Weekly Precious Metals News Articles: August 7, 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-

Sorry for the delayed distribution this week. I have been managing a family health emergency.

Gold

- **Central Banks Go Big on Gold Buying in Quest for Security**
  - Central bankers' appetite for gold is growing, providing a bright spot for the traditional haven as investor interest ebbs. Global reserves expanded 333.2 tons in the first half, 39% higher than the five-year average for the period, according to a quarterly summary from the World Gold Council, which noted strong purchases by Thailand, Hungary and Brazil. If central banks continue to buy at the levels seen recently, it will provide a supportive element for the market, according to Louise Street, senior markets analyst at the council.
    https://www.bloomberg.com/news/articles/2021-07-29/central-banks-go-big-on-gold-buying-in-quest-for-security-chart
- **China's gold consumption reports stable recovery in H1**
  - China's gold consumption went up 69.21% year on year to 547.05 tonnes in the first half of this year. The demand not only surged significantly year on year but also hovered above pre-pandemic levels, industry data showed, informed The Xinhua News Agency.
  - Consumption of gold jewelry in the Chinese market rose 67.68% from a year earlier to 348.56 tonnes in the January-June period, according to data released by the China Gold Association (CGA).
    https://ukranews.com/en/news/792698-china-s-gold-consumption-reports-stable-recovery-in-h1
- **How jewelry too is joining the green revolution**
  - As the world's second-most polluting industry, fashion has been changing its ways for several years now, in a bid to reduce its environmental impact, just like the beauty sector and, more recently, the jewelry sector. In fact, more and more jewelry brands are coming out with collections in recycled or upcycled gold or silver to reduce their impact on the planet. One such brand is PDPAOLA, which is launching its first collection of sustainable fine jewelry.
    https://sg.style.yahoo.com/jewelry-too-joining-green-revolution-103409446.html
- **Asia Gold-India flips to small premiums, demand still muted across top hubs**
  - Premiums in China unchanged at $1-$4/oz
  - Singapore premiums at $1-$1.8/oz, Hong Kong market muted
  - India's July gold imports surge 131% to 3-month high

- India's physical gold market flipped into a small premium this week for the first time in a month as prices eased although activity was still subdued, while buyers in other Asian hubs also stayed on the sidelines.
  https://www.reuters.com/article/asia-gold-demand-idUSL4N2PD2GA

- **Gold futures lose grip on $1,800, head for steepest daily drop in 7 weeks**
  - Gold futures on Friday skidded to potentially the sharpest daily drop in two months, pressured below $1,800, after the U.S. monthly jobs report for July came in better than expected, delivering a further jolt to the U.S. dollar and bond yields and undercutting demand for the precious metals.
  - December gold was trading $37, or 2.1%, lower, at $1,772.70 an ounce, after declining 0.3% on Thursday. For the week, gold is headed for a decline of 2.4%, which would mark its steepest weekly slump since the period ended June 18 when it fell 5.88%.
    https://www.marketwatch.com/story/gold-futures-fall-fight-to-retain-grip-on-1-800-as-bullion-on-pace-for-weekly-drop-11628251243?siteid=msnheadlines
- **Fed taper bets knock gold in run-up to U.S. jobs data**
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    https://www.nasdaq.com/articles/precious-fed-taper-bets-knock-gold-in-run-up-to-u.s.-jobs-data-2021-08-05

Semiconductor Related Articles (impacting Precious Metals electronics):

- **Why Silicon Valley Cares About Silicon Again**
  - Now, Malone said, "it's a dangerous time. Eighty percent of the world's chips are made in Taiwan, and China has found the choke point of the world economy—those fabs. There's a scramble to build fabs outside Taiwan, but that will take two to three years. So it's a very worrisome time right now."
    https://spectrum.ieee.org/silicon-valley-cares-about-chips-again
- **Chip shortage to extend into next year: Winbond**
  - Demand for DRAM and flash