



Weekly Precious Metals News Articles: February 11, 2022

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Below is a cross section of relevant news article to the world of Precious Metals:

Markets, Supply & Demand, Investment, and Industrial Applications.

Printable PDF version attached. Enjoy-

Gold

- **Gold keeps finding a bid: Up in 8 of the past 10 days**
 - Gold is up \$14 from the European low and \$8 on the day to \$1835. It reversed lower yesterday on the rout in bonds and risk trades but it has since steadied and is now on track for the highest close of the month.
<https://www.forexlive.com/news/gold-keeps-finding-a-bid-up-in-8-of-the-past-10-days-20220211/>
- **Could drinking gold nanoparticles regenerate our nervous system?**
 - CNM-Au8's potential therapeutic activity was assessed in a recent paper published in Scientific Reports. This paper shows that CNM-Au8 stimulates and supports energy metabolic pathways in oligodendrocyte membranes, promoting remyelination of axons and recovery of behavioral functions in animal models of multiple sclerosis. The authors (partially composed of Clene Nanomedicine scientists and engineers) concluded in this study that clean-surfaced, faceted gold nanocrystals represent a novel remyelinating therapeutic for multiple sclerosis.
<https://www.utahbusiness.com/could-drinking-gold-nanoparticles-regenerate-our-nervous-system/>
- **Gold Price Defies 30-Month High in Bond Yields as Inflation 'Getting Worse Before Better'**
 - Gold prices continued to rise in London trade Wednesday, reaching 2-week highs against a weaker US Dollar as longer-term interest rates eased back from their strongest since mid-2019 ahead of tomorrow's US consumer-price inflation data. With gold prices reaching \$1830 per ounce, Washington's 10-year Treasury yield slipped 3 basis points from Tuesday's new 30-month highs at 1.96% per annum. December's CPI inflation was reported at 7.0% by the Bureau of Labor Statistics, the fastest annual rise in the cost-of-living for 4 decades, creating the worst negative real interest rates on record for cash savers.
<https://www.bullionvault.com/gold-news/gold-inflation-020920222>
- **Why 42 States Have Removed Taxes from the Purchase of Gold and Silver**
 - Taxing the exchange of dollars for the monetary metals is an atrocious policy for several reasons.
<https://fee.org/articles/why-42-states-have-removed-taxes-from-the-purchase-of-gold-and-silver/>

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Chip Giants are Ramping Up Spending by Billions**
 - The world's largest contract chipmaker, TSMC, has committed to investing \$100 billion over three years to ramp up production. Rival Intel announced last March that it plans to spend \$20 billion on two new chip plants in Arizona.

- In 2021, semiconductor companies worldwide spent \$146 billion building new production capacity and on research, according to research firm Gartner. TSMC, Samsung and Intel — three of the world’s biggest chipmakers — accounted for 60% of the \$146 billion.
<https://www.cnbc.com/2022/02/04/tsmc-intel-ramp-up-spending-as-semiconductor-demand-booms.html>
- **EU rolls out a red carpet for TSMC and other semiconductor giants**
 - EU announces ambitious programme to spend €42 billion (US\$48 billion) by 2030 to effectively double the bloc’s production of semiconductors
 - EU is already in talks with Taiwan Semiconductor Manufacturing Co hoping to attract the industry giant to help develop European chip industry
<https://www.scmp.com/news/world/europe/article/3166311/eu-rolls-out-red-carpet-tsmc-and-other-semiconductor-giants>
- **GF sees revenue from automotive chip orders hike 187% in 2021**
 - Globalfoundries has reported revenue climbed 36% on year to US\$6.6 billion in 2021, when the pure-play foundry saw sales generated from the automotive sector hike 187% from a year earlier to US\$287 million.
<https://www.digitimes.com/news/a20220209VL208.html>
- **GlobalFoundries bullish on strong chip demand**
 - GlobalFoundries Inc, the biggest US-based provider of made-to-order semiconductors, gave a bullish forecast for the current quarter, indicating the rush to get chips continues amid industry-wide shortages. *Matt: GF is a Semiconductor front-end foundry.*
<https://www.taipeitimes.com/News/biz/archives/2022/02/10/2003772847>
- **Toshiba to split into two companies**
 - Toshiba Corp yesterday announced plans to split into two companies, revising a controversial proposal to divide into three following a tumultuous period for the storied industrial conglomerate. The group said it plans to spin off its device segment, including its semiconductor business, in a bid to speed up decision making and boost stock performance.
<https://www.taipeitimes.com/News/biz/archives/2022/02/08/2003772718>

