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CONTENTS

S. No.	TITLE		Page No.
	DRDO News		1-2
	DRDO Technology News		1
1.	BrahMos supersonic missile 'creates hole' in Indian Navy's abandoned ship	<i>Hindustan Times</i>	1
	Defence News		3-13
	Defence Strategic: National/International		3-13
2.	Sixth Scorpène submarine Vagsheer launched into water in Mumbai	<i>The Hindu</i>	3
3.	Defence Ministry "Over-Achieved This Target... To Achieve PM's Vision"	<i>NDTV</i>	4
4.	Defence start-up AROO collaborates and makes ECWCS for the first time in India for the Indian Army	<i>CISION</i> <i>PR Newswire</i>	5
5.	Vendor conclave organised by CII-AP and Society of Indian Defence Manufacturers	<i>The Hindu</i>	7
6.	Indian Navy studying the sinking of Russian cruiser Moskva	<i>Hindustan Times</i>	8
7.	As part of close maritime cooperation, India and Maldives jointly unveil navigation chart	<i>WION</i>	9
8.	Super Hornet Gears Up for India Ski-Jump, Landing Tests	<i>Indian Defence News</i>	11
	Science & Technology News		14-15
9.	Who is Ajay Sood? Meet newly appointed Principal Scientific Adviser to the PM	<i>Hindustan Times</i>	14

Wed, 20 Apr 2022

BrahMos supersonic missile 'creates hole' in Indian Navy's abandoned ship

India has successfully tested a BrahMos supersonic cruise missile from the guided-missile destroyer INS Delhi. The test of the anti-ship variant of the missile was conducted using an upgraded modular launcher onboard the INS Delhi.

"Successful maiden BrahMos firing by INS Delhi from an upgraded modular launcher once again demonstrated long-range strike capability of BrahMos along with validation of integrated Network Centric Operations from frontline platforms," the Indian Navy tweeted along with a video of the test fire.



A BrahMos supersonic cruise missile was test-fired by the Indian Navy warship INS Delhi on April 19. (ANI)

Successful maiden #BrahMos firing by #INS Delhi from an upgraded modular launcher once again demonstrated long range strike capability of BrahMos alongwith validation of integrated Network Centric Operations from frontline platforms (1/2)#CombatReady #Credible #FutureProofForce

— SpokespersonNavy (@indiannavy) April 19, 2022

On Wednesday, officials of BrahMos told news agency ANI that the missile (without a warhead), which was fired on Tuesday with a speed of around 3,000 kmph, created a hole in the abandoned ship.

“A BrahMos supersonic cruise missile was test-fired by the Indian Navy warship INS Delhi on April 19. The missile without a warhead created a hole in the abandoned ship. The missile travels at speeds around 3,000 kmph and is difficult to intercept by air defence systems,” the officials said.

A BrahMos supersonic cruise missile was testfired by the Indian Navy warship INS Delhi on Apr 19. The missile without warhead created a hole in the abandoned ship. The missile travels at speeds around 3000 kmph & is difficult to intercept by air defence systems: BrahMos officials

— ANI (@ANI) April 20, 2022

On Tuesday, in demonstrating its operational preparedness, the Indian Air Force (IAF) also successfully tested a BrahMos supersonic cruise missile from a Sukhoi fighter jet on the Eastern seaboard on the same ship.

The "live firing" of the missile was carried out in close coordination with the Indian Navy, the IAF said.

The missile hit the target with accuracy and precision, officials said. The ship sank after the missile with warhead hit it directly.

Today on the Eastern seaboard, #IAF undertook live firing of #BrahMos missile from a Su30 MkI aircraft.

The missile achieved a direct hit on the target, a decommissioned #IndianNavy ship.

The mission was undertaken in close coordination with @indiannavy.

— Indian Air Force (@IAF_MCC) April 19, 2022

In 2016, the government had decided to integrate the air-launched variant of the Brahmos into over 40 Sukhoi fighter jets. The project was conceived to enhance the IAF's capability to strike from large stand-off ranges on any target on sea or land.

On March 5, the Indian Navy successfully tested an advanced version of the Brahmos supersonic cruise missile from a stealth destroyer in the Indian Ocean.

