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समाचार पत्रों से चयनित अंश
Newspapers Clippings

डीआरडीओ समुदाय को डीआरडीओ प्रौद्योगिकियों, रक्षा प्रौद्योगिकियों, रक्षा नीतियों, अंतर्राष्ट्रीय संबंधों और विज्ञान एवं प्रौद्योगिकी की नूतन जानकारी से अवगत कराने हेतु दैनिक सेवा

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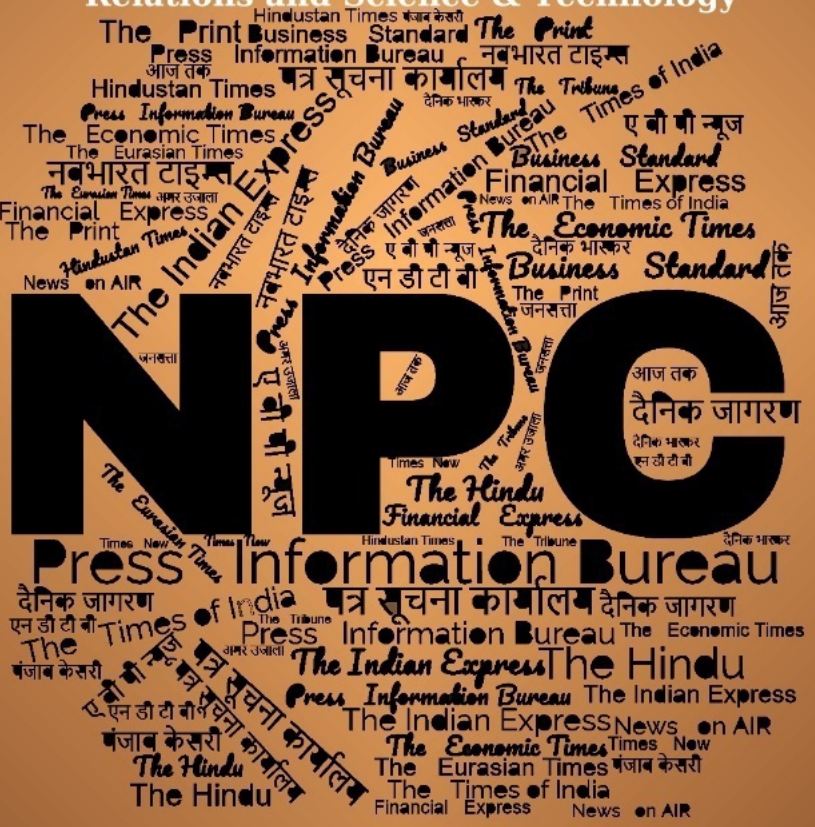

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DRDO News

DRDO & Indian Navy conduct in-flight release trials of indigenous Air Droppable Container 'ADC-150' from P8I Aircraft

Source: Press Information Bureau, Dt. 10 March 2026

Defence Research & Development Organisation (DRDO) and the Indian Navy jointly conducted four successful in-flight release trials of the indigenous Air Droppable Container 'ADC-150' from the P8I aircraft off the coast of Goa between February 21 to March 01, 2026, at different extreme release conditions. Indigenously designed and developed to deliver 150 kg payload, the Air Droppable Container enhances the naval operational logistics capabilities for providing quick response to naval vessels under distress, needing critical stores/equipment, medical assistance etc. at blue sea deployed far from the coast.

The Naval Science & Technological Laboratory, Visakhapatnam is the nodal laboratory for the activity. Aerial Delivery Research & Development Establishment, Agra has developed the parachute system and Centre for Military Airworthiness & Certification, Bengaluru provided the flight clearance & certification. Defence Research & Development Laboratory, Hyderabad provided the instrumentation support for the trials.

To meet the requirement of the Indian Navy, the ADC-150 system for the P8I aircraft was developed and qualified in a short timeframe. As all the developmental flight trials have been completed successfully, the system is expected to be inducted into the Indian Navy soon.