Silver

- **Global Silver Demand Forecast to Reach a Record 1.112 billion Ounces in 2022**
 - The increase will be driven by record silver industrial fabrication, which is forecast to improve by +5%, as silver’s use expands in both traditional and critical green technologies. Physical silver investment demand is projected to jump +13% in 2022, achieving a 7-year high. Silver’s use in jewelry +11% and silverware +21% is also expected to strengthen in 2022.
 - Total global silver supply is projected to rise by +7% in silver mine production, and silver recycling should advance by +3%.
<https://www.silverinstitute.org/global-silver-demand-forecast-reach-record-1-112-billion-ounces-2022/>
- **Bridging the propylene gap: Electrocatalyst offers new path for converting captured carbon into valuable products**
 - At the heart of the innovation is an electrocatalyst made of copper, silver and ruthenium. When carbon monoxide (CO) and water arrive at the surface of this catalyst, they undergo a series of electrochemical reactions that result in the production of 1-propanol.
 - “There are already established and cost-effective ways to convert CO₂ to CO, as well as 1-propanol to propylene,” says Josh Wicks, a PhD student in Sargent’s lab group. “The missing link in the chain was going from CO to 1-propanol. That’s what Dr. Wang and the rest of the team have now demonstrated.”
<https://news.engineering.utoronto.ca/bridging-the-propylene-gap-electrocatalyst-offers-new-path-for-converting-captured-carbon-into-valuable-products/>

- **Silver to have bonanza 2022 after record demand last year**
 - The outlook for 2022 assumes a 5% increase in silver demand for industrial fabrication, as the metal's use expands in both traditional and critical green industries.
 - "Ongoing improvements in the global economy will give silver industrial applications an additional boost, mitigating near-term headwinds from supply chain bottlenecks and the challenges in certain regions from the ongoing COVID pandemic," Silver Institute predicts.
<https://smallcaps.com.au/silver-bonanza-2022-after-record-demand-last-year/>
- **GoodWe: Global solar installations could exceed 240GW in 2022**
 - According to Shen Rong, Vice President of GoodWe, the global PV market could see new installations exceeding 240GW in 2022 on the back of easing supply chain issues. In an interview with pv magazine he lays out the current challenges and opportunities this year's solar market is likely to see.
 - *Matt: 240GW in 2022 with projected design throttling would represent > 160Moz of Ag demand. Note BloombergNEF forecasts 2022 at a lower 228 GW of new installations.*
<https://www.pv-magazine.com/2022/02/08/goodwe-global-solar-installations-could-exceed-240gw-in-2022/>
- **Biden's Solar Panel Tariffs Make It Costlier To Meet Biden's Climate Goals**
 - The White House announced that it would extend Trump-era tariffs on several types of imported solar panels and solar cells. Those tariffs were set to expire later this month, but President Joe Biden has invoked his unilateral authority to extend them for another four years.
 - The tariff will be applied at a rate of 14.75% this year, with planned declines to 14.5%, 14.25%, and 14% in each of the next three years. Donald Trump's tariffs had been applied at 30% in 2018 and declined to 15% last year.
 - <https://reason.com/2022/02/07/bidens-solar-panel-tariffs-make-it-costlier-to-meet-bidens-climate-goals/>

Precious Metals Mining:

- **Barrick Gold grows net reserves by 150% at improved grade**
 - Barrick Gold (GOLD -1.1%) said it replaced its depletion of gold mineral reserves by 150% in 2021, before acquisition and equity changes at its South Arturo mine in Nevada and Porgera mine in Papua New Guinea, and improved the quality of its group reserve grade by 3%.
 - Barrick said at \$1,200/oz., attributable proven and probable reserves rose to 69M oz. at 1.71 g/t in 2021 from 68M oz. at 1.66 g/t in 2020.
<https://seekingalpha.com/news/3798767-barrick-gold-grows-net-reserves-by-150-at-improved-grade>
- **Wheaton Precious Metals meets 2021 production guidance, expects 'steady' long-term growth**
 - Royalty and streaming company Wheaton Precious Metals reported today that in 2021, its attributable gold equivalent production of 750,220 Toz exceeded the midpoint of guidance of between 735,000 and 765,000 Tozs. Wheaton noted that it further diversified its asset base in 2021 by adding five additional streams on development assets, which "will contribute to the company's steady organic growth over the next five years."
<https://www.kitco.com/news/2022-02-07/Wheaton-Precious-Metals-meets-2021-production-guidance-expects-steady-long-term-growth.html>
- **New integrated PGMs/chrome plant provides growth platform for Jubilee**
 - The new integrated facility can produce up to 44 000 oz/y of PGMs, compared with the previous output of 30 000 Toz/y PGMs, as well as 615 000 t/y of additional chrome concentrate. Among the PGMs produced are platinum, palladium, rhodium, ruthenium, osmium and gold.
<https://www.miningweekly.com/article/new-integrated-pgmchrome-plant-provides-growth-platform-for-jubilee-2022-02-08>
- **Royal Bafokeng recommends shareholders accept Impala's offer**
 - The sum offered by Impala is over eight times RBPlat's year ending June 2021 profit and a premium of up to 58% on the day it first offered to buy the company in October.