The missile was fired from the stealth destroyer INS Chennai.

BrahMos Aerospace, an India-Russian joint venture, produces supersonic cruise missiles that can be launched from submarines, ships, aircraft, or land platforms. BrahMos missile flies at a speed of 2.8 Mach or almost three times the speed of sound.

The range of the advanced version of the missile is learnt to have been extended to around 350 km from the original 290 km.

<https://www.hindustantimes.com/india-news/brahmos-supersonic-missile-creates-hole-in-indian-navy-s-abandoned-ship-101650444392218.html>

Sixth Scorpène submarine Vagsheer launched into water in Mumbai



The launch of Vagsheer, India's sixth Scorpène class submarine at Mazgaon Dockyard on April 20, 2022. | Photo Credit: Emmanuel Yogini

The sixth and last of the French Scorpène-class submarines, Vagsheer, was launched into water at the Mazagon Docks Limited (MDL) in Mumbai.

“The sixth submarine will now commence setting to work of various equipment and their harbour trials. The crew will thereafter sail the submarine for the rigorous sea acceptance trials after which the submarine would be delivered to the Navy by late next year,” the Navy said in a statement.

Defence Secretary Ajay Kumar was the chief guest at the ceremony and Vagsheer was launched by Mrs. Veena Ajay Kumar, in keeping with the naval tradition of launch and naming by a lady.

The six submarines were being built under Project-75 by the MDL under technology transfer from the Naval Group under a \$3.75 bn deal signed in October 2005. The first one, INS Kalvari, was commissioned in December 2017; the second, INS Khanderi, in September 2019; the third, INS Karanj, in March 2021; and the fourth one, INS Vela, joined service last November. The 5th one, Vagir, was launched in November 2020 and is undergoing sea trials.

The Navy has drawn up plans to install an Air Independent Propulsion (AIP) module on all the Scorpenes as they go for refit, beginning with INS Kalvari, in the next couple of years to enhance their endurance. Development of an indigenous AIP module by the Defence Research and Development Organisation (DRDO) is in advanced stages.

30-year submarine-building programme

Parallely, the tender to build six more advanced conventional submarines under Project-75I is in the Request For Proposal (RFP) stage. The Navy has a 30-year submarine-building programme and after the P-75I, it intends to design and build conventional submarines indigenously.

With delays in submarine induction, the SSKs - 209s (German HDWs) and EKMs (Russian Kilos), are being put through the Medium Refit Life Certification (MRLC) process, which will give them additional life of 10 to 15 years.

The Navy currently has 16 conventional submarines- eight Russian Kilos, four German HDWs and four Scorpenes, and indigenous nuclear ballistic missile submarine INS Arihant in service.

<https://www.thehindu.com/news/national/sixth-scorpne-submarine-vagsheer-launched-into-water-in-mumbai/article65338261.ece>



Wed, 20 Apr 2022

Defence Ministry "Over-Achieved This Target... To Achieve PM's Vision"

The Defence Ministry today said it had set aside 64 per cent of the capital acquisition budget for domestic industry in the financial year 2021-22 and has been able to "over achieve" the target.

The ministry said it has utilised 65.50 per cent of the capital acquisition budget on making procurements from domestic sources.

"The Ministry of Defence (MoD) had earmarked 64 per cent of capital acquisition budget for domestic industry in financial year 2021-22," it said in a statement.

"At the end of 2021-22, the MoD has been able to over achieve this target and has utilised 65.50 per cent of capital acquisition budget on indigenous procurements through Indian industry to achieve Prime Minister Narendra Modi's vision of 'Aatmanirbhar Bharat'," it said.

The ministry further said that it has been able to utilise 99.50 per cent of the defence services budget in 2021-22.

"As per preliminary expenditure report of March 2022, MoD has been able to utilise 99.50 per cent of the defence services budget in FY 2021-22," it said.

In the last few years, the government has taken a series of measures to boost domestic defence manufacturing.

In May 2020, the government announced increasing the FDI limit from 49 per cent to 74 per cent under the automatic route in the defence sector.