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Raksha Rajya Mantri to inaugurate seminar on Changing Dynamics in the Indian Neighbour-hood under the aegis of CENJOWS

Key initiatives like AI in Military Domain, Samvad Application to be launched

Source: Press Information Bureau, Dt. 10 March 2026

To mark 25th Anniversary of the Centre for Joint Warfare Studies (CENJOWS), Raksha Rajya Mantri Shri Sanjay Seth will inaugurate a seminar titled “Changing Dynamics in the Indian Neighbourhood” under the aegis of CENJOWS on March 11, 2026 at Manekshaw Centre, New Delhi.

The seminar will bring together senior military leaders, diplomats, policy practitioners, and strategic experts to deliberate on emerging geopolitical developments in India’s neighbourhood, with focused sessions examining developments in neighbour countries and their implications for India’s strategic and security environment.

During the inaugural session, key initiatives related to defence technology and professional military education, including AI in Military Domain, Samvad Application developed by CAIR, DRDO, and Integrated Online Training and Evaluation Programme (IOTEP) developed by Indian Defence University (IDU Dte), will be launched by Raksha Rajya Mantri.

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Defence News

Raksha Mantri releases ‘Defence Forces Vision 2047: A Roadmap for a Future-Ready Indian Military’

Source: Press Information Bureau, Dt. 10 March 2026

Raksha Mantri Shri Rajnath Singh released ‘Defence Forces Vision 2047: A Roadmap for a Future-Ready Indian Military’ at an event in South Block, New Delhi on March 10, 2026. This comprehensive blueprint has been articulated by Headquarters Integrated Defence Staff to transform the Defence Forces into a modern, integrated and technologically-advanced military capable of supporting India’s aspiration to become Viksit Bharat by 2047.

The vision document outlines the strategic reforms, capability enhancements and organisational changes required within the Defence Forces to effectively address the evolving geostrategic, technological & security environment. It envisages the transformation of the military into an integrated, multi-domain and agile force capable of deterring adversaries, responding across the full spectrum of conflict & protecting expanding strategic interests, amid the rapidly changing global and regional dynamics.

A central pillar of the vision is the emphasis on jointness and synergy among the Services, promoting greater coordination in planning, operations & capability development. The document also highlights the importance of innovation, advanced technologies and modern training framework to build a force that is adaptable to future warfare challenges.

Another key focus area is Aatmanirbharta in defence, encouraging the development & adoption of indigenous technologies and solutions tailored to the country’s unique security requirements. Strengthening domestic defence manufacturing and technological capabilities is expected to enhance operational readiness while contributing to national growth.

The vision document adopts a calibrated roadmap with clearly prioritised capability goals across short-term, mid-term and long-term timelines. This structured approach will guide the development of critical military capabilities, institutional reforms and strategic partnerships required to build a world class defence force.

Recognising the complexity of future security challenges, the vision document underscores the need for a whole-of-nation approach, integrating military strength with diplomatic, technological and economic power to ensure national security. Through sustained reforms, innovation and national commitment, it aims to ensure that by the centenary of India’s independence, the nation's military stand as a globally-respected,

technologically-advanced and combat-ready military, contributing to a strong and resilient Viksit Bharat.

Chief of Defence Staff General Anil Chauhan, Chief of the Naval Staff Admiral Dinesh K Tripathi, Chief of the Air Staff Air Chief Marshal AP Singh, Defence Secretary Shri Rajesh Kumar Singh, Vice Chief of the Army Staff Lieutenant General Pushpendra Singh and other senior officials were present on the occasion.

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Defence Forces Vision 2047 aims to boost integration, indigenisation & operational capabilities

Source: The Statesman, Dt. 11 March 2026

Defence Forces Vision 2047 aims to boost integration, indigenisation & operational capabilities

UNITED NEWS OF INDIA
New Delhi, 10 March

The government on Tuesday unveiled 'Defence Forces Vision 2047: A Roadmap for a Future-Ready Indian Military', a comprehensive document outlining the long-term transformation of India's armed forces into a modern, integrated and technologically advanced military.

