Weekly Precious Metals News Articles: February 26, 2021

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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

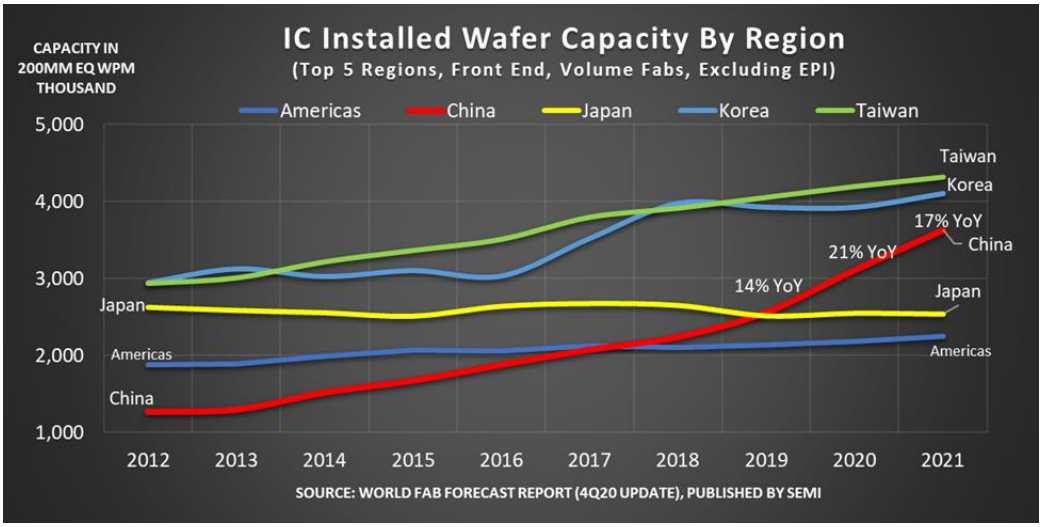
- **Gold Goes From a Star Commodity to Laggard in Shocking Reversal**
  - Spot prices touched a seven-month low on Friday before erasing losses as the dollar moved lower, though bullion is already down more than 6% this year.
  - Gold surged last year on pandemic-induced haven buying, low interest rates and stimulus spending, is now 2021's worst performer in the Bloomberg Commodity Index. It's suddenly facing a host of unexpected stumbling blocks. Chief among those are the surprising resilience in the dollar and a rally in U.S. Treasury yields as economic indicators show recovery from the pandemic is well under way. https://www.msn.com/en-us/money/markets/gold-goes-from-a-star-commodity-to-laggard-in-shocking-reversal/ar-BB1dMdbX
- **Gold slides more than 2% as U.S. Treasury yields rise**
  - Spot gold was down 1.8% at $1,772.86 per ounce at 01:49 p.m. ET (1849 GMT), after earlier touching its lowest since Feb. 19 at $1,765.06. U.S. gold futures settled down 1.3% to $1,775.40. https://www.cnbc.com/2021/02/25/gold-markets-us-treasury-yields-federal-reserve-jerome-powell.html
- **PRECIOUS-Gold slides 1.5% as U.S. Treasury yields continue climb | Nasdaq**
  - Gold is down nearly 6% so far this year after posting its best year in a decade in 2020 on virus fears, lower interest rates and unprecedented stimulus measures. https://www.nasdaq.com/articles/precious-gold-slides-1.5-as-u.s.-treasury-yields-continue-climb-2021-02-25