India is one of the largest importers of arms globally. According to estimates, the Indian armed forces are projected to spend around USD 130 billion (in capital procurement in the next five years).

The government now wants to reduce dependence on imported military platforms and has decided to support domestic defence manufacturing.

<https://www.ndtv.com/india-news/defence-ministry-over-achieves-procurement-of-made-in-india-equipment-2903002>



Wed, 20 Apr 2022

Defence start-up AROO collaborates and makes ECWCS for the first time in India for the Indian Army

AROO is India's first defence start-up that creates the Intellectual Property in specialized defence clothing. AROO was started by Rohit Bedi and Munish Hinduja, in the defence space for apparel and gear, and through its OEM manufacturers the ECWCS (Extreme Cold Weather Clothing System) and other specialized defence clothing. AROO's business approach is unique as it creates the products and applications for a specialized category of clothing and gear and then partners with the most capable OEM (original equipment manufacturer) to supply the product to the Armed forces.

AROO's first product was ECWCS where it passed field trials in 2017 and are currently manufacturing this product in India through its OEM based out of Bengaluru. ECWCS is a 3-layer modular clothing system worn together, which is designed to operate in temperatures of up to -50 degrees Celsius. This product is used by Indian soldiers at high altitude regions including the Siachin Glacier which is the highest battlefield in the world. This clothing system was being imported for over 25 years. AROO can, with



AROO : Extreme Cold Weather Clothing System (ECWCS).

pride comment that AROO ECWCS outperforms the imported clothing systems provided to the Indian Army. It is also at a lower cost thus providing savings to the Indian government. Furthermore, the Indian Army is no longer dependent on foreign companies for this life-saving apparel. AROO is also in advanced field trials with the Indian Army for the new Trouser ECC (extreme cold clothing) which operates in temperatures up to -30 degrees Celsius.

Rohit Bedi, Co-founder AROO says, "We were inspired by the government's policies of 'Make in India'. Our vision started with the Indian government's focus to promote the indigenization of key imported products to decrease the dependencies on imports. Our mission is to provide world-class protection solutions for our 'JAWANS,' and our ambition is to exceed any world manufacturer in terms of product, quality and pricing.

With the government's initiative and thrust of encouraging Indian defence manufacturing. AROO realized the potential in this segment because a large portion of the special clothing and mountain equipment (SCME) was being imported into the country."

Munish Hinduja, Co-founder AROO says, "The manufacturing process designed by AROO is focused on creating a defect-free product. The manufacturing lines at our OEM's facility combined with our quality standards and rigorous raw material testing conducted at our OEM's in-house testing facility, provide us with real-time product performance, with an eye on the CLO value (warmth level) and waterproofness of the garment our production supply outperform foreign specifications by 20% to 75% on key performance parameters."

"AROO creates high-performance military-grade textiles with a functional design sensibility that provides comfort, performance, and protection to the end-user. The product's complexity requires a high level of technical ability in sewing and apparel construction. Our OEM for ECWCS has specialized infrastructure for seam sealing, sewing, and testing at both the textile and garment manufacturer levels".

About AROO

Our products carry the branding of the wolf. AROO is the phonetic spelling of the wolf's call/howl and the wolf is our logo. The Wolf exhibits immaculate foresight, balance and agility. He is alert and loyal inspiring those around to prosper and survive in any situation. They have an instinctive understanding of leadership and goal-oriented tasks. They share a heightened intuition in threat assessments. They naturally organize themselves into packs applying strategy, patience and competence. These packs operate on a code of conduct, working together. They are communicative, sophisticated and relentless with an unwillingness to quit. Our jawans embody all these qualities and we at AROO aim to deliver the next generation of clothing systems and gear to the Indian Army which will enhance the capabilities of the Indian Wolf - Our Soldier, Our Jawan.

About Founders

Rohit Bedi comes from an Army family, with lineage from both sides of his grandparents. He brings diverse expertise to AROO, having worked with multinationals in India, Dubai, the Philippines, and the United States in various roles of operations, sales, and marketing. Prior to Aroo he owned and operated his own boat charter company in Goa. He is so committed to the concept of "Make in India" and "Live in India" that he even gave up his American green card 3 years ago.

