

August 20, 2024

SYLLOGE ON CHINA

Focus: Nuclear, Space, Missiles and other Security Issues

**An Initiative by the Nuclear and Arms Control Centre,
MP-IDSA**



China's tech innovation continues to thrive despite Western protectionism

Wen Sheng

Global Times, August 11, 2024

China's largest cities including Beijing, Shanghai, Shenzhen and Hangzhou have recently accelerated their pace of green transformation by quickly replacing internal combustion engine vehicles with clean new-energy ones. Despite rising protectionism in the US and other Western countries, China's NEV-making technology has continued to improve and is now being introduced to a few trade-friendly markets, allowing those countries to benefit from Chinese companies' technological progress.

<https://www.globaltimes.cn/page/202408/1317809.shtml>

China is beating America in the race for laser weapons

Brandon J. Weichert

The National Interest, August 12, 2024

The United States has long struggled to develop effective laser weapons, or directed energy weapons (DEW), but China's rapid advancements in this field pose a significant threat. Chinese scientists have reportedly made breakthroughs in laser technology, including using lasers to penetrate the "black barrier" surrounding hypersonic weapons and potentially defending against such weapons. These advancements highlight China's growing technological edge in various areas, raising concerns about its ability to challenge U.S. military dominance. As China's military continues to modernize, the failure of the U.S. to innovate in DEW could lead to a dangerously even playing field.

<https://nationalinterest.org/blog/buzz/china-beating-america-race-laser-weapons-212289>

Taiwan seeks new scramjet tech for hypersonic weapons

Joe Saballa

The Defence Post, August 12, 2024

Taiwan's Ministry of National Defence is seeking a new supersonic combustion ramjet technology that could be used for its hypersonic weapons. A solicitation notice was recently issued to Taiwanese universities for potential scramjet solutions that feature heat-resistant materials. The tech must also boast improved ignition and flame retention to achieve maximum propulsion efficiency. The initiative, part of the recently announced National Defence Advanced Technology Research Program, will run over three years starting in 2025. It will be overseen by the state-owned National Chung-Shan Institute of Science and Technology.

<https://www.thedefensepost.com/2024/08/12/taiwan-scramjet-tech-hypersonic/>

Xi's anti-graft purge of the PLA is limited and has dubious motives

James Char

Nikkei Asia, August 13, 2024

The spotlight is back on corruption in the Chinese People's Liberation Army (PLA) following official confirmation in late June on the fate and alleged misdemeanors of China's two ex-defense ministers and former members of the Central Military Commission (CMC). After the two had disappeared from public view for more than 10 months, it was finally revealed that the PLA's internal discipline and inspection organ had opened a case against Li Shangfu on Aug. 31, 2023. Some three weeks later on Sept. 21, the retired Wei Fenghe had also been hauled in for questioning.

<https://asia.nikkei.com/Opinion/Xi-s-anti-graft-purge-of-the-PLA-is-limited-and-has-dubious-motives>

China Submarine Capabilities

Nuclear Threat Initiative, August 13, 2024

The People's Liberation Army Navy (PLAN) of China possesses both a nuclear-powered submarine fleet and a robust diesel-electric submarine fleet. While the PLAN is currently developing its nuclear-powered submarine capabilities, its diesel-electric submarine fleet remains the backbone of China's submarine forces. According to United States government reports, the PLAN is expected to grow its fleet to 65 submarines by 2025.

<https://www.nti.org/analysis/articles/china-submarine-capabilities/>

Hong Kong chip fab raises U.S. research security concerns: report

Pak Yiu

Nikkei Asia, August 13, 2024

A Chinese scientist who worked on developing photonic technology for the U.S. military is now leading a third-generation semiconductor chip production venture in Hong Kong, raising concerns about U.S. research security, according to a defence policy group in Washington. Liao Yitao, a former Boston University researcher, will spearhead a new facility producing chip technology crucial for advanced semiconductors in Hong Kong that is set to be operational this year.

<https://asia.nikkei.com/Politics/International-relations/US-China-tensions/Hong-Kong-chip-fab-raises-U.S.-research-security-concerns-report>

South China Sea: US Navy's newest air-to-air missile could erase China's aerial advantage

South China Morning Post, August 14, 2024

The US Navy's deployment of new extremely long-range air-to-air missiles in the Indo-Pacific could erase China's advantage in aerial reach, experts say, part of an intensifying focus on projecting power amid high tensions in the region. The AIM-174B, developed from the readily available Raytheon SM-6 air defence missile, is the longest-range such missile the United States has ever fielded and was officially acknowledged in July.