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Biden to press for $37 billion to boost chip manufacturing amid shortfall**
  - President Joe Biden said on Wednesday he would seek $37 billion in funding for legislation to supercharge chip manufacturing in the United States as a shortfall of semiconductors has forced U.S. automakers and other manufacturers to cut production. https://www.reuters.com/article/us-usa-biden-supply-chains/biden-rushes-to-address-global-computer-chip-shortage-via-latest-executive-order-idUSKBN2AO13D
- **Global chip supply to be hit, chipmakers in drought-hit Taiwan face water crisis**
  - Due to drought Taiwan, a key hub in the global technology supply chain for giants such as Apple, will begin on Thursday to further reduce water supply for factories in central and southern cities where major science parks are located.
  - Taiwan chipmakers are buying water by the truckload for some of their foundries as the island widens restrictions on water supply amid a drought that could exacerbate a chip

supply crunch for the global auto industry. Some auto makers have already been forced to trim production, and Taiwan had received requests for help to bridge the shortage of auto chips from countries including the United States and Germany.
https://www.livemint.com/industry/manufacturing/global-chip-supply-to-be-hit-chipmakers-in-drought-hit-taiwan-face-water-crisis-11614146921371.html

- **TSMC's development of 3nm process ahead of schedule: chairman**
  - TSMC company chairman Mark Liu gave the update in an online speech at the International Solid-State Circuits Conference (ISSCC) earlier this week, but he did not provide any details about how far along or ahead of schedule the process is.
  - TSMC had said trial production of 3nm chips is scheduled for later this year in a wafer fab located in the Southern Taiwan Science Park in Tainan, and commercial production is expected to begin in the second half of 2022.
    https://focustaiwan.tw/sci-tech/202102190021
- **China Passes Americas And Japan In IC Capacity**
  - From 2019 through the end of 2021, China will have increased wafer capacity for memory by 95%, foundry by 47%, and analog by 29%. China's IC wafer capacity growth accelerated to tune of 14% in 2019 and 21% in 2020 and is expected to grow at least 17% this year, as we report in the latest update of the World Fab Forecast, published December 3rd by SEMI.
    https://semiengineering.com/china-passes-americas-and-japan-in-ic-capacity/



Silver

- **Silver investment at six-year high in 2021**
  - Silver ETF investments tend to be what's called "sticky money." That means when investors buy, they tend to hold, even though price drops and even through significant ones. I've highlighted this phenomenon with yellow arrows in the above chart. Even as silver prices sold off several times since 2016, silver ETF holdings remained rather stable. The most dramatic example of this was last March when silver plunged temporarily to $12, while ETF holdings barely budged.
    https://www.daijiworld.com/news/newsDisplay?newsID=804461
- **Silver Is Sticky Money**
  - A Workaround for Huge Silver Premiums: Investors can purchase a silver ETF now in order to gain exposure to silver prices. It's an alternative while they wait for premiums to return to more normal levels.

https://www.streetwisereports.com/article/2021/02/23/silver-is-sticky-money.html

- **Surge abates but silver has more friends than ever**
  - Wall Street's finest like it at as well, Goldman Sachs describing silver as its "preferred precious metals" due to its combination of dollar-debasement and green industrial themes. ("Silver remains the populist's metal", Feb. 2, 2021)
  - Both sides of silver's split investment-industrial personality are currently shining, uniting investment bankers and retail punters in a common bull cause.
    https://www.reuters.com/article/uk-silver-squeeze-ahome-idUSKBN2AP1XL
- **Rising prices may push PV industry away from silver – pv magazine International**
  - During the past decade, the PV industry has reduced silver use but only for the rear contact of the cells with partial substitution with aluminum, and for the front side silver remains an unsolved issue, although copper-nickel alloys for the frontal contact metallization are considered a promising solution.
  - Matt: I disagree wholeheartedly with these conclusions presented in this article.
    https://www.pv-magazine.com/2021/02/23/rising-prices-may-push-pv-industry-to-move-away-from-silver-use/

Precious Metals Mining:

- **Implats in final stages of approving R10bn worth of new platinum projects**
  - Implats is in the final stages of approving two exciting new platinum projects that tick all the boxes of the company's strategic intent, CEO Nico Muller said on Thursday.
  - The one project is a Merensky reef expansion project at the Two Rivers platinum mine, an opencast mine in Steelpoort, Limpopo, and the other the expansion of the production capacity of the Bimha Mupani projects at Zimplats, in Zimbabwe.
  - The Two Rivers project will add 180 000 oz at a capital expenditure (capex) of R5.7-billion over the next four years and the Bimha Mupani expansion another 180 000 oz at a capex of R4.3-billion over the next four to five years.
    https://www.miningweekly.com/article/implats-in-final-stages-of-approving-r10bn-worth-of-new-platinum-projects-2021-02-25
- **Ivanhoe Mines' Platreef: Plan to fast-track production**
  - Slower start plan 2H2024, Bigger CAPEX and ramp plan start 2H2025.
  - Early-works surface construction for Shaft 2 began in 2017.
  - While Shaft 2 is being sunk, Ivanplats will undertake underground development from Shaft 1, which will allow the mine to ramp up to its envisioned 4.4 Mtpa relatively quickly.
  - It is envisioned that Shaft 2 will be equipped for hoisting in 2025, allowing for first concentrate production in 2H2025. The initial capital cost for the Platreef 2020 FS is estimated at US$1.4 billion.
    https://www.mining.com/web/ivanhoes-s-african-unit-to-fund-up-to-240m-for-palladium-platinum-mine/
- **Norilsk Nickel Partially Suspends Two Big Mines on Water Inflow**
  - MMC Norilsk Nickel PJSC, the world's biggest producer of palladium and refined nickel, has partially suspended two of its main Arctic mines due to water inflows at one of the interconnected operations.
    https://www.msn.com/en-us/money/markets/norilsk-nickel-partially-suspends-two-big-mines-on-water-inflow/ar-BB1dYOAg
- **Head of Nornickel's Arctic processing plant placed under house arrest -IFX**
  - A Russian court has placed the head of a processing plant owned by metals producer Norilsk Nickel GMKN.MM in Siberia under house arrest as officials investigate an accident at the plant, Interfax news agency reported on Thursday.
  - A section of the plant collapsed on Feb. 20 killing three workers during renovation works. A regional investigative committee had opened a criminal investigation into the accident.

- The plant's head, Alexander Tsymbal was placed under house arrest until April 20 as he is suspected of violating safety rules during the renovation works.
- The plant's chief engineer and head of technical inspection are also suspected of the same violations. They were detained until April 19 by another court's decision earlier on Thursday, the court said in a statement on its website.
  https://www.nasdaq.com/articles/head-of-nornickels-arctic-processing-plant-placed-under-house-arrest-ifx-2021-02-25

E-Waste & Precious Metals Recycle Related:

- **US – Recyclers' working group aims to combat CAT theft**
  - To help combat the issue, in October 2020, ISRI's Materials Theft Subcommittee formed a Catalytic Converter Working Group with Steve Levetan, executive vice president of Pull-A-Part, taking the lead.
  - The aim of the group is to aid recyclers in identifying and avoiding purchasing stolen CATS by making their sale more traceable and more identifiable.
  - Some police departments in the US are starting to host "etch and catch" events, where car owners can bring their vehicles to have the converter's heat shield engraved with license plate numbers or other identifiers. The etchings can help tip off recyclers that a particular catalytic converter may be stolen and can help law enforcement identify the victim of the theft.
    https://autorecyclingworld.com/us-recyclers-working-group-aims-to-combat-cat-theft/
- **Copper price climbs to recent record**
  - The price of copper is now over $9,000 per metric ton, the highest it's been since September 2011, according to data from The London Metal Exchange. As of Tuesday, Feb. 23, it was $9,158 per metric ton, or about $4.15 a pound.
    https://resource-recycling.com/e-scrap/2021/02/25/copper-price-climbs-to-recent-record/?utm_medium=email&utm_source=internal&utm_campaign=Feb+25+ESN
- **Two lives are better than one**
  - Redeploying end-of-life EV batteries, an emerging e-scrap market, is a task U.K.-based Connected Energy Ltd. is addressing.
    https://www.recyclingtoday.com/article/connected-energy-uk-elv-battery-recycling-repurposing/
- **New project announced to deliver recycling supply chain for luxury cars**
  - The University of Birmingham, UK, has announced 3-year research project with Bentley Motors Limited, a subsidiary of the Volkswagen Group, to deliver a sustainable source of rare earth magnets for electric and hybrid vehicles for one of the most sought-after luxury car brands in the world.
  - The £2.6m RaRE (Rare-earth Recycling for E-machines) project is funded by the Office for Low Emission Vehicles (OLEV) and delivered in partnership with Innovate UK, and involves six partners who will work together to establish the first end-to-end supply chain of recycled rare earth magnets in the UK. Rare earth magnets are found in almost every appliance that uses electricity to generate motion. In the last 30 years their use has increased exponentially, and although they are increasingly important in the transition to a low carbon economy, less than 1% of these magnets is recycled.
    https://batteryindustry.tech/new-project-announced-to-deliver-recycling-supply-chain-for-luxury-cars/
- **Electronics processing 2.0**
  - Imagine the following scenario happening inside an ITAD or e-scrap facility.
  - A laptop that enters the site is isolated and placed in a box, and cameras installed inside take photos of the asset. The box's processing unit examines the digital images to evaluate and determine the laptop's model, type, configuration, cosmetic grade, and any other important information. All of this data is automatically entered into the company's ERP system. At this point, a decision-making algorithm, using the latest pricing information, decides which route the laptop should take downstream for maximum ROI.
    https://resource-recycling.com/e-scrap/2021/01/20/electronics-processing-2-0/?utm_medium=email&utm_source=internal&utm_campaign=Feb+25+ESN

Platinum

- **Gold and Silver News - Going Platinum | United States Gold Bureau**
    - Throughout history, we have seen the precious metals platinum and gold jockey for position, in terms of price, each leading the other for different periods of time. Gold has been leading the price game since 2012, but momentum has been building for platinum since we first discussed its relative value in this November edition of "Metals Minute." Platinum has climbed 47% since then, and 19% so far in 2021. Today, I'll present some history about the precious metal known as platinum, and what makes it an attractive investment in 2021.
    https://mail.yahoo.com/d/folders/1/messages/ADzX5XAgxSsGYDXEIwKMWLiCu1A?reason=invalid_cred
- **Platinum Stumbles After High With Caution on Recovery Outlook**
    - Platinum rallied to the highest since 2014 this month on bets that a recovery in industrial demand and stricter emissions rules will tighten supply of the metal used to curb pollution from cars and trucks. Prices have since lost more than 7%, with some investors cashing out after the metal slipped back below the key $1,300 an ounce level, according to Carsten Fritsch, an analyst at Commerzbank.
    - Platinum's "failure to regain $1,300 caused profit taking," Fritsch said. The declines have been "driven by souring market sentiment, as visible in falling stock markets. It's worth noting that platinum and palladium rather behave like industrial metals sometimes, given their large industrial use."
    https://www.bloomberg.com/news/articles/2021-02-23/gold-holds-gains-with-powell-s-testimony-stimulus-in-focus

Fuel Cells/Hydrogen Economy Related Articles:

- **New green hydrogen hub in Brazil to result from $5.4 billion investment**
    - The planning for a massive green hydrogen hub in Brazil is already underway. The Ceará facility is expected to be a first of its kind in Latin America and will cost an estimated $5.4 billion. Enegix Energy from Australia is behind the construction of the green hydrogen hub in Brazil. It will be built at the Pecém Industrial and Port Complex (CIPP), which is located about 37 miles from Fortaleza.
    - Matt: No mention of the planned Electrolyzer technology yet.
    https://www.hydrogenfuelnews.com/green-hydrogen-hub-in-brazil/8543317/?mc_cid=b15b49c039&mc_eid=70c1246d58
- **Sinoptec sets ambitious 2025 goal of 1,000 hydrogen fuel stations in China**
    - Sinoptec, formerly known by the name China Petroleum & Chemical Corp., intends to use the next 4 years to install 1,000 hydrogen fuel stations in China. Its statement said that it had already installed 27 stations by the end of 2020. Across the country, it already operates approximately 30,000 traditional service stations, said its most recent annual report.
    https://www.hydrogenfuelnews.com/hydrogen-fuel-stations-in-china/8543309/?mc_cid=b15b49c039&mc_eid=70c1246d58
- **Hydrogen powered steel plant headed to France**
    - The MoU was signed for the assessment of the building and operation of the hydrogen powered steel plant facility. This collaboration between Paul Wurth, Liberty Steel Group, and SHS is expected to result in a first of its kind plant in France. The companies expect that their collaboration will result in a two million tonne direct reduce iron (DRI) facility with an integrated H_2 electrolysis production unit with a 1-GW capacity.
    - At first, this DRI plant will use a combination of H2 and natural gas as its DRI production reductant, and hot-briquetted iron (HBI). That said, over time, it will transition its way to the use of 100 percent H2 upon the completion of the electrolysis production unit.

https://www.hydrogenfuelnews.com/hydrogen-powered-steel-plant/8543312/?mc_cid=b15b49c039&mc_eid=70c1246d58

- **Nikola reveals fuel cell truck timing but nothing new on customers**
  - Tre model that wasn't originally planned for US now highlights the portfolio
  - Tre FCEV Semi Truck due to start production in 2023, and the TWO FCEV Semi Truck due to start production in 2024.
    https://www.freightwaves.com/news/nikola-reveals-fuel-cell-truck-timing-but-nothing-new-on-customers
- **Fighting Against Air Pollution: Methanol Fuel Cells to Provide Higher Efficiency**
  - In September 2020, Element 1 Corp, a leading developer of hydrogen generation technology, in collaboration with Co-Win Hydrogen Power, announced road testing of world's first medium-duty fuel cell. Co-Win said that e1's proprietary methanol-based M-Series hydrogen generator has been incorporated onto a medium-duty fuel cell truck produced by one of the world's largest truck manufacturing companies.
    https://energyindustryreview.com/analysis/fighting-against-air-pollution-methanol-fuel-cells-to-provide-higher-efficiency/
- **(DMFC) Blue World Technologies takes over Aalborg fuel cell site**
  - Production equipment for core fuel cell components such as membrane and electrode for the MEA (membrane electrode assembly) will be installed at Langerak 15A within the first half of 2021. It is targeting full-scale commercial production capacity of 50,000 fuel cell units per year within the next three years.
  - Blue World Technologies, founded in 2018, is focused on the high-temperature PEM-technology combined with methanol-reforming. The combination ensures a simple system design with high conversion efficiency and significant benefits including CO2 reduction, fuel cost savings, and zero harmful emissions.
    https://www.energydigital.com/renewable-energy/blue-world-technologies-expands-aalborg-fuel-cell-facilities

Palladium

- **U.S. auto sales to rise in February despite weather woes- J.D. Power, LMC Automotive**
  - U.S. auto sales are forecast to rise in February, despite weather-related hurdles, as lean inventories provide a boost, industry consultants J.D. Power and LMC Automotive said on Thursday.
  - Retail sales of new vehicles are estimated to reach about 975,600 units in February, a 3.3% increase from a year ago, when adjusted for selling days, the consultancies said.
    https://www.reuters.com/article/usa-autos-sales-idUSL4N2KV3G9
- **Palladium/Silver: MLCC Material Maker PDC Sees Order Visibility Extended For 5G Applications**
  - Prosperity Dielectrics Company (PDC), which mainly supplies MLCCs and related ceramic powders, has utilized over 90% of production capacity with clear order visibility extended to 3-4 months thanks to particularly strong demand for application to 5G regular base stations and small cells, according to industry sources.
    https://www.nocturnalcloud.com/mlcc-material-maker-pdc-sees-order-visibility-extended-for-5g-applications/