Munish Hinduja is a second-generation entrepreneur from an apparel manufacturing business and whose domain knowledge is primarily on product innovation, design and textile creation, he is self-taught and recognised internationally for his expertise and his knowledge in this domain. His deep understanding of ergonomics and functional design, coupled with manufacturing and sewing processes, helps AROO create next-generation products.

Both the entrepreneurs joined hands over five years ago to ideate and toil to make 'AROO' a reality and to give India its first Indian Defence Start-Up in the apparel and gear segment, which has fulfilled the supply of over 60,000 ECWCS sets successfully so far making India proud.

<https://www.prnewswire.com/in/news-releases/defence-start-up-aroo-collaborates-and-makes-ecwcs-for-the-first-time-in-india-for-the-indian-army-878248157.html>



Wed, 20 Apr 2022

Vendor conclave organised by CII-AP and Society of Indian Defence Manufacturers

A vendor conclave was organised by the Confederation of Indian Industry- Andhra Pradesh (CII-AP) and Society of Indian Defence Manufacturers (SIDM) in partnership with Material Organisation Visakhapatnam, Eastern Naval Command, on Wednesday.

Delivering the inaugural address, Commodore M.M. Mohan Raju, Material Superintendent, Material Organisation, Visakhapatnam, said that the Union Government aims to make the defence sector self-reliant and encourage ease of doing business, under the Atmanirbhar Bharat initiative.

He felt that the domestic demand of the Indian defence sector should be fulfilled by the Indian manufacturing industries. He urged the Indian industries to focus on quality of production, ensuring timely delivery, competitive pricing, and building a resilient supply chain and to actively take part in adopting innovative technologies.

J. Srinivasa Raju, Convener, Defence and Aerospace Panel of CII Andhra Pradesh and Chairman of Society of Indian Defence Manufacturers (SIDM), Andhra Pradesh Chapter, said that the Indian defence manufacturing industry has been playing a significant role in the economy. He pointed out that the 'Make in India' initiative can be harnessed by MSMEs and startups to make their presence felt in the defence sector, as it has already been opened to the private sector by the government.

Cdr. Rohit Pratap Singh, Material Organisation (Visakhapatnam) spoke about the role of Material Organisation and their procurement process.

Col. Suhail Zaidi (Retd), Head- CII–Centre for Digital Transformation, in his address, shared how CDT has been interacting with the MSMEs and helping them overcome the challenges.

<https://www.thehindu.com/news/cities/Visakhapatnam/vendor-conclave-organised-by-cii-ap-and-society-of-indian-defence-manufacturers/article65338201.ece>



Thu, 21 Apr 2022

Indian Navy studying the sinking of Russian cruiser Moskva

The Indian Navy's operational planners are studying the sinking of the missile cruiser Moskva, the flagship of Russia's Black Sea fleet, by two Ukrainian anti-ship cruise missiles on April 14 with the focus on how to protect Indian warships from anti-ship ballistic missiles like the Chinese DF-21. The last Russian flagship sunk was in the Battle of Tsushima by the Japanese imperial navy in 1905, 117 years ago.

The sinking of a Russian cruiser in the ongoing Ukraine war poses serious questions about the survivability of warships in the day and age of anti-ship cruises as well as ballistic missiles. The anti-ship weapon poses threat to all navies in the world including the Chinese Navy, which has been flaunting its aircraft carriers, Liaoning, and Shandong, against in the Indo-Pacific while threatening the mighty US Navy with DF 21 and DF 26 missiles. The Chinese propaganda media

has dubbed DF 21 as a ship killer and DF 26 as killer of the US base in Guam in the Indo-Pacific.

It is learnt that the sinking of the Russian Moskva will be a topic of discussion at the Naval Commanders Conference next week.

While premier Indian Navy warships carry Barak-1 and Barak-8 surface to air missiles along with a close-in weapons suite (CIWS) to tackle aerial and cruise missile threats, the issue gets more complicated in case of saturation attack by the adversary.