<https://www.scmp.com/news/asia/southeast-asia/article/3274493/south-china-sea-us-navys-newest-air-air-missile-could-erase-chinas-aerial-advantage>

Chinese Foreign Ministry on Japanese parliamentarians' visit to Taiwan

Ministry of Foreign Affairs, The People's Republic of China, August 14, 2024

The Taiwan question is at the very core of China's core interests. It bears on the political foundation of China-Japan relations and is a red line that must not be crossed. Japan committed innumerable crimes during its 50 years of colonial rule over Taiwan, and is responsible for the enormous sins witnessed by history against the Chinese people. We call on certain Japanese politicians not to forget the lessons of history and to recognize the fact that there is but one China in the world and Taiwan is an inalienable part of China's territory. They should adhere to the one-China principle and the spirit of the four political documents between China and Japan, and stop sending wrong signals to the "Taiwan independence" separatists.

https://www.fmprc.gov.cn/eng/xw/fyrbt/202408/t20240814_11472410.html

Taiwan chipmaker breaking ground in Europe amid China threat

Li Beiping

Voice of America, August 14, 2024

Taiwan Semiconductor Manufacturing Company, TSMC, the world's top advanced computer chipmaker, is expected to break ground on its first European factory in Dresden, Germany, as it seeks to diversify production from Taiwan and threats from China. TSMC is the biggest supplier of semiconductor chips used in everything from computers to cars and medical equipment. The company will run the nearly \$11 billion plant, holding a 70% stake.

<https://www.voanews.com/a/taiwan-chipmaker-breaking-ground-in-europe-amid-china-threat/7742536.html>

Iron stealth vs Iron Dome: PLA scientists create stealth coating affordable for everyone

Stephen Chen

South China Morning Post, August 14, 2024

How can you mass-produce high-performance stealth materials cheaply? Chinese military scientists have developed a groundbreaking method. Their innovative, cost-effective coating can achieve both radar and infrared stealth, significantly reducing the interception rate of air defence systems using multiple detection methods. For instance, Israel's famed Iron Dome system uses radar to detect drones or ballistic missiles, and then launches missiles equipped with heat-seeking sensors to destroy the threats. The new Chinese stealth coating is cheap to make, using ordinary industrial equipment such as a laser processing machine that is priced below 50,000 Chinese yuan (US\$6,972) on China's online shopping platforms.

<https://www.scmp.com/news/china/science/article/3273835/iron-stealth-vs-iron-dome-pla-scientists-create-stealth-coating-affordable-everyone>

The choice of German companies is a silent opposition to 'over-politicization'

Global Times, August 15, 2024

"German companies are investing in China more than ever before," said a French media outlet. According to foreign media reports, German direct investment into China, much of it driven by big German carmakers, has risen sharply this year. That brings the total for the first half of 2024 to €7.3 billion (\$8.06 billion). Some of these reports intentionally highlight the current trade tensions between China and Europe and the so-called "de-risking" context to emphasize the "rebellious" nature of German companies. Some French media have even bluntly remarked that German companies seemingly have "suffered Stockholm Syndrome."

<https://www.globaltimes.cn/page/202408/1318064.shtml>

China: AUKUS nuclear sub cooperation harms efforts for regional peace

China Daily, August 15, 2024

A Chinese Foreign Ministry spokesperson said AUKUS nuclear-powered submarine cooperation harms efforts to keep the region peaceful and secure, adding that the United States, the United Kingdom and Australia should not proceed with their nuclear-powered submarine cooperation, until the international community reaches consensus on safeguards and other issues. It was reported that Australia has recently signed a cooperation agreement with the United States and the UK on nuclear-powered submarines that will enable the three countries to exchange nuclear-related material and information.

<https://www.chinadailyhk.com/hk/article/590620>

China's Wang Yi urges war-torn Myanmar to seek 'political reconciliation'

CK Tan

Nikkei Asia, August 15, 2024

Chinese Foreign Minister Wang Yi urged Myanmar to pursue political reconciliation and hold long-promised elections, during a visit to the strife-torn Southeast Asian nation that has seen the military regime lose key outposts to resistance forces in recent weeks. Wang met with military chief Min Aung Hlaing and influential former leader Than Shwe in Naypyitaw. Speculation had swirled about whether he would see the former, amid rumors of internal dissent within the regime, known as the State Administration Council, and possible efforts to remove the senior general from power. According to a Chinese readout, Wang told Min Aung Hlaing that Beijing "firmly supports Myanmar in safeguarding its independence, sovereignty, national unity and territorial integrity."

