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Wed, 07 Aug 2024

DRDO Shares Biodegradable Packaging Tech with 40 Industries

The Defence Research and Development Organisation (DRDO) has shared a technology used to make biodegradable packaging products using PBAT, a biodegradable polymer derived from petroleum products or plant oils, with over 40 industries free of cost. Dr. K Veerabrahmam, scientist, DRDO and his team developed this technology. PBAT-based biodegradable packaging offers an eco-friendly alternative without compromising on quality. These bags decompose within three months, leaving no harmful residue. The production cost is about Rs 160 to 180 per kg compared to regular polyethylene bags costing Rs 140 per kg. "DRDO and its partners aim to scale up production and distribution. This approach ensures that the benefits of this eco-friendly solution reach a broad audience," said Veerabrahmam.

The bags are now used for distributing Tirupati laddus. DRDO chairman Satish Reddy, along with Tirumala Tirupati Devasthanam (TTD) executive officer Dr.KS Jawahar Reddy and additional EO AV Dharma Reddy inaugurated an exclusive sale counter at Tirumala. This pilot serves as a model for further implementation in tourist destinations, coastal areas, and other regions. Biodegradable materials can be used for medical waste bags, aprons, garbage bags, nursery bags, shrink films, and packing films. The patent of this technology is in progress, a release said.

<https://www.deccanchronicle.com/southern-states/tehrangana/drdo-shares-biodegradable-packaging-tech-with-40-industries-1814691>



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This recycling firm collaborates with DEAL-DRDO, IIT Delhi for development of nano composites

Recycling firm Vikas Lifecare has entered into a strategic collaboration with the Defence Electronic Applications Laboratory (DEAL), a premier laboratory under the Defence Research and Development Organisation (DRDO), Dehradun, the Indian Institute of Technology (IIT), New Delhi, and the CSIR-National Physical Laboratory (CSIR-NPL), Delhi for development of Nano Composites. This partnership aims to advance the development of Nano composites for EMI shielding applications, targeting a broad range of commercial, military, scientific electronic devices, and communication instruments. To formalize this collaboration, a Non-Disclosure Agreement (NDA) has been signed between all parties involved.

Objective of the Collaboration

The primary objective of this NDA is to design and develop advanced carbon fiber and MWCNT/graphene nano ferrites composites specifically for EMI shielding applications. The focus will be on:

1. Design and Development: - Creation of nano composites using exfoliated graphite blended with MWCNT in a polymer matrix or carbon fibers polymer composites.

- Incorporation of Ag nanoparticles and Copper nanoparticles to enhance the electrical and thermal conductivity of the composites.

2. Optimization:

- Fine-tuning processing and material parameters to ensure the production of viable, high-performance nano composite products.

3. Applications:

- Development of materials for use in a wide array of commercial, military, and scientific electronic devices and communication instruments.

<https://www.zeebiz.com/india/news-this-recycling-firm-collaborates-with-deal-drdo-iit-delhi-for-development-of-nano-composites-306378>



Wed, 07 Aug 2024

India-Russia | Keeping an arms distance

India and Russia share decades of close strategic alliance. However, defence sales and military-technical cooperation—one of the pillars of the ‘special and privileged strategic partnership’—between the two nations have taken a backseat. In recent years, India has been reducing its reliance on Russian defence equipment and increasingly turning to western allies like the US and France as well as its domestic arms industry to meet its growing needs. This was evident during Prime Minister Narendra Modi’s two-day visit to Moscow on July 8 and 9 for the 22nd annual summit between the two nations. In the inaugural bilateral visit of his third term in office, PM Modi held both delegation-level talks and one-on-one discussions with President Vladimir Putin. On the back of bilateral trade reaching an all-time high of \$65.70 billion (Rs 55,040 crores) in 2023-24—largely due to India buying large amounts of Russian oil—the focus was on economic aspects. Matters relating to energy, trade, manufacturing, technology and fertilisers were discussed. Announcement of a big defence deal was missing.

The reasons for India’s diversification of defence procurement are manifold. There are valid concerns over Moscow’s ability to continue delivering spare parts and ammunition for India’s large inventory of Russian-origin military platforms when its arms industry is busy supplying materiel for the Ukraine war. Then there is the ongoing boost for India’s own defence industry under the government’s Make in India initiative, with more indigenous material being inducted than ever before. Finally, the need to partner with the West to counter an aggressive China flexing its muscles in the Indo-Pacific as well as on our northern borders has driven India to diversify its arms imports. India—the world’s largest buyer of arms—is reportedly concerned over the quality of some Russian equipment. Indeed, from 76 per cent in the 2009-13 period, Russia’s share in India’s arms imports dropped to just 36 per cent in the 2019-2023 period, according to the Stockholm International Peace Research Institute (SIPRI). Though India expects

to spend nearly \$100 billion (Rs 83,720 crores) on defence orders over the next decade, it is not contemplating any fresh, big-ticket purchases from Russia.