“The anti-ship missile age dawned in the 1960s and throughout our career, the focus is on how to avoid missile attacks and fires onboard our ships. The key to warding off an anti-ship missile attack is to ensure that the adversary does not get real-time location of the warship in times of hostilities and detection of the incoming threat to counter it,” said a former Indian Navy admiral.

The 2021 launched ballistic missile tracking ship INS Dhruv, operated by the NTRO, will help the Indian military detect missile launches toward India and its military platforms.

However, the DRDO has developed the CHAFS system, which creates a metal particle cloud away from the warship to divert the incoming anti-ship missile in times of hostilities. India after the US is the second country to develop the CHAFS capability to shield the warship by attracting the incoming missile by creating an illusion of a warship, away from the actual platform. “Once the on-board ship radar detects the incoming missile threat, the CHAFS system is activated by firing metal clouds far away from the actual ship and distracts the missile from hitting the actual target,” said a senior official.

While the CHAFS system may work in hostile conditions, the anti-ship cruise and ballistic missiles pose a real threat to naval armadas as they will take down a ship if undetected. The sinking of a warship is not a mere war event but has a serious impact on the morale of the military and the nation.

<https://www.hindustantimes.com/india-news/indian-navy-studying-the-sinking-of-russian-cruiser-moskva-101650511462362.html>



Wed, 20 Apr 2022

As part of close maritime cooperation, India and Maldives jointly unveil navigation chart

As part of increased maritime cooperation, India and Maldives have jointly unveiled a navigation chart.

This is the first such navigation chart produced by both countries. It was unveiled during India's Chief of the Naval Staff (CNS) Admiral R Hari Kumar's visit to Maldives.



Chief of the Naval Staff (CNS) Admiral R Hari Kumar (L) unveiling the navigation chart Photograph:(WION)

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The chart is part of practical cooperation between the Naval forces of the two countries and helps ships to understand the maritime topography of Maldives Exclusive Economic zones, water depths, areas to avoid etc.

The fact that the Indian Navy chief choose Maldives as his first overseas visit after taking charge also shows Delhi's increased engagement in the Indian Ocean and more focus on maritime.

Adm R Hari Kumar is on a three-day visit to Maldives from April 18 to April 20. During the visit, he called on President Ibrahim Mohamad Solih, Foreign Minister Abdulla Shahid, Defence Minister Mariya Didi and Chief of Defence Staff Major General Abdulla Shamaal.

During a meeting with the Indian naval chief, Maldives Defence Minister Mariya noted the "promptness with which India submitted the Detailed Project Report (DPR) of the Coast Guard Harbour and Dockyard to Maldives, the review of which will be completed soon," a Maldives defence ministry statement said.

Last year, India and Maldives signed a pact for the development of a coast guard harbour for maritime security.

The harbour will be developed at Uthuru Thila Falhu naval base. The pact was signed last year during Indian External Affairs Minister Jaishankar's visit to the country.

She also appreciated the Indian Navy's support in the maintenance and repair of the MNDF Coast Guard Fleet and transport of medicines and hospital consumables to Maldives during the COVID-19 pandemic.

Under mission 'Sagar One' of the Indian Navy, India reached out to five Indian Ocean countries, including the Maldives.

Indian Navy Ship Kesari delivered 600 tons of food items to the island country.

During the visit, CNS handed over hydrography equipment to consolidate the organic capabilities of the Maldives National Defence Forces (MNDF). Additionally, he presented a consignment of engineering equipment for further sustenance of MNDF ships, something that will enhance the capacity building efforts.

Maldives defence minister expressed "appreciation for the continuous assistance and support rendered by the Indian Navy in maintenance and repair of MNDF Coast Guard Fleet", Maldives statement pointed out.

An Indian Navy statement said, "This visit further consolidates the strong and long standing bilateral relations between two close maritime neighbours and also identified new avenues of expanding the scope of bilateral cooperation in defence and maritime domain."

The Navy chief's visit comes in the backdrop of two high profile visits from Delhi to the Maldives—India's National Security Advisor Ajit Doval for the Colombo Security Dialogue and Jaishankar's bilateral visit.

