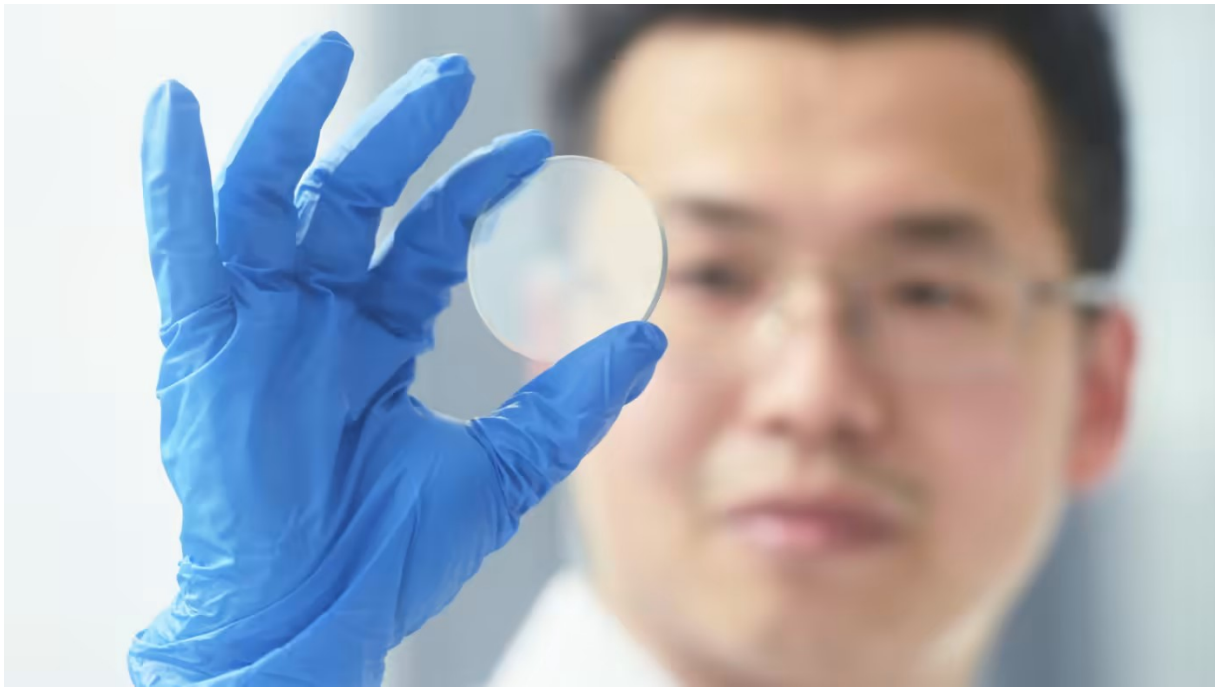


Opinion **Lex**

The Lex Newsletter: rare earth dearth will hurt US and China

Tit-for-tat trade curbs show both nations are prioritising political objectives over economic health

JUNE YOON



A gallium oxide wafer. China accounts for 80% of global output of gallium, a metal used in chip production as well as in the defence and renewable energy industries © Costfoto/NurPhoto/Reuters

June Yoon in Seoul YESTERDAY

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Dear reader,

Investors are putting big bets on who the immediate winner will be in geopolitical backbiting between China and the US. China has hit back at mooted [US-led restrictions](#) on chip sales by [limiting its own exports](#) of two metals used in chipmaking. A rally in related stocks overlooks the likely long-term effects.

The US dented China's plans to make advanced artificial intelligence chips. By subjecting gallium and germanium to export restrictions, Beijing has set up roadblocks in the world's chip manufacturing supply chain.

The two materials are used in chip production and can serve as alternatives to some traditional silicon wafers. They are also needed in a wide range of products in the defence and renewable energy industries, including solar cells, night-vision devices and satellites.

China accounts for about two-thirds of the world's germanium production and about 80 per cent of global gallium output.

Shares of Chinese metals producers surged following the export controls. Yunnan Lincang Xinyuan Germanium Industrial rose by its 10 per cent daily limit for the second straight day on Wednesday, bringing gains for the year to more than 50 per cent. Expectations are running high that prices and demand for the materials will surge as controls limit supply.

Most germanium is a byproduct of zinc production. Gallium is found in small amounts in zinc ores. That has boosted related stocks such as Aluminum Corp of China, which also produces gallium, and Zhuzhou Smelter Group.

The timing of the export controls suggests Beijing will no longer sit back as it loses access to advanced chips. The move comes just days after the Netherlands announced its latest set of export controls on high-end chipmaking equipment made primarily by Dutch group ASM.

China is sending a signal to the US. Treasury secretary Janet Yellen is scheduled to visit Beijing this week.

Chinese curbs on metals exports are not an insuperable problem for chipmakers elsewhere. The US, Canada and Belgium can make germanium while South Korea and Japan produce gallium.

Production capacity is limited at present. Setting up new processing plants is time-consuming and costly. Yields are low.

The move comes at a high cost to Chinese producers. These are mostly relatively small companies. One of the main groups, Yunnan Lincang Xinyuan Germanium, for example, has a market valuation of just \$1bn. Operating margins are negative. That makes it difficult for the companies to weather an extended period of declining export volumes.

Chipmakers in South Korea, one of the world's largest importers of the two materials, can fall back on large stockpiles in the government's inventory. That could mean a slower rise in material prices than Chinese suppliers hope.

But a dent to local companies' earnings may be a price Beijing is willing to pay. Like Washington, it is prioritising political objectives over the health of its businesses and international trade.

Rising tensions with the US are far from over. The Biden administration is reportedly preparing to restrict the access of Chinese companies to US cloud-computing services that use advanced AI chips.

Beijing may well add more materials to its export control list in retaliation for this and other side swipes from the US. China accounts for about two-thirds of the world's rare earth mining and most of the world's processing capacity. Some of these metals — including dysprosium, cerium and neodymium — are critical for the supply chains of electric cars, missiles, magnets and renewable energy production.

The effects could be far-reaching. The world is attempting to switch to a net zero economy. The move is dogged with uncertainty, inertia and feeble policymaking. A trade war that impedes a full switchover from combustion vehicles to the electric kind may be an added problem.

Meanwhile, the battle over high technology will surely retard innovation in both the west and east. In the geopolitical contest to cut off noses to spite faces, Washington and Beijing are both making steady progress.

Enjoy the rest of your week,

June Yoon

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