Titanium's Spotlight Moment: Why a Once-Niche Metal Now Sits at the Center of Global Critical Minerals Diplomacy

written by Tracy Hughes | May 28, 2025

One year ago, titanium was a sleepy footnote in metals conferences, relegated to side-panels on aerospace alloys and pigment pricing. Today, it commands plenary attention. In April, Airbus SE committed to buy SAR 2.5 billion (US$ 666 million) worth of Saudi titanium to secure fuselage feedstock for up to twenty A330neo jets—an order that underlines how abruptly the titanium supply map is being redrawn. And last week, the Critical Minerals Institute (CMI) crystallized that reality by elevating titanium to its newly minted "CMI Critical Minerals List 2025", a 23-mineral shortlist distilled from a dozen national strategies. Titanium has graduated from specialty metal to strategic commodity.

From benign alloy to strategic asset

Why the rush? Titanium combines a steel-like strength-to-weight ratio with outstanding corrosion resistance, a pairing prized by jet-engine OEMs, nuclear-grade engineers, and orthopedic-implant makers. That performance once made titanium a story only for Boeing, Airbus, and a handful of defense ministries. Russia's invasion of Ukraine, however, exposed an uncomfortable fact: roughly 20% of the aerospace-grade sponge moving into Western supply chains originated with VSMPO-Avisma, a company now operating behind sanctions and export restrictions. The scramble to replace that tonnage has spilled over into every link in the

chain, from sponge processors to pigment producers.

Pricing tells the tale

Spot sponge prices have climbed about 13% year-to-date, holding in a US$ 6,000-to-US$ 6,600 per-tonne band, while Ti-6Al-4V bar hovers near US$ 16 per kilogram—manageable for air-framer cost models but high enough to squeeze medical-device margins. TiO_2 pigment, by contrast, remains soft on lackluster construction demand, illustrating the bifurcated nature of this market: the aerospace "metal chain" (≈10 percent of volume) is tight; the pigment chain (≈90 percent) is oversupplied.

Geopolitics moves the dial

The Airbus-Saudi accord is emblematic. By pivoting to Riyadh, Airbus simultaneously diversifies away from Russia and inserts itself into Crown Prince Mohammed bin Salman's Vision 2030 industrial agenda, guaranteeing future supply while helping Saudi Arabia up the manufacturing ladder. Boeing, sourcing heavily from U.S. suppliers TIMET and ATI Inc. (NYSE: ATI), must now weigh whether geographic de-risking trumps cost.

Ukraine adds another geopolitical layer. Kyiv and Washington activated a joint minerals investment fund on May 23rd, aiming to channel new licence fees into critical mineral projects. Although half of Ukraine's mineral territory sits under Russian occupation, titanium deposits in western oblasts remain out of range and could, with sustained capital, feed European aerospace users eager to shorten supply lines.

The North-American capsule

North America's titanium ecosystem is smaller than China's or

Australia’s, but it offers a public-market window on three distinct business models—pigment integration, legacy pigment plus fluoropolymers, and circular-economy powder metallurgy. Each company is navigating the same tectonic shifts but from different starting points.

Policy tailwinds—and tripwires

Congress is debating the *Securing America’s Titanium Manufacturing Act*, which would waive Section 232 duties on imported titanium sponge for five years while funneling Defense Production Act dollars into domestic capacity. Chemours and Tronox welcome the downstream relief but caution that dropping duties could invite a flood of low-cost sponge that undermines prices before U.S. sponge projects (Allegheny Technologies’ Rowley restart, UKTMP’s Montana JV) can scale.

Across the border, Ottawa’s Critical Minerals Strategy now offers up to 30 percent investment tax credits for metal projects that align with NATO supply-chain security—a quietly significant lever for Tronox’s Saskatchewan pigment plant and IperionX’s recycled-powder facility. The policy subtext is clear: titanium is no longer simply a commodity; it is a dual-use strategic material.

Investors’ calculus

Market sentiment has not yet caught up with titanium’s new status. Tronox trades at roughly 5× forward EBITDA—half its 2019 multiple—because pigments still account for 85% of revenue. Chemours’ multiple is depressed by PFAS litigation overhang despite improvements in balance-sheet leverage. IperionX, meanwhile, commands a premium valuation on the promise of greenfield powder growth. In other words, the market is treating

titanium equities as either cyclical chemical stocks or pre-revenue tech bets, not as levers on national security supply chains. That mismatch offers patient capital an asymmetry: geopolitical optionality priced as commodity cyclicals.

Tronox Holdings plc (NYSE: TROX) carries a market capitalization of roughly **US $0.77 billion**. The company is one of the few vertically integrated titanium players: it mines mineral-sands feed in Florida and Western Australia and processes that ore in its chloride-route TiO_2 pigment complex in Mississippi. By relying on its own rutile and ilmenite, Tronox shields itself from China's overcapacity pressures. Investors are now focused on whether the firm's planned 2027 Florida expansion will protect margins if Washington widens tariffs on Chinese pigment imports.

The Chemours Company (NYSE: CC), valued at about **US $1.56 billion**, is best known for the Teflon® fluoropolymers brand, yet it also operates one of the world's largest chloride-route TiO_2 pigment systems. Management is shutting older sulfate plants and concentrating on high-efficiency chloride assets while actively lobbying against EU anti-dumping measures that could reshape global pigment flows. Chemours's strategy hinges on streamlining its asset base and defending trade routes to keep unit costs in check.

IperionX Limited (NASDAQ: IPX | ASX: IPX) sports a market capitalization near **US $0.79 billion**. The newcomer's edge lies in two patented processes—HAMR and GSD—that convert low-grade ilmenite, production scrap, and aerospace swarf into high-purity titanium powder and spherical additive-manufacturing feedstock. Its Tennessee pilot plant already supplies Lockheed Martin, positioning IperionX as a circular-economy, low-carbon alternative to conventional sponge production and giving the U.S. Department of Defense a secure, traceable domestic source

of critical titanium powders.

What could go wrong

Supply-chain de-risking is not a free lunch. Saudi Arabia's titanium ore comes with its own desert-logistics challenges; Ukraine's deposits sit one artillery volley away from the front line; U.S. sponge restarts must clear environmental permitting that averages 4.7 years. Add in the Trump administration's talk of reciprocal tariffs on European aerospace imports and you have a volatility cocktail that will reward vertically integrated players and punish toll processors caught between ore inflation and OEM price caps.

Why titanium stays on the CMI radar

CMI's Directors rank titanium alongside rare earths and gallium for cross-sector versatility—from hypersonic missile skins to hydrogen-electrolyser frames. That breadth explains why CMI trimmed 55 candidates down to 23 yet kept titanium on the slate. Materials that straddle old-economy infrastructure and next-generation defense tech warrant policy priority because they cannot be swapped out overnight.

Closing thought

Twenty-five years covering metals markets has taught me that supply chains rarely break cleanly; they fray, fiber by fiber, until one missing thread snaps the loom. The question is no longer whether titanium is critical, but **who holds the keys to its supply chain.**