<https://www.wionews.com/south-asia/as-part-of-close-maritime-cooperation-india-and-maldives-jointly-unveil-navigation-chart-472320>



Thu, 21 Apr 2022

Super Hornet Gears Up for India Ski-Jump, Landing Tests

Boeing is preparing a series of flight tests in Goa to demonstrate the take-off and landing capabilities of the F/A-18E/F Super Hornet from Indian aircraft carriers.

The tests are planned in the May-June timeframe and will see the US company dispatch two US Navy (USN) F/A-18Es to the Indian navy's Shore-Based Test Facility at INS Hansa near Goa.

The jets will demonstrate the ability to take-off using a ski-jump ramp, and also make arrested landings on a runway configured as an Indian carrier, says Alain Garcia, vice-president of India business development for Boeing Defence, Space & Security.

The work will involve a composite team of Boeing and USN. Different aircraft configurations, such as air-to-air, air-to-surface, and anti-ship will be demonstrated.

New Delhi has had a long-running requirement for 57 new carrier-capable fighters. Initially, it is likely to obtain a first tranche of 26 aircraft, of which eight need to be two-seaters. For the time being the Indian navy is assessing its options, and has yet to produce a formal request for proposals (RFP).

The Super Hornet's primary rival for the requirement, the Dassault Rafale M, reportedly completed a series of similar tests at INS Hansa in January. Saab has also proposed a carrier-capable version of the Gripen E, the Gripen Maritime.

Garcia, who formerly flew the Super Hornet in the USN, is confident that the Boeing type is eminently well suited for India, noting that the Block III configuration – which is on the verge of entering US service – plays an important role in creating a common tactical picture.

He lists several attributes of the Block III Super Hornet, such as its active electronically scanned array radar, large area displays, ability to communicate with other platforms, and open systems architecture.

He feels the type will integrate well with other US equipment in service with the Indian navy, such as the Lockheed Martin/Sikorsky MH-60R anti-submarine warfare helicopter and Boeing P-8I Neptune, the Indian variant of the 737-derived P-8A. Moreover, a Super Hornet acquisition would also allow the Indian navy to work more closely with the USN and Royal Australian Air Force, both of which operate Super Hornets.

New Delhi has one operational carrier, the INS Vikramaditya, derived from former Soviet Kiev-class carrier Baku. By American standards it is small, with a displacement of 45,400t, less than half that of the US carriers from which the Super Hornet typically operates. Vikramaditya's fixed-wing air wing now comprises 26 RAC MiG-29Ks.

In addition, New Delhi is preparing its first indigenously-built carrier, the INS Vikrant, for active service. The Vikrant's displacement is listed at 45,000t.

Both are short take-off but arrested landing (STOBAR) vessels and use a ski-jump to launch aircraft. US and French carriers are catapult assisted take-off but arrested recovery (CATOBAR) ships. While CATOBAR carriers are more complicated, aircraft can take off with heavier payloads. Moreover, such vessels also can launch turboprop support assets, namely the Northrop Grumman E-2 Hawkeye airborne early warning and control aircraft.

Longer term, India could also develop a CATOBAR vessel using an electromagnetic launch system similar to that being pioneered aboard the USS Gerald R Ford.

Irrespective of the major differences between US and Indian carriers, Garcia feels the Super Hornet will perform well in Goa. He notes that the type has already undergone ski-jump tests at NAS Patuxent River in Maryland. In Goa, the Super Hornet will even demonstrate the ability to

take off with two Boeing AGM-84 anti-ship missiles, although the Indian requirement only calls for the carriage of one anti-ship missile.

Garcia declines to detail the payload penalty that using a ski-jump versus a catapult will impose on the Super Hornet, but says the fighter has the payload capability while operating off a ski-jump to meet all requirements.

As for recovering aboard an Indian carrier, Garcia says the Super Hornet's Precision Landing Mode allows for extremely precise shipboard landings.

"They'll really be able to see how accurate the Super Hornet is in its ability to land on any given flight deck area," he says. "We're so confident that we actually told the Indian navy that we're more than happy – if they have an aircraft carrier parked off the coast of Goa – to go fly out there and demonstrate it on the aircraft carrier itself."

The Indian navy has yet to take Boeing up on this proposal, so the Super Hornets will undergo the tests on land at INS Hansa.

