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Defence News

Indian Army receives final batch of Apache helicopters

Source: The Hindu, Dt. 17 Dec 2025

The Indian Army on Tuesday (December 16, 2025) received the final batch of three AH-64E Apache attack helicopters, completing its six-unit fleet at the 451 Army Aviation Squadron based in Jodhpur, Rajasthan. The helicopters landed at Hindon Air Force Station in Ghaziabad before being inducted into the service.



The Apaches were contracted in February 2020 under a \$600 million deal with the United States. The first batch of three helicopters was delivered earlier this year, and the arrival of the final tranche will ensure full operationalisation of the Army's dedicated Apache squadron.

The six advanced attack helicopters will be stationed at Jodhpur, significantly enhancing the Army's strike and reconnaissance capabilities along the western sector facing Pakistan. The squadron was raised in March last year to cater specifically to operational requirements on the western front.

The deliveries come in the backdrop of a telephonic conversation between Defence Minister Rajnath Singh and U.S. Defence Secretary Pete Hegseth in July this year, during which both sides reviewed ongoing and upcoming initiatives to strengthen bilateral defence cooperation.

During the talks, the United States had assured India of delivering the first batch of three Apaches within two weeks and the remaining three by November this year. The first batch was delivered after a delay of nearly 15 months from the original delivery schedule of May 2024, primarily due to global supply chain disruptions.

In November, a specialised Antonov AN-124 cargo aircraft carrying three Apache helicopters took off from Mesa Gateway Airport in Arizona and landed in England for refuelling. The aircraft remained grounded for about a week after Turkey denied overflight clearance, forcing it to return to the United States.

The AH-64E Apache is regarded as the world's most advanced multi-role combat helicopter, equipped with cutting-edge avionics, sensors and weapon systems, and capable of operating in all weather and terrain conditions. Its induction is expected to provide a major boost to the Indian Army's offensive and deterrence capabilities along the western border.

<https://www.thehindu.com/news/national/indian-army-receives-final-batch-apache-helicopters/article70403334.ece>

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विजय दिवस पर राष्ट्रपति भवन में मुर्मू ने 'परम वीर दीर्घा' का उद्घाटन किया

Source: Dainik Jagran, Dt. 17 Dec 2025

नई दिल्ली, प्रेटर : 1971 में पाकिस्तान पर जीत के उपलक्ष्य में मनाए जाने वाले विजय दिवस के अवसर पर राष्ट्रपति त्रैपदी मुर्मू ने राष्ट्रपति भवन में 'परम वीर दीर्घा' का उद्घाटन किया। इसमें सभी 21 परम वीर चक्र विजेताओं के चित्र प्रदर्शित किए गए हैं। परम वीर चक्र भारत का सबसे बड़ा सैन्य सम्मान है, जो युद्ध के दौरान वीरता, साहस और आत्म-बलिदान के असाधारण कार्यों के लिए दिया जाता है।

राष्ट्रपति भवन की जिस गैलरी में 'परम वीर दीर्घा' बनाई गई है, वहां पहले ब्रिटिश एडीसी के चित्र प्रदर्शित थे। विजय दिवस के अवसर पर राष्ट्रपति ने एक्स पर एक पोस्ट में उन सैनिकों को श्रद्धांजलि भी दी जिन्होंने 1971 के युद्ध में पाकिस्तान



विजय दिवस पर वार मेमोरियल पर सलामी देते रक्षा मंत्री व तीनों सेनाओं के प्रमुख • प्रेटर

पर जीत दिलाने में मदद की थी।

पीएम मोदी ने कहा कि यह दिवस साहसी सैनिकों की बहादुरी को सलाम करता है और उनके बेमिसाल जज्बे की याद दिलाता है। उनकी बहादुरी भारतीयों की कई पीढ़ियों को प्रेरित करती रहेगी। केंद्रीय गृह मंत्री अमित शाह ने भी देश के साहसी बलिदानियों को श्रद्धांजलि दी। रक्षा मंत्री राजनाथ