The blueprint, prepared by the Headquarters Integrated Defence Staff, lays out the strategic framework for enhancing jointness among the services, accelerating indigenisation and strengthening operational capabilities to meet emerging security challenges in the coming decades.

The document was released by Defence Minister Rajnath Singh in South Block. In a statement issued here, the Ministry of Defence stated that the vision document outlines the strategic reforms, capability enhancements and organisational changes required within the defence forces to effectively address the evolving geostrategic, technological & security environment.

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NATO Boosts Defence Around Turkey with Patriot Deployment

Source: The Economic Times, Dt. 11 March 2026

NATO Boosts Defence Around Turkey with Patriot Deployment

The North Atlantic Treaty Organization (NATO) is increasing air defences in southeast Turkey, where the US operates a key radar supporting the alliance's ballistic missile shield.

The decision to deploy the Patriot systems in Malatya province came in the wake of two Iranian missile attacks targeting Turkey.

Since the start of the US-Israeli war on Iran, Tehran has targeted American radar systems elsewhere in the West Asia, including a strike in Jordan that destroyed an RTX Corporation AN/TPY-2 radar and support equipment. The $300 million radar system was seen as crucial to directing US missile defence batteries in the Persian Gulf to counter attacks from Iran.

The same type of advanced radar is deployed at Kurecik, about 700 kilometres from Iran, according to a US State Department document from 2011, the year when Turkey agreed to host the equipment.

SYSTEM IN PLACE

The same advanced radar system is deployed at Kurecik, about 700 km from Iran

"In addition to the national measures we have implemented, NATO has enhanced air and missile defense measures," Turkey's Ministry of Defence said in a statement on Tuesday.

"As part of this framework, a Patriot system is currently in Malatya and is being prepared for operational readiness to support the protection of our airspace." Bloomberg

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Science & Technology

Post budget webinar discusses ways to use budget announcements to strengthen India's telescope ecosystem

Source: Press Information Bureau, Dt. 10 March 2026

Experts discussed ways of strengthening telescope infrastructure and overcoming geographical, gender, and generational gaps in firming up capacity in astronomy and futuristic technologies at a breakout session on Telescope Infrastructure Facilities of the post budget webinar "Sabka Saath Sabka Vikas – Fulfilling Aspirations of People."

Hon'ble Prime Minister Shri Narendra Modi addressed the inaugural session of the Post Budget Webinar 2026–27 underscoring expanding STEM opportunities for youth and women and stressed on the need to reach the remotest regions to build capacity for an innovation-driven India.

In line with this, astronomy experts from institutes across the country, deliberated on using the support in budget 2026-27 for telescope infrastructure facilities to reach out to institutes and universities in different regions to advance the next generation capacity in astronomy and futuristic technologies, at the session coordinated by the Ministry of Science & Technology.

In a major boost to mega-science facilities in the country, the budget of 2026-27 has announced four telescope infrastructure facilities to be set up or upgraded. These include the National Large Solar Telescope (NLST), the National Large Optical-Infrared Telescope (NLOT), the upgraded Himalayan Chandra Telescope (uHCT) and the COSMOS-2 Planetarium. The NLST will be built at Merak, Ladakh, while the NLOT and uHCT will be built at Hanle, Ladakh. COSMOS-2, the 2nd LED Dome planetarium to be built in India, will be constructed at Amaravathi.

Union Minister of State (Independent Charge) for Science & Technology, Earth Sciences, MoS PMO, Personnel, Public Grievances, Pensions, Atomic Energy and Space, Dr. Jitendra Singh, who addressed the concluding session highlighted the creation of advanced instrumentation and sophisticated research infrastructure facilities across the country under the leadership of Prime Minister Shri Narendra Modi and expressed confidence that the coming decades would be driven by transformative discoveries in astronomy and astrophysics enabled by large aperture telescopes.

DST Secretary Professor Abhay Karandikar in his introduction to the breakout session stressed that the discussions at the session could set the framework for effective and timely utilisation of the budget support to catapult the astronomy infrastructure and capacity of the country to the global level.