<https://asia.nikkei.com/Spotlight/Myanmar-Crisis/China-s-Wang-Yi-urges-war-torn-Myanmar-to-seek-political-reconciliation2>

China's military AI detects secret radar links between South China Sea, Alaska and Guam

Stephen Chen

South China Morning Post, August 16, 2024

Chinese electronic warfare AI has detected mysterious signals that repeatedly show up in the South China Sea, Guam, the Marshall Islands and the Aleutian Islands near Alaska – and they appear to be coordinated. Scientists involved in the investigation say that the characteristics of these electromagnetic signals suggest the existence of “tactical coordination” among military radars deployed in these areas across the Pacific Ocean. This is the first time the People’s Liberation Army has publicly showed its ability to gather electronic warfare intelligence around the globe “based on specific targets and actual reconnaissance data”, according to the researchers.

<https://www.scmp.com/news/china/science/article/3274610/chinas-military-ai-detects-secret-radar-links-between-south-china-sea-alaska-and-guam>

China-Kiribati cooperation will continue, in spite of anti-China canvass spreading misinformation

Chen Hong

Global Times, August 16, 2024

Taneti Maamau, president of the Pacific island nation Kiribati, retained his parliamentary seat in a landslide in the first round of voting in a national election. With a population of 134,000,

the election in this island country has evoked considerable coverage in a number of Western media outlets. Instead of focusing on the actual election processes and the constituencies' expectations, frontpage headlines of these outlets attempt to stir up unwarranted "concerns" or even "alarm" on the China-Kiribati relations. Some even labeled election as "a referendum on Maamau's embrace of Beijing."

<https://www.globaltimes.cn/page/202408/1318175.shtml>

Iran seeks China's help with surveillance satellites, officials say

Joby Warrick and Souad Mekhennet

The Washington Post, August 16, 2024

Iran is pursuing partnerships with two Chinese satellite companies, Western security officials say, as it seeks to expand its capability for remote surveillance and intelligence gathering, potentially including high-resolution images of military targets in Israel and across the Middle East. The outreach has included multiple exchanges of delegations in recent months between Iran's Islamic Revolutionary Guard Corps and the Chinese companies, both of which manufacture and operate remote-sensing satellites with sophisticated cameras, according to U.S., European and Middle Eastern officials privy to intelligence reports describing the meetings.

<https://www.washingtonpost.com/national-security/2024/08/16/iran-space-china-satellites-military/>

Chinese military slams US for trying to maintain hegemony with nuclear weapons

China Daily, August 16, 2024

A Chinese defence spokesperson denounced the United States for attempting to maintain hegemony and intimidate the world with nuclear weapons. Zhang Xiaogang, spokesperson for the Ministry of National Defense, made the remarks in response to a media query regarding the United States and Japan reconstituting the US Forces Japan, and their accusation of China for expanding nuclear weapons arsenal. The United States and Japan recently have been playing up the so-called "China military threat" to make up excuses for closer military ties. Such acts provoke bloc confrontation and undermine regional peace and stability, Zhang said, expressing firm opposition.

<https://www.chinadailyhk.com/hk/article/590800>

Shanghai to develop full-coverage communications network for low-altitude flights

Xinhua, August 17, 2024

By the end of 2026, Shanghai will have largely established a low-altitude communications network with continuous coverage throughout the region, facilitating the development of the low-altitude economy, a government guideline has said. According to the guideline released by the Shanghai Communications Administration, the city will, over a period of three years, gradually achieve low-altitude coverage of an internet of intelligence based on 5G-A network -- an enhanced version of 5G. Shanghai encourages telecommunications companies to provide a communications network with ultra-high bandwidth, ultra-low latency and massive connections for low-altitude flights, the guideline stated.

<https://english.news.cn/20240817/d34a5435b0c849dbb2601a0ed6345ae6/c.html>

Chinese scientists planning rotating launch system on the moon

Ling Xin

South China Morning Post, August 18, 2024

Chinese scientists have proposed building a magnetic launcher on the moon to provide a cost-effective way of sending resources extracted from the lunar surface back to Earth. The magnetic levitation facility would work on the same principle as the hammer throw in athletics but rotating at increasing speeds before throwing the launch capsule towards Earth. By taking advantage of the moon's unique environment, such as its high vacuum and low gravity, it would be able to eject payloads twice a day at around 10 per cent of the cost of existing transport methods, according to researchers from the Shanghai Institute of Satellite Engineering.