सिंह ने राष्ट्रीय युद्ध स्मारक पर जाकर पुष्पांजलि अर्पित की। विदेश मंत्री एस. जयशंकर ने कहा कि 1971 की जीत और हमारी सेना की कामयाबी हमेशा प्रेरणा बनी रहेगी। कांग्रेस अध्यक्ष मल्लिकार्जुन खरगे, लोकसभा में नेता प्रतिपक्ष राहुल गांधी और कांग्रेस महासचिव प्रियंका गांधी वाड़ा ने भी 1971 की लड़ाई



राष्ट्रपति भवन में परम वीर दीर्घा के उद्घाटन अवसर पर पूर्व सेन्य अधिकारी को सम्मानित करती मुर्मू • प्रेटर

में अदम्य साहस प्रदर्शित करने वाले वीरों को श्रद्धांजलि अर्पित की। ढाका में भारतीय उच्चायोग ने मंगलवार को एक फेसबुक पोस्ट में बताया कि भारत और बांग्लादेश ने हर वर्ष होने वाले विजय दिवस समारोहों में हिस्सा लेने के लिए एक-दूसरे के युद्ध के नायकों और सेवारत अधिकारियों को आमंत्रित किया।

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Naval Diving Support Craft A20 commissioned

Source: The Pioneer, Dt. 17 Dec 2025

PIONEER NEWS SERVICE
Kochi

The naval diving support craft, A20, meant to enhance underwater preparedness and to serve as a force multiplier, was commissioned into the Indian Navy on Tuesday. The craft was commissioned at the Kochi naval base in a ceremonial event presided over by Vice Admiral Sameer Saxena, Flag Officer Commanding-in-Chief, Southern Naval Command, a defence statement said.

It is the 11th ship to be commissioned in the calendar year—a significant milestone in the country's shipbuilding capability, it added. The cer-

emony commenced with the reading of the commissioning warrant by Lieutenant Commander Hemant Singh Chauhan, the Commanding Officer of DSCA20 and was followed by the hoisting of the naval ensign, accompanied by the national anthem and a ceremonial salute by the colour guard presented by the ship's crew, it said.

"Simultaneously, the commissioning pennant was hoisted, signifying the craft's induction into active naval service. The commissioning plaque was there-after unveiled by the chief guest (Vice Admiral Saxena)," it added.

In his speech, Saxena highlighted the craft's role as a



"vital enabler" of the Indian Navy's maritime capabilities in the underwater domain and a "fine example of Aatmanirbhar Bharat with indigenous design, construction, and system integration," the statement said.

"These diving support

crafts will significantly strengthen the Indian Navy's ability to provide diving expertise, underwater maintenance support and salvage assistance to friendly foreign nations, reinforcing India's role as a first responder and preferred security partner

across the region," it said.

The DSC A20 is a modern catamaran-hull vessel, equipped with advanced diving systems and state-of-the-art underwater video monitoring, recording and tracking facilities, it further said.

"The craft is fitted with a two-man Recompression Chamber (RCC), enabling safe and extended diving operations. With enhanced endurance, manoeuvrability and contemporary diving infrastructure, DSC A20 will enhance underwater preparedness and serve as an essential force multiplier in the Indian Navy's maritime security architecture," the statement said.

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Science & Technology News

New sunlight-driven method to break tough C–F bonds useful for pharmaceutical and agrochemical industries

Source: Press Information Bureau, Dt. 16 Dec 2025

Scientists have found a sunlight-driven method to break one of the toughest chemical bonds, the carbon–fluorine (C–F) bonds that needs severing for recycling, drug design, or transforming industrial chemicals.

Fluorinated organic compounds are widely used in research and industry due to their easy availability and well-established synthesis routes. However, activation of C–F is crucial for transforming poly- or perfluorinated compounds into more useful derivatives. However, it remains a significant challenge as the chemical bond is exceptionally strong. Traditionally, C–F bond cleavage has relied on harsh conditions, costly metal catalysts, and energy-intensive methods, which are often unsustainable and typically require homogeneous conditions. In contrast, heterogeneous photocatalysts offer a greener and more energy-efficient alternative under mild and recyclable conditions using sunlight.