<https://www.mining.com/web/royal-bafokeng-recommends-shareholders-accept-impalas-offer/>

- **A wage deal in sight at Sibanye's gold mines**

- Trade union Solidarity said yesterday that a final wage deal might be in reach at Sibanye-Stillwater's gold mines after the precious metals producer on Friday tabled a revised offer to employees.
- This comes after seven months of negotiations had deadlocked. Wage talks between unions and Sibanye deadlocked in November after the unions rejected the company's wage offer.

<https://www.iol.co.za/business-report/companies/a-wage-deal-in-sight-at-sibanyes-gold-mines-ac241f01-2225-417a-abba-5e81aa435420>

E-Waste & Precious Metals Recycle Related:

- **BASF and Heraeus plan \$75 million plant in China to recycle autocatalysts**

- They will be 50-50 partners in the venture in Pinghu, a city near Shanghai, with production due to begin in 2023, the companies said.

<https://www.reuters.com/business/autos-transportation/basf-heraeus-plan-75-million-plant-china-recycle-autocatalysts-2022-02-11/>

- **INTERVIEW: PGM refineries running close to capacity despite limited scrap supply**

- Auto scrappage should pick up as new vehicle output rises in H₂
- PGM scrap supply should increase, prices may see slowdown
- Platinum imports to China to remain price elastic
- Despite the limited number of vehicles being scrapped currently, supply of auto catalysts to platinum group metal refineries for recycling remains sufficient and many are still running at close to full capacity, Standard Chartered Bank precious metals analyst Suki Cooper told S&P Global Platts.

<https://www.spglobal.com/platts/en/market-insights/latest-news/metals/020822-interview-pgm-refineries-running-close-to-capacity-despite-limited-scrap-supply-standard-chartered>

- **E-scrap export restriction proposal moves to US Senate**

- But the sprawling bill also includes a section prohibiting e-scrap exports. The only exempt items are electronic parts of vehicles, working used electronics, electronics at low risk of being counterfeited & recalled electronics. The bill wouldn't affect exports of separated e-scrap commodities & components, such as PCBs shipped to an overseas smelter to recover copper & precious metals.

https://resource-recycling.com/e-scrap/2022/02/10/e-scrap-export-restriction-proposal-moves-to-senate/?utm_medium=email&utm_source=internal&utm_campaign=Feb+10+ESN

- **Aurubis AG considerably boosts operating result in Q1 and increases full-year forecast**

- Multimetal company's operating EBT rose to € 152 million in Q1 2021/22, exceeding the previous year by 85 %. Very good market conditions and smelter network's outstanding production performance. *Matt: One of the largest Cu smelters and EEE/E-Waste processors in the world.*

<https://www.aurubis.com/en/media/press-releases/press-releases-2022/aurubis-ag-considerably-boosts-operating-result-in-Q1-and-increases-full-year-forecast>

Platinum

- **Platinum industry expected to take off**

- Global platinum investment organisation the World Platinum Investment Council (WPIC) believes that the current state of the platinum-group metals (PGMs) industry is, overall, buoyant as PGMs continue to be in demand for a range of industrial, and other, applications.
- "Confidentiality has prevented the details of platinum substitution being made public; the volume of its replacement may be notably higher than WPIC's published predictions. However, details are slowly becoming public and platinum substitution is likely to be the largest single component of short-term platinum demand growth, with WPIC's current forecast predicting that 200 000 oz of platinum will replace palladium in 2022, rising to at least 400 000 oz in 2023."