Garcia adds that Boeing has provided New Delhi with considerable analysis of how Super Hornets would fit aboard Indian carriers, on the flight deck as well as in the hangar.

One challenge with both Vikramaditya and Vikrant are relatively small elevators optimised for the MiG-29. Garcia says that one advantage that the Super Hornet has over Rafale is the ability to fold its wings, allowing for an easier elevator fit. In addition, Boeing has devised a way for Indian deck crews to move the Super Hornet onto and off Indian carrier elevators.

Garcia also points out that the Super Hornet's two-seat version, the F/A-18F, is fully capable and serves aboard US carriers. While the air force variant of the Rafale has a two-seat B version, the carrier-capable Rafale M only comes with a single seat.

While the test work at Goa suggests that there is some traction toward an acquisition decision, New Delhi's patchy record with fighter acquisitions could suggest that a final decision is some years away – if ever. Underlining this, New Delhi has yet to issue an RFP for the naval fighter acquisition, although a 59-page request for information first emerged over five years ago, in early 2017.

Nonetheless, New Delhi's long-term ambition to boost its aircraft carrier capability is clear. The upcoming Super Hornet tests in Goa – and what the Indian navy takes away from them – will mark an important step toward the achievement of this vision.

<http://www.indiandefensenews.in/2022/04/super-hornet-gears-up-for-india-ski.html?m=1>

Who is Ajay Sood? Meet newly appointed Principal Scientific Adviser to the PM

Sood is a renowned Indian physicist, researcher and holder of 2 US and 5 Indian patents, was awarded the Padma Shri in 2013 for his stellar work in the field of science.

Ajay Sood, Honorary professor at the Department of Physics, Indian Institute of Science, Bengaluru is the new Principal Scientific Adviser to the Prime Minister. Sood replaces K. Vijaya Raghavan, who retired recently.



Sood is a renowned Indian physicist, researcher and holder of 2 US and 5 Indian patents, was awarded the Padma Shri in 2013 for his stellar work in the field of science.

Known for his pioneering research findings on graphene and nanotechnology, he is a distinguished honorary Professor of Physics at the Indian Institute of Science, Bangalore.

Born on 26 June 1951 in Gwalior, he completed his MS in Physics from Panjab University, Chandigarh in 1972, and did his PhD in Physics from the Indian Institute of Science (IISc), Bengaluru in 1982.

Currently, Sood is a member of the Science, Technology and Innovation Advisory Council to the Prime Minister since 2018.

Research

Sood has done extensive research on hard condensed matter and soft condensed matter physics, with special emphasis on Raman scattering and nanotechnology. He has been credited with many path-breaking findings and inventions, which are said to be of daily and scientific use.

Through his experiments in 2003, he generated electrical signals by passing liquids over solids or through nanotubes and this phenomenon has now been termed by the scientific world as the Sood Effect.

Achievements and awards

After being a post-doctoral Max Planck Fellow at Max Planck Institute fur FKF, Stuttgart, Germany between 1983-85, Sood worked as a scientist at the Indira Gandhi Centre for Atomic Research at Kalpakkam in India before joining IISc. He has also been an honorary professor at the Jawaharlal Nehru Centre for Advanced Scientific Research in Bangalore since 1993.

Sood was elected a Fellow of the Royal Society (FRS) in 2015. He has been on the Physical Sciences jury for the Infosys Prize from 2019. Sood has published over 290 research articles and papers in national and international peer-reviewed journals.

He has received over a dozen awards for multiple achievements from various institutions. The Third World Academy of Sciences (TWAS) recognised Sood's services by conferring on him the TWAS Prize in Physics, in 2000.

He was awarded the Shanti Swarup Bhatnagar Prize in 1990, the National Award in Nanoscience and Nanotechnology by the Government of India, Nano Award by Government of Karnataka and Vigyan Ratan Award of Punjab University among many. He is one of the Executive Editors of an International journal, 'Solid State Communications.

<https://www.hindustantimes.com/cities/bengaluru-news/who-is-ajay-sood-the-newly-appointed-principal-scientific-adviser-to-the-pm-101650476336095.html>