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

- **FEATURE: Rhodium surges past $25,000/oz on tight supply, strong demand**
  - Rhodium up forty-fold since Aug 2016, Refined output boosted by processing of stockpiles., Restarts and projects can take years to reach full production
  - Feb 25th - Thursday Fix: BASF/EIB: $26,200/Toz, JM: $25,450/toz, Umicore: $26,400 , Heraeus $27,250

https://www.spglobal.com/platts/en/market-insights/latest-news/metals/022521-feature-rhodium-surges-past-25000oz-on-tight-supply-strong-demand

- **Iridium and Platinum: Large scale electrolyzer for sustainable hydrogen headed to Normandy**
  - Air Liquide and Siemens Energy will be working together on the development of a large scale electrolyzer that will produce sustainable hydrogen fuel.
  - They signed an MoU for the purpose of bringing their Proton Exchange Membrane (PEM) electrolysis technology expertise together. Their combined goal is to concentrate their actions on the core purposes of: Establishing the foundation for large-scale European electrolyzer manufacturing, co-creation of large industrial scale H2 projects in collaboration with customers, and research in development activities for the co-development of new electrolyzer tec https://mail.yahoo.com/d/folders/1/messages/ALzAuusTTuBlYDgOuAALuHVy2d8?reason=invalid_cred
- **Ruthenium and Iridium: Will Hydrogen Become Chlorine Chemistry's Trump Card?**
  - Over 83 % of chlor-alkali sites use energy-efficient and safe (Ruthenium and Iridium) membrane processes, explains Eurochlor, the chlorine chemistry working group of the European Chemical Industry Council (Cefic) (a further 11.6 % of sites use diaphragm processes). This marks the successful completion of a years-long transformation process that some saw as a potential eliminator for European chlorine manufacture. In 2019, Europe produced 419 kilotons of chlorine. https://www.process-worldwide.com/will-hydrogen-become-chlorine-chemistrys-trump-card-a-1003212/

BEV / LiB Battery Market News

- **Sibanye-Stillwater makes battery metals entry**
  - Precious metals miner Sibanye-Stillwater has entered the battery metals sector through an investment in lithium firm Keliber, which has a goal of being the first European company producing high-purity, battery-grade lithium hydroxide from its own ore.
  - The South Africa-based major would make a €30-million investment in Keliber, earning it a 30% equity shareholding, the companies announced on Tuesday. https://www.miningweekly.com/article/sibanye-stillwater-makes-battery-metals-entry-2021-02-23
- **Hyundai to recall 82,000 electric vehicles $900 Million dollar recall globally over battery fire risk**
  - The issue is reported to have been linked to 15 vehicle fires and lies with alleged defects in the battery cells made by LG Energy Solution – but LG has disputed this and said Hyundai has misapplied its suggestion for fast-charging logic in Hyundai's battery management system.
  - It's the latest recall to be announced within the electric vehicle sector; both BMW Group and Ford announced recalls of various plug-in hybrids in 2020 due to potential fire risks. https://fleetworld.co.uk/hyundai-to-recall-82000-electric-vehicles-globally-over-fire-risk/
- **Hyundai will replace Kona Electric battery packs, in most expensive EV recall ever**
  - Hyundai is recalling ~82,000 electric vehicles globally to replace a faulty (est 5.23 GWh) LiB packs. (that is 2.6% of the 200 GW of transportation LiB's produced in 2020).
  - The recall will include 75,680 Hyundai Kona Electric models (64kWh), as well as 5,715 Hyundai Ioniq Electric models (58-kWh or 72.6-kWh battery packs) and 305 city buses (speculate 200+ kWh) are being recalled, according to Yonhap. The recall effort is expected to cost $900 million, which will make it the most expensive electric car recall ever.
  - All of these vehicles use battery cells produced by LG Chem, and Hyundai is reportedly in talks to split the cost of the recall with its battery division, LG Energy Solution.
  - Matt: I think the $900M price tag is understated, and represents only the LiB's replacement, yet there is labor and other parts replacement that takes the actual cost over 32% higher with current examples on Tesla's. Total Recall price more like $1.1B. (5.23 GWh @ $167/kWh = $861M in LIB + 32% labor and other parts = $1.13B).