<https://www.engineeringnews.co.za/article/platinum-industry-expected-to-take-off-2022-02-10>

- **Quarterly (Jewelry) platinum sales cross pre-pandemic levels**
 - Growth was “extremely good” and retail sales rose 30-35% in the period, said Vaishali Banerjee, the managing director of Platinum Guild International India, which has retail partners across 1500 stores in the country. Many weddings were postponed during the pandemic and this led to a lot of pent-up demand for one of the most valuable precious metals.
 - The Gem and Jewelry Export Promotion Council said that the platinum exports have also been stellar in the October-December period of the current financial year. Platinum exports rose to \$7.01 million, compared with \$2.63 million for the same period in 2019.
<https://www.deccanherald.com/business/business-news/quarterly-platinum-sales-cross-pre-pandemic-levels-1079085.html>

Fuel Cells/Hydrogen Economy Related Articles:

- **Pt/Ru/Ir Catalyst: New Greentech Start-Up, Refhuel, to Develop Reversible Fuel Cell Technology**
 - Refhuel is developing a reversible fuel-cell based on a proprietary hydrogen carrier technology that will enable efficient storage and production of energy.
 - The announcement comes as Decama Capital Ltd looks to expand and explore new investment opportunities, particularly in the renewable energy sector.
<https://www.businesswire.com/news/home/20220207005412/en/New-Greentech-Start-Up-Refhuel-to-Develop-Reversible-Fuel-Cell-Technology>
- **Ballard cut at BMO as fuel cell engine growth seen slower than forecast**
 - BMO's Jonathan Lamers pointed to an internal analysis that suggests fuel cell adoption in the global heavy-duty motive markets targeted by Ballard likely will come in at ~7% in 2030, well below the 20% presented at the company's investor day.
 - "Competition has increased, with most global OEMs having partnered with hydrogen engine suppliers other than Ballard, and a number of upstart fuel cell engine manufacturers in China with support from Toyota," the analyst said.
<https://seekingalpha.com/news/3796593-ballard-cut-at-bmo-as-fuel-cell-engine-growth-seen-slower-than-forecast>
- **Cummins Inc. Leader Sees Promise for No-Carbon, H₂-Fueled Internal Combustion Engines**
 - “Hydrogen ICEs will provide a low-cost, zero-carbon solution for high load factor and high utilization applications where battery-electric solutions cannot meet the operational requirements and fuel cells are not yet economically viable,” Srikanth Padmanabhan wrote in a blog appearing recently on the global power leader’s website.
https://www.csrwire.com/press_releases/736331-cummins-inc-leader-sees-promise-no-carbon-hydrogen-fueled-internal-combustion
- **World’s first ammonia-ready vessel delivered**
 - Greek shipowner Avin International has taken delivery of Kriti Future, the first ammonia-fuel ready vessel in the world. “This vessel represents a milestone in the development of the maritime industry and a step forward in the readiness to utilize alternative marine fuels,”
<https://www.offshore-energy.biz/worlds-first-ammonia-ready-vessel-delivered/>
- **US: Hydrogen Fuel Cell Car Sales Rebounded In 2021**
 - The year 2020 was pretty weak for FCVs as only 937 were sold (down 55%), according to the California Fuel Cell Partnership. In 2021, things got better and not only did FCVs return to growth, but achieved a new record level of 3,341
<https://insideevs.com/news/565185/us-hydrogen-car-sales-2021/>
- **Advancing the hydrogen economy from production to application**
 - The fuel cells market for commercial vehicles is growing very rapidly. Over the last few years, the fastest growth has taken place in China. According to a report published last year

by the International Energy Association of all the fuel cell buses on the roads globally by year end 2020, 93% were operating in China. In the medium duty commercial vehicle segment over 99% of fuel cell trucks were operating on China's roads.

- Between April and September 2021, 170 new heavy duty fuel cell electric vehicles hit China's roads powered by REFIRE and Johnson Matthey technology. This number is expected to increase over the coming months.
<https://matthey.com/en/science-and-innovation/expert-insights/2022/advancing-the-hydrogen-economy-from-production-to-application>
- **The solar sponge: storing energy from hydrogen fuel cells and solar panels – Technology**
 - According to the manufacturer, this system acts as a “solar sponge”, integrating with solar panels to capture renewable energy. The LAVO system will use (a reversible) PEM fuel cells that will be powered by hydrogen obtained from water and absorbed by LAVO's proprietary metal hydride, where it is reliably and long-term stored in a secure container.
<https://thegoaspotlight.com/2022/02/06/the-solar-sponge-storing-energy-from-hydrogen-fuel-cells-and-solar-panels-technology-hybrids-and-electric/>
- **Hydrogen in the decarbonising mix**
 - As India sets out to achieve its net zero targets, a few innovative projects are coming up where renewable energy, green H₂ and microgrids converge to complement each other.
<https://www.thehindubusinessline.com/specials/clean-tech/hydrogen-in-the-decarbonising-mix/article64968850.ece>