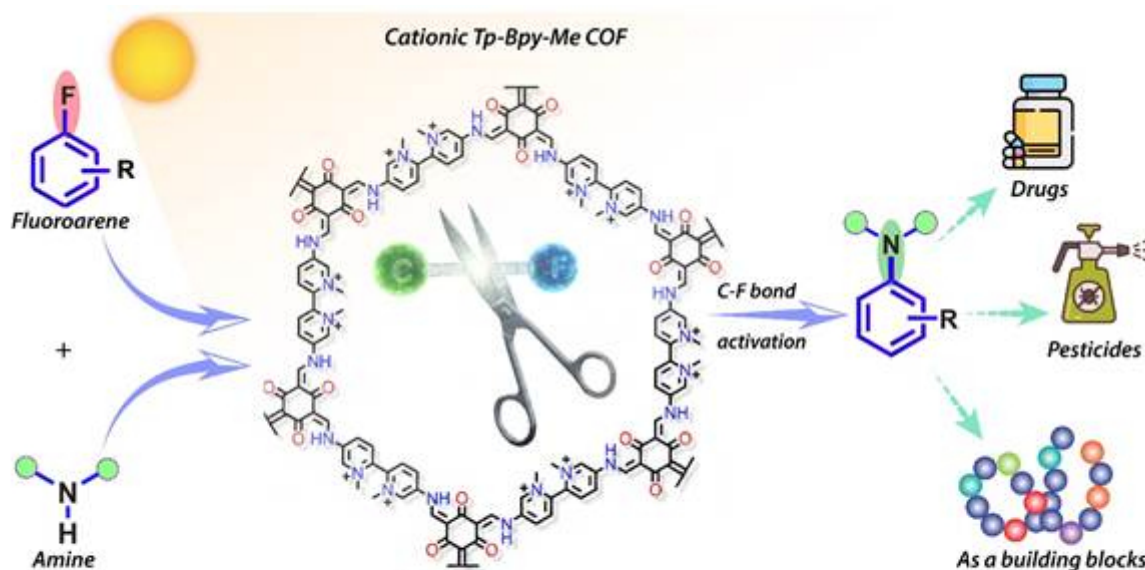


Fig: Sunlight-driven C–F bond activation of fluoroarenes over cationic Tp-Bpy-Me COF, leading to the formation of aminated products with potential applications across various sectors.

Researchers at the S. N. Bose National Centre for Basic Sciences — an autonomous institute under the Department of Science and Technology (DST) — have explored a cutting-edge class of materials known as covalent organic frameworks (COFs), in an attempt to overcome the challenge of breaking the strong C–F bond. They developed a specially engineered COF that acts as a heterogeneous photocatalyst. COFs are crystalline, porous materials prized for their exceptional stability, large surface area and highly tunable structures. Their modular design enables scientists to easily modify their properties, making them highly attractive for catalytic applications.

The team worked with a bipyridine-based COF (Tp-Bpy) and performed a simple post-synthetic modification by adding a methyl group, known as methylation. This single-step change produced a positively charged version of the COF, known as cationic Tp-Bpy-Me COF, while maintaining the

original integrity of the framework. This seemingly small modification had a significant impact, making the COF more electron-deficient, improving its ability to absorb visible light and drive challenging photocatalytic reactions in an efficient manner.

When exposed to blue light, Tp-Bpy-Me COF successfully activated strong C–F bonds and promoted the formation of C–N bonds through the attack by amine nucleophile, an important step in building more complex organic molecules. Remarkably, the reaction could even proceed under natural sunlight, making the process not only efficient but also environmentally friendly.

This represents the demonstration of a COF-based photocatalyst capable of converting C–F bonds into C–N bonds. The resulting products hold significant potential for applications in the pharmaceutical and agrochemical industries, as well as serving as building blocks for various natural products.

Link for the article: <https://doi.org/10.1002/anie.202516235>

<https://www.pib.gov.in/PressReleasePage.aspx?PRID=2204450®=3&lang=1>

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The Tribune
The Statesman
ਪੰਜਾਬ ਕੇਸਰੀ ਜਨਸੱਤਾ
The Hindu
The Economic Times
Press Information Bureau
The Indian Express
The Times of India
Hindustan Times
नवभारत टाइम्स
दैनिक जागरण
The Asian Age
The Pioneer