<https://www.scmp.com/news/china/science/article/3274828/chinese-scientists-planning-rotating-launch-system-moon>

Top atomic bomb scientist dies at 95

Yan Dongjie

China Daily, August 19, 2024

Zhou Guangzhao, a renowned physicist and former president of the Chinese Academy of Sciences, has died at the age of 95, Xinhua News Agency reported. A pivotal figure in China's nuclear weapons program, Zhou was honored with the prestigious "Two Bombs, One

Satellite" Meritorious Service Medal in 1999. Zhou made significant contributions to theoretical physics, including his discovery in 1960 of the partial conservation of axial current — one of the most important contributions to particle physics and the key to understanding the interactions of fundamental particles known as pions. His work was also instrumental in the research and development of China's first atomic bomb, hydrogen bomb and other nuclear weapons.

<https://global.chinadaily.com.cn/a/202408/19/WS66c29517a31060630b923afa.html>

Shanghai injects US\$1 billion into chip fund as China strives for self-reliance

Che Pan

South China Morning Post, August 19, 2024

The Shanghai Semiconductor Industry Investment Fund (SSIIF), run by the municipal government to support the local chip industry, has doubled its size to around US\$2 billion after a new funding round, as the Chinese semiconductor hub pumps more money into the sector amid US sanctions targeting the industry. The SSIIF raised 6.9 billion yuan (US\$963 million) from investors, most of them state-backed companies based in Shanghai, to expand its capital base to 14.5 billion yuan, according to data from business registry database Qichacha. The capital boost is expected to bolster the fund's capacity to finance projects vital to helping China reach self-sufficiency in the semiconductor sector, and signifies Shanghai's commitment to developing chip technology.

<https://www.scmp.com/tech/tech-war/article/3275077/tech-war-shanghai-injects-us1-billion-chip-fund-china-strives-self-reliance>

Chinese Foreign Ministry on the revised Counterespionage Law of the People's Republic of China

Ministry of Foreign Affairs, The People's Republic of China, August 19, 2024

China is firmly committed to promoting high-standard opening up and providing Chinese and foreign companies with a world-class pro-business environment that is market-oriented and law-based. China's Counterespionage Law targets the very few spying activities that are harmful to China's national security, not normal business and investment activities. As long as businesses operate lawfully and their personnel abide by the law, there's no need for concern.

https://www.fmprc.gov.cn/eng/xw/fyrbt/lxjzh/202408/t20240819_11475916.html

Chinese and Philippine ships collide again in disputed waters, and the countries are trading blame

Simina Mistreanu and Jim Gomez

The Associated Press, August 19, 2024

Chinese and Philippine coast guard ships collided at sea, damaging at least two vessels, in an encounter near a new flashpoint in their increasingly alarming confrontations in the disputed South China Sea. Each blamed the other for the collision near Sabina Shoal, a disputed atoll in the Spratly Islands, where Vietnam and Taiwan also have overlapping claims. There were no reports of injuries. China's coast guard accused the Philippines of deliberately crashing one of its ships into a Chinese vessel.

<https://apnews.com/article/china-philippines-sabina-shoal-collision-fd76fcfcfcfdce5eb81c9422e8216c>

CCG restricts repeated Philippine vessel intrusions near South China Sea reefs

Liu Xuanzun and Du Qiongfang

Global Times, August 19, 2024

The China Coast Guard (CCG) took legitimate, professional and restrained restrictive measures on Philippine Coast Guard ships when they consecutively intruded into waters adjacent to two Chinese reefs in the South China Sea, with experts slamming the Philippine' dangerous moves of brinkmanship that violate China's territorial sovereignty. The Philippine Coast Guard ships MRRV-4410 and MMRV-4411 illegally intruded waters adjacent to Xianbin Jiao (also known as Xianbin Reef) of China's Nansha Qundao (also known as Nansha Islands), and the CCG conducted restrictive measures in accordance with the law, CCG spokesperson Gan Yu said in a statement.