The session moderated by Prof. Annapurni Subramaniam Director, Indian Institute of Astrophysics (IIA), an autonomous Institution of the Department of Science and Tech-

nology (DST) also discussed consolidating the astronomy and mega-science ecosystem of the country, advancing indigenous technologies, and fostering collaboration between academia, industry, and research institutions.

Panelists included Prof. Jayaram Chengalur, director TIFR, Prof. A. N. Ramaprakash, scientist IUCAA, Dr. K. Sankarasubramanian, scientist ISRO, Mr. B. M. Raghavendra from Larsen & Toubro and Prof. Ajit Kembhavi, former director of IUCAA.

Discussions highlighted the importance of the budget announcements in strengthening India's leadership in astronomy and astrophysics through mega-science projects, while also inspiring the next generation of astronomers and space scientists.

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Newly developed nanosheets bring potential for future clean-energy production

Source: Press Information Bureau, Dt. 10 March 2026

Novel Quasi-2D tellurium (Te) nanosheets developed offer an unusual approach to controlling magnetism and catalysis in a single material, facilitating indigenous solutions for sustainable hydrogen production impacting future clean-energy production.

As devices shrink, traditional materials are becoming limited in their relevance due to instability and loss of functionality and scientists are looking for materials that can suit the changing needs. Recent predictions and experiments on 2D Te and telluride magnets suggested that breaking inversion symmetry and introducing strain could unlock spin-orbit-driven magnetism and ferroelectricity in elemental Te.

Building on this background, a team of scientists from the Institute of Nano Science and Technology (INST), Mohali, an autonomous institute of the Department of Science and Technology (DST) have found a way to develop a new nano-material called quasi-2D α-Te nanosheets in an emergent ferromagnetic state that can make future hydrogen-producing electrolysers more energy-efficient.

This is possible as the magnetoelectric control lowers the voltage needed to generate hydrogen and speeds up the reaction, reducing electricity use for green hydrogen production.

The procedure combines scalable liquid-phase exfoliation, strain-engineered lattice distortions, and advanced spin-sensitive probes to explicitly track how unpaired surface spins emerge and furthermore how it can be manipulated.

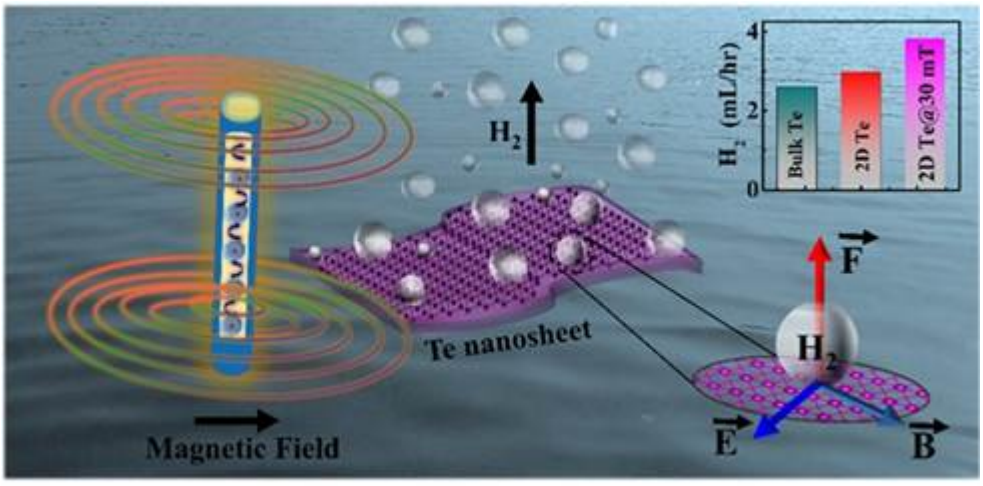

***Fig**: Magnetic field-induced hydrogen evolution on a 2D Te nanosheet. Under an applied magnetic field, unpaired surface spins on the α-Te nanosheet generate hydrogen gas bubbles, with enhanced performance at higher fields.*

INST scientist Prof. Dipankar Mandal and his PhD student Dalip Saini have shown that when bulk tellurium is exfoliated into quasi-2D α-Te nanosheets, the surface “unlocks” unpaired 5p electron spins that are otherwise quenched in bulk Te, giving rise to an emergent ferromagnetic state tied to surface strain and broken inversion symmetry.