- Matt the estimated 5.23 GWh in LiB packs in the announced recall to date, with more likely to come, represents 2.6% of the 200 GW of transportation LiB's produced in 2020. Tesla already has LC Chem and Panasonic at max production rates of LiB's, so this could hurt 2021 supply for sure. https://www.greencarreports.com/news/1131385_hyundai-kona-electric-battery-packs-most-expensive-ev-recall

- **Ford CEO Calls on U.S. Government to Support EV Batteries, Charging**
  - Ford Motor Co's Chief Executive on Wednesday called on the U.S. government to support battery production and charging infrastructure development, as he outlined the automaker's plan to develop electric platforms for its top-selling trucks, vans and SUVs.
  - "We need to bring large-scale battery production to the U.S.," Ford CEO Jim Farley said at a financial conference, adding that he planned to highlight the issue in talks with government leaders. https://money.usnews.com/investing/news/articles/2021-02-24/ford-ceo-calls-on-us-government-to-support-ev-batteries-charging
- **Supercharged Commodity Boom: Definitely. Supercycle? Not Exactly**
  - A surge in commodity prices has Wall Street banks gearing up for the arrival of a new supercycle, but underlying dynamics suggest it isn't going to be a repeat of the epic China-led boom at the start of this century.
  - Matt: I agree the Renewable boom in particular can show negative impacts on grid cost impacts over the next decade, much like what has already happened in California and Germany. Increasing costs coupled with lower reliability and higher frequency brown outs can change our global course on Solar and Wind in particular in favor of Nuclear and other options. https://www.miningweekly.com/article/supercharged-commodity-boom-definitely-supercycle-not-exactly-2021-02-23
- **Canada could be top player in global EV battery market**
  - Canada is rich in lithium, graphite, nickel, cobalt, aluminum and manganese, key ingredients for advanced battery manufacturing and storage technology.
  - "The potential to add [Canada's huge base of key battery raw materials] into high value chemicals, cathodes anodes and even engage in the production of lithium-ion batteries offers the country a major slice of this growing lithium ion and electric vehicle economic pie," Moore said. https://www.mining.com/canada-could-be-top-player-in-global-ev-battery-market-report/
- **Nano One Technology Performs Well in Solid State Battery Collaboration with Univ. of Michigan**
  - Nano One is collaborating with the University of Michigan on the development of innovative solid-state battery technology.
  - Nano One's proprietary coated single crystal HVS cathode material is performing well in University of Michigan test programs.
  - HVS is inexpensive, fast charging, cobalt free, and suited for solid-state battery configuration because it does not expand, contract and stress the cathode-electrolyte interface like other materials. https://nanoone.ca/news/news-releases/nano-one-technology-performs-well-in-solid-state-battery-collaboration-with-the-university-of-michigan/
- **Northvolt expands op's in Poland to establish Europe's largest factory for energy storage solutions**
  - Northvolt's vision of enabling the future of energy takes a new step forward through a $200 million expansion of its battery systems capabilities in Gdańsk, Poland. Entering into production in 2022, a new factory will have an initial annual output of 5 GWh, and potential future capacity of 12 GWh. https://batteryindustry.tech/northvolt-expands-operations-in-poland-to-establish-europes-largest-factory-for-energy-storage-solutions/

Regards –