<https://www.globaltimes.cn/page/202408/1318276.shtml>

China-US tensions erode co-operation on science and tech

Michael Peel and Eleanor Olcott

Financial Times, August 19, 2024

Rising tensions between the US and China threaten to sever a 45-year-old science and technology pact due for renewal later this month, hindering the superpowers' collaboration in critical areas. Researchers are attempting to work round the strained inter-governmental relationship, with some focusing on less contentious possible areas of co-operation, such as climate change and diseases related to ageing. The struggle to strike a comprehensive multiyear extension to the science and technology accord is a sign of how political problems can undermine frontier research work.

<https://www.ft.com/content/68ab4ed3-2f9a-4d0d-a23e-59db2555e1b0>

Xi holds talks with Vietnam's top leader To Lam in Beijing

China Daily, August 19, 2024

Xi Jinping, general secretary of the Communist Party of China Central Committee and Chinese president, held talks with To Lam, general secretary of the Communist Party of Vietnam Central Committee and Vietnamese president, in Beijing. Xi welcomed Lam's state visit to China and once again congratulated him on election as general secretary of the CPV Central Committee. China is the destination for Lam's first overseas visit after taking office as general secretary of the CPV Central Committee. Xi said this fully reflects the great importance Lam attaches to the relations between the two parties and the two countries, as well as the high level and strategic nature of China-Vietnam relations.

<https://www.chinadaily.com.cn/a/202408/19/WS66c2b31ea31060630b923c6b.html>

Chinese team thinks ‘outside the box’ to find a cool solution to hypersonic heat

Stephen Chen

South China Morning Post, August 19, 2024

A Chinese military research institute says it has developed an efficient way to control one of the biggest challenges to hypersonic flight: searing heat. The new cooling device can operate for up to 2½ hours – significantly longer than previously reported solutions and enough for a journey from one side of the Earth to the other. It has a simple structure and the cost is relatively low because it does not have complex components like heat pipes or booster pumps. And it is reusable – it just needs clean water added before each flight. The team behind it was led by Li Shibin, an assistant researcher with the National University of Defence Technology's College of Aerospace Science and Engineering in Changsha, Hunan.

<https://www.scmp.com/news/china/science/article/3274827/chinese-team-thinks-outside-box-find-cool-solution-hypersonic-heat>

Chinese Foreign Ministry on the collision between the Philippine Coast Guard vessels and the Chinese Coast Guard vessel in the South China Sea

Ministry of Foreign Affairs, The People's Republic of China, August 20, 2024

What China did was to respond to the Philippines' infringement activities. We took those actions in order to defend our territorial sovereignty and maritime rights and interests. They are just, lawful and beyond reproach. The US is not a party to the issue of the South China Sea and is in

no position to interfere in the maritime issues between China and the Philippines. Still less, the US should not use the US-Philippines Mutual Defense Treaty to justify the violation of China's sovereignty, rights and interests in the South China Sea. The US needs to stop stoking confrontation in the South China Sea, and stop destabilizing the region and escalating the tensions in the region.

https://www.fmprc.gov.cn/eng/xw/fyrbt/lxjzh/202408/t20240820_11476896.html

CAS' new liquid rocket Kinetica-2 nails key test, aims maiden flight by 2025

Deng Xiaoci

Global Times, August 20, 2024

Kinetica-2, Chinese Academy of Sciences (CAS) Space's new liquid propellant rocket that is designed to support China's large-scale satellite constellation networks, has successfully completed its stage separation test, marking a milestone achievement toward its maiden flight scheduled for 2025, the Global Times learned from the rocket developer. According to the CAS Space, the test demonstrated the normal functioning of all systems involved and confirmed the successful separation of the rocket's first and second stages.

<https://www.globaltimes.cn/page/202408/1318358.shtml>

China OKs five nuclear power projects

Yang Yang

China Daily, August 20, 2024

China has approved five new nuclear power projects, including 11 nuclear power units, driving 100 billion yuan-level investment. The new projects involve a variety of independent third - and fourth-generation nuclear power technology routes. The total investment of these projects is more than 200 billion yuan (\$28 billion). The project in Xuwei, East China's Jiangsu province, is world's first nuclear power plant that couples high temperature gas-cooled reactor with pressurized water reactor, focuses on industrial heating and electricity supply.

<https://www.chinadaily.com.cn/a/202408/20/WS66c4326aa31060630b923fda.html#:~:text=China%20has%20approved%20five%20new,generation%20nuclear%20power%20technology%20routes.>

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