<https://www.indiatoday.in/magazine/defence/story/20240812-india-russia-keeping-an-arms-distance-2575646-2024-08-02>

THE ECONOMIC TIMES

Wed, 07 Aug 2024

India holds large strike corps exercise in Eastern Ladakh

Sources said Army Chief General Upendra Dwivedi is also scheduled to visit the exercise area to monitor the wargames and interact with the troops. India already has close to 50,000 troops in Eastern Ladakh, with units posted at the frontlines to counter Chinese deployments that took place in 2020.

India is conducting a large-scale strike corps exercise in Eastern Ladakh, with all elements including artillery, armoured and infantry troops taking part in the wargames. Being conducted in areas close to border flashpoints on the Line of Actual Control (LAC), the exercise will test the preparedness of troops that have been tasked with quickly maneuvering to the front in case of hostilities.

<https://economictimes.indiatimes.com/news/defence/india-holds-large-strike-corps-exercise-in-eastern-ladakh/articleshow/112327771.cms>

Science & Technology News

Wed, 07 Aug 2024

ISRO likely to launch Earth Observation Satellite-8 on August 15

The Earth Observation Satellite-8 (EOS-8) is likely to be launched on August 15, ISRO sources said on Tuesday. The EOS-8 will be launched by the Small Satellite Launch Vehicle (SSLV)-D3, it said.

“Most likely it will be launched on August 15 (Independence Day) from Sriharikota in [Andhra Pradesh](#),” sources told PTI. The primary objectives of the EOS-08 mission include designing and developing a microsatellite, creating payload instruments compatible with the microsatellite bus, and incorporating new technologies required for future operational satellites, [ISRO](#) said in a statement.

Built on the Microsat/IMS-1 bus, EOS-08 carries three payloads: Electro Optical Infrared Payload (EOIR), Global Navigation Satellite System-Reflectometry payload (GNSS-R), and SiC UV Dosimeter.

The EOIR payload is designed to capture images in the Mid-Wave IR (MIR) and Long-Wave IR (LWIR) bands, both during the day and night, for applications such as satellite-based surveillance, disaster monitoring, environmental monitoring, fire detection, volcanic activity observation, and industrial and power plant disaster monitoring.

The GNSS-R payload demonstrates the capability of using GNSS-R-based remote sensing for applications such as ocean surface wind analysis, soil moisture assessment, cryosphere studies over the Himalayan region, flood detection, and inland waterbody detection.

The SiC UV Dosimeter monitors UV irradiance at the viewport of the Crew Module in the Gaganyaan Mission and serves as a high-dose alarm sensor for gamma radiation. The spacecraft has a mission life of one year.

<https://indianexpress.com/article/technology/science/isro-likely-launch-earth-observation-satellite-8-august-15-9498854/>



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**“India emerging as world-class cost-effective
healthcare destination and global pharma leader”,
says Union Minister Dr. Jitendra Singh**

Union Minister Dr. Jitendra Singh, addressing the "Global MedTech Summit 2024" organized by Confederation of Indian Industry (CII) at Hotel Le Meridian here, highlighted India's emergence as a world-class cost-effective healthcare destination and at the same time, a leader in the global pharmaceutical industry.

Speaking on the transformation in healthcare brought about in recent times, Dr. Jitendra Singh said, “Prime Minister Narendra Modi's government has laid down a vision for a healthy India with the elimination of communicable diseases and prevention of non-communicable diseases, developing health indices and making steady progress.” He said, “India carried out the world's largest vaccination drive in COVID pandemic; this reaffirms that the Modi Govt firmly believes that accessible healthcare is a right of every citizen. He also pressed on the new burden of metabolic disorders and the challenges it posed with a wide spectrum of diseases and increasing life span bringing novel diseases.

Union Minister of State (Independent Charge) for Science and Technology, Minister of State (Independent Charge) for Earth Sciences, MoS PMO, Department of Atomic Energy, Department of Space, Personnel, Public Grievances and Pensions, Dr. Jitendra Singh, said preventive healthcare is a national priority to achieve the vision India @ 2047.

Dr. Jitendra Singh, who is himself a professor of medicine & endocrinology, highlighted the Increasing prevalence of morbidities of later age happening in younger age like Type 2 Diabetes Mellitus, young Heart attacks, malignancies etc, are not only a health challenge but also threaten to drain away the vital youth energy and youth potential which would otherwise be contributing to the task of nation building and realizing the vision of India 2047.

Dr. Jitendra Singh advocated for a "PPP + PPP" collaboration, urging the public and private sectors within India to partner with their counterparts in other countries. He highlighted that such partnerships not only boost economic resources but also enhance knowledge resources. He pointed to the success in the space and biotechnology sectors as role models for integrated partnerships, noting the rapid growth in private investment and StarUp numbers in these areas.

<https://pib.gov.in/PressReleaselframePage.aspx?PRID=2042249>