This surface magnetism couples strongly with ferroelectricity to produce a giant magnetoelectric response, which the team harnessed to significantly boost the hydrogen evolution reaction (HER), demonstrating a single material that links multiferroicity, spintronics, and electrocatalysis.

This work published in *Advanced Materials* shows that an elemental 2D material, quasi-2D α-tellurium, can host unpaired surface spins that become ferromagnetically ordered and are directly controllable through strain and electric fields, rather than relying on transition-metal ions or complex magnetic compounds.

It uniquely couples this surface ferromagnetism with ferroelectric and strong piezoelectric responses in the same few-layer Te platform, and then demonstrates that this magnetoelectric coupling can be used to actively enhance hydrogen evolution catalysis.

The work connects three areas-- spintronics, multiferroic nanoelectronics, and green hydrogen technologies, targeting applications in low-power memory, smart sensors, and magnetoelectric-driven water electrolysers.

The stability and flexibility of quasi-2D α-Te nanosheets make them promising for flexible, portable, and wearable energy and sensing technologies, potentially improving access to clean energy and real-time health or environmental monitoring for the wider population.

Publication link: ITTEN

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“TDB-DST supports M/s Wellnesys Technologies Pvt. Ltd. for Commercialization of AI-Powered Smart Yoga Mat”

Source: Press Information Bureau, Dt. 10 March 2026

Reinforcing its commitment to nurturing India’s deep-tech startup ecosystem and enabling the journey of indigenous innovations from laboratory to market, the Technology Development Board (TDB), Department of Science & Technology (DST), Government of India, has extended financial assistance to Wellnesys Technologies Private Limited, a Bengaluru-based start-up, for the commercialization of its innovative product, the YogiFi Smart Yoga Mat.

The project titled “YogiFi Smart Sensor Fabric Mat Commercialization with Autonomous and Self-Reliant Systems” aims to strengthen indigenous manufacturing capabilities and enable large-scale production of an AI-powered wellness technology developed in India. The initiative aligns with the Government of India’s vision of promoting pre-

ventive healthcare, digital wellness technologies, and self-reliant manufacturing under the broader framework of Aatmanirbhar Bharat.

The YogiFi Smart Yoga Mat integrates advanced sensor technology with artificial intelligence to provide real-time posture feedback, guided yoga sessions, and detailed performance analytics through a connected mobile application. By combining digital technology with the ancient science of yoga, the product represents a new category of AI-enabled preventive wellness solutions emerging from India's startup ecosystem.

India has witnessed a rapid growth in digital health and wellness technologies, driven by increasing awareness of preventive healthcare and the global popularity of yoga. Innovations such as YogiFi highlight how Indian startups are leveraging deep-tech capabilities to transform traditional practices into scalable global products.

Speaking on the agreement signing, **Shri Rajesh Kumar Pathak, Secretary, TDB,** stated that "TDB remains committed to empowering Indian startups that are developing globally relevant technologies. He further highlighted these innovations such as YogiFi demonstrate how India's ancient tradition of yoga can be strengthened through modern technologies, creating scalable digital wellness solutions that promote preventive healthcare while carrying India's timeless knowledge systems to a global audience."

Promoters of Wellnesys Technologies Private Limited expressed appreciation for TDB's support and noted that the assistance would accelerate the company's efforts to expand production and global outreach for the YogiFi Smart Yoga Mat, while showcasing India's growing leadership in technology-driven wellness solutions.

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The Statesman
पंजाब केसरी जनसत्ता
The Hindu
The Economic Times
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