Palladium

- **Platinum shorts are covering, rally to \$1,100 up next?**
 - Large speculators have drastically reduced their short positions against platinum futures, and price action has built a base above the 200-day eMA.
<https://www.forex.com/en/market-analysis/latest-research/platinum-shorts-are-covering-rally-to-1100-up-next/>
- **Palladium Prices Have Soared 23% So Far In 2022 —What Next?**
 - The price of palladium has risen to its highest level in the last four months amid pressure from traders to secure supply amid rising Russia-Ukraine tensions —the former is the world's largest producer of palladium, well above the second.
 - In the over-the-counter market, the metal has rapidly entered backwardation, indicating lower availability, but the rebound may be shorter than expected. Precisely, one of the problems that affect the palladium market is its scarce liquidity, which has historically caused rapid movements in its price.
<https://www.msn.com/en-us/money/news/palladium-prices-have-soared-23-25-so-far-in-2022-e2-80-94what-next/ar-AATK400?ocid=BingNewsSearch>
- **Ford plans to suspend or cut production at 8 factories due to chip shortage, Reuters reports**
 - Ford is to suspend or cut output at eight of its factories due to a chip shortage, Reuters reported. It will impact factories in the US, Canada and Mexico.
<https://news.yahoo.com/ford-plans-suspend-cut-production-123943696.html>

PGM Minor Metals (Rhodium, Iridium, Ruthenium, Osmium)

- **Rhodium trades above \$17,000/oz for first time in six months**
 - Rhodium approaching \$18,000/oz
 - Market up 19.50% since start of year
<https://www.spglobal.com/platts/en/market-insights/latest-news/metals/020822-rhodium-trades-above-17000oz-for-first-time-in-six-months>
- **Rhodium, Ruthenium and Iridium Price Trends**

- Matt: This is a recent blog on my website that tries to explain the Rh,Ir, Ru price movement since 2021 and what to expect in the 2H of 2022.
<https://www.preciousmetalscommoditymanagement.com/blog-part-2/rhodium-ruthenium-and-iridium-price-trends>
- **Ruthenium Catalyst: Turning carbon dioxide into gasoline efficiently**
 - Captured CO₂ can be turned into carbon-neutral fuels, but technological advances are needed. In new research, a new ruthenium catalyst increased the production of long-chain hydrocarbons in chemical reactions by some 1,000 times over existing methods.
<https://news.stanford.edu/2022/02/09/turning-carbon-dioxide-gasoline-efficiently/>

Clean Energy General News

- **No McKinsey, it will not cost \$9 trillion per year to solve climate change.**
 - A new report by McKinsey on the costs of transitioning the world to net zero carbon emissions by 2050 is making the rounds, brandishing a shocking top line figure of \$9.2 trillion per year.
<https://126807953-342388712406101991.preview.editmysite.com/editor/main.php#>
- **Goldman Commodity Veteran Says He's Never Seen a Market Like It**
 - "I've been doing this 30-years and I've never seen markets like this," Currie said in a Bloomberg TV interview. "This is a molecule crisis. We're out of everything, I don't care if it's oil, gas, coal, copper, aluminum, you name it we're out of it."
 - Futures curves in several markets are trading in super-backwardation -- a structure that indicates traders are paying bumper premiums for immediate supply. The downward sloping shape in prices is generally taken to mean commodities are severely undersupplied.
<https://www.bloomberg.com/news/articles/2022-02-07/goldman-commodity-veteran-says-he-s-never-seen-a-market-like-it>
- **Supply fears keep aluminum near 13-1/2-year highs**
 - Aluminum prices held near 13-1/2 year highs on Wednesday as a supply shortfall caused by smelter closures in Europe and China ate further into exchange stockpiles.
<https://www.nasdaq.com/articles/metals-supply-fears-keep-aluminium-near-13-1-2-year-highs>
- **Global rare earth metals production up 17% in 2021 as production in China jumps 20%**
 - *Matt: Yet pricing still climbed as EV's, Electrolyzers, and Renewables uses of REEs is increasing even faster.*
<https://www.kitco.com/news/2022-02-07/Global-rare-earth-metals-production-up-17-in-2021-as-production-in-China-jumps-20.html>
- **Iron ore price hits 5-month high on China demand optimism**
<https://www.mining.com/iron-ore-price-hits-5-month-high-on-china-demand-optimism/>

