense forest at night.

Digital out of home (DOOH) media has the potential to turn the out of home advertising industry on the head if its true potential is harnessed, said Shripad Ashtekar, CEO and cofounder, Signpost India Pvt. Ltd., a DOOH enterprise. "Each DOOH asset supported by artificial intelligence (AI) can become a virtual point of sale with hyperlocal customised communication, targeting a wide spectrum of clients for brands, and can be scaled instantaneously," he said.

The Indian Sugar Mills Association (ISMA) estimates sugar production this season, which will end in September, to be 350 lakh tonnes, after considering 34 lakh tonnes of sugar equivalent for ethanol production.

India may be currently facing a huge scramble for digital talent, but the good news is that the country is well placed with a lowest tech talent demand supply gap when compared to major economies including the U.S., U.K. and China, said industry body Nasscom. "India's tech talent demand supply gap at 21.1% is the lowest compared to other major economies."

S&P lowered Russia's foreign currency ratings to "selective default" on increased risks that Moscow will not be able and willing to honour its commitments to foreign debtholders. Facing waves of sanctions over its invasion of Ukraine, Russia could face its first sovereign external default in over a century after it made arrangements to make an international bond repayment in rubles this week, even though the payment was due in dollars.

The ancient Greeks called the plant dye indigo by a name which is pronounced as indikón and means Indian. The Latin name, used by the

community also used to live there. Neighbouring Himachal Pradesh and Jammu states also have a sizeable presence of the community. Kullu Dussehra is celebrated for a week on the directions of Guru Nabha Dass.

BUCHA MASSACRE

1.Ukrainian President accused Russian troops of committing "the most terrible war crimes" since World War II in Bucha, Ukraine. More than 300 bodies have been found in Bucha, a Kyiv suburb, some with their hands bound, flesh burned, and shot in the back of the head. Bucha is a town located about 25 km to the northwest of Kyiv.

2.The discoveries have drawn comparisons with the killings of civilians in this area during World War II. Between the 1st Battle of Kyiv (1941) and the 2nd Battle of Kyiv (1943) when the Red Army started to push back the Germans from Ukraine, the area around the Ukrainian capital saw the "Holocaust by bullets".

3.Both the expressions 'genocide or war crimes' have been used freely in outraged Ukrainian and Western descriptions of the atrocities in Bucha. Whether these incidents fit those definitions is important because of the international community's obligation to respond to them.

TOUR OF DUTY SCHEME

1.The Department of Military Affairs has finalised the "Tour of Duty (ToD)" scheme - a radical proposal for future recruitment to the armed forces. Under this scheme, the youngsters will be recruited as soldiers only for 3 to 5 years in the backdrop of the urgent need to curb the ballooning salary & pension bills that are badly impacting military modernization.

2.The 12-lakh strong Army was finalizing the radical ToD proposal for both officers and jawans, which would not entail any pensionary benefits being given to them. The scheme, which was being pushed by the late Chief of Defence Staff General Bipin Rawat, is likely to be applicable to the Indian Air Force (IAF) and Indian Navy as well.

3.But entry at the officer-level under the ToD scheme is not on the cards as of now. ToD scheme, which is likely to be called the "Agnipath" recruitment, is likely to be launched on an experimental basis first.

4.But eventually, all soldiers could be recruited under this model. While 25% of them would serve for three years and 25% for five years, the remaining 50% would serve for the full term till they reach the retirement age.

BAIJAYANT PANDA COMMITTEE

1.It is a committee constituted by the Ministry of Defence constituted a High Level Expert Committee for a comprehensive review of National Cadet Corps (NCC). Objectives of the Committee: Committee is to suggest measures to empower NCC cadets to contribute more effectively towards nation building.

2.To propose ways for gainful engagement of NCC Alumni for betterment of the organization. To recommend best practices of similar international youth organisations for inclusion in NCC curriculum.

KUTHIRAN TUNNEL

1.It is Twin-tube tunnel at Kuthiran in Thrissur District of Kerala state in India. It is located on National Highway 544, owned and operated by National Highways Authority of India.

2.It is Kerala's first-ever tunnel for road transport and South India's Longest 6-lane road tunnel. The 1.6 km long tunnel is designed through Peechi- Vazahani wildlife sanctuary.

CAG'S AUDIT OF UIDAI

1.CAG has presented its performance audit of Aadhaar's regulator, Unique Identification Authority of India (UIDAI). It was carried out over a four-year period between FY2015 and FY2019. CAG's audit portrays an unsatisfactory picture of the systems and processes in UIDAI.

2.Issues highlighted by the Report: **Issue of duplicate Aadhaar.** Lack of oversight of subcontractors: Many failed to get their operations audited annually. UIDAI neither has granular data nor is it able to pinpoint the cause of failure. No Documents for Proof of Residency: UIDAI has not prescribed any specific proof/document or process for confirming whether an applicant has resided in India for the specified period.

3.**Faulty Enrolment Process:** UIDAI appeared to have charged

Romans, was indicum, from where it mutated to indigo in English. The dye was highly valued, from royalty to militaries (as in navy blue) and came from a tropical genus of plants, Indigofera, some of which were native to the Indian subcontinent.

With a number of companies across the world proposing 4 day workweek for employees, a report has revealed that a majority of employers in India strongly agree that this model will help in reducing stress level. Over 60% of the employers strongly agree that the new 4day workweek model will be successful in uplifting the overall morale of the organisation with job satisfaction and worklife balance, helping to reduce stress and anxiety levels, HR Solutions Genius Consultants said in a report. However, 27% of the employers who participated in the survey said they were not sure of its implications on organisations' productivity.

people for biometric updates when poor quality data was fed in during enrolment. UIDAI did not take responsibility for poor quality biometrics.

4.Bal Aadhar: The audit was also critical of UIDAI's move to issue Aadhaar cards to children and newborns without biometrics under an initiative known as Bal Aadhaar. This needs to be reviewed because anyway after 5 years, a child has to apply for new regular Aadhaar. Issues related to data security.

5.Recommendations: Prescribe a Procedure for Self Declaration. Tighten the Service Level Agreement (SLA) parameters of Biometric Service Providers (BSPs). Explore Alternate Ways to Capture Uniqueness of Biometric Identity for Minor. Proactive Steps to Identify and Fill the Missing Documents. Frame a Suitable Data Archival Policy.