BEV / LiB Mineral & Battery Market News

- **EV battery giant LG Energy Solution sees demand rising as chip shortage eases**
 - Battery maker LG Energy Solution Ltd (LGES) (373220.KS) said on Tuesday it aims to boost sales by about 8% in 2022, forecasting a pick-up in demand for electric vehicle (EV) batteries as a global chip shortage ease later this year.
<https://www.reuters.com/business/lg-energy-solution-swings-q4-profit-2022-02-07/>
- **Lithium price rise: Electric vehicle demand leads to record surge**
 - Prices for lithium salts, lithium carbonate and lithium hydroxide, rose by between 400%-500% last year, and show no signs of slowing down as supplies struggle to keep up with demand.
 - Battery-grade lithium carbonate was trading at \$9,600/mt in January 2021, but by the end of last month (January) the price was nearly \$50,000/mt. On Monday, spot price \$59,600/mt.

- Lithium-rich spodumene concentrate, an unrefined ore mined in Australia, is +480% since the start of last year and nearly six times higher than September 2020 when the current cycle turned positive. <https://www.news.com.au/finance/business/mining/global-lithium-shortage-leads-to-record-price-surge/news-story/dbcdef1f6955116a347f305887783046>
- **‘Gone ballistic’: lithium price rockets nearly 500% in a year amid electric vehicle rush**
 - Buckley, an early investor in lithium, said while a range of factors were at play in creating the situation – including a labour shortage at key mine sites in Western Australia as a result of the pandemic and supply chain issues – it was surging demand for EVs in China that was the main driver. <https://www.theguardian.com/australia-news/2022/feb/09/gone-ballistic-lithium-price-rockets-nearly-500-in-a-year-amid-electric-vehicle-rush>
- **BMW Boss Warns Of Sudden Abandonment Of Combustion Engines**
 - BMW boss Oliver Zipse has suggested that the world is not yet ready for the complete abandonment of internal combustion engines. Automobilwoche recently, Zipse suggested that ditching combustion engines too soon won’t even have a positive impact on the environment. <https://www.carscoops.com/2022/02/bmw-boss-warns-of-sudden-abandonment-of-combustion-engines/>
- **Sibanye-Stillwater concludes €85m takeover of Sandouville nickel facility**
 - The Sandouville (France) facilities include a hydrometallurgical nickel refinery with a production capacity of 12,000 tons a year of high-purity nickel metal, 4,000 tons annually of high-purity nickel salts and solutions, and around 600 tons per annum of cobalt chloride. <https://www.miningmx.com/trending/48642-sibanye-stillwater-concludes-e85m-takeover-of-sandouville-nickel-facility/>
- **FREYR Battery concludes frame agreements for more than 90% of its raw material requirements for initial plants in Mo i Rana**
 - FREYR is on track to start the initial sample production of lithium iron phosphate (LFP) battery cells in its CQP in the second half of 2022. The frame agreements described above will form the legal basis for the supply of the facility with cathode active material, anode active material, separators, electrolyte, Al-foil, Cu-foil, and insulation material, comprising more than 90% of the material required on both a value and volume basis. The next step will be to agree on volume and price for each raw material, after which FREYR will be in a position to issue purchase orders. <https://www.freyrbattery.com/news/freyr-battery-concludes-frame-agreements-for-more-than-90-of-its-raw-material-requirements-for-initial-plants-in-mo-i-rana>
- **Tesla applies to build giant new cathode factory for battery production next to 'Gigafactory Texas**
 - Last year, it was revealed that Tesla was working on a new “Project Bobcat” on ~97 acres at the site. Now, Tesla has applied for another project, codename ‘Project Cathode’, on 32 acres at the site.
 - From the name of the new project, it is fairly clear that it is going to be for a cathode production factory. Tesla originally announced plans to build its own “cathode facility” during its “Battery Day” presentation in 2020. <https://electrek.co/2022/02/03/tesla-applies-build-giant-new-cathode-factory-battery-production-gigafactory-texas/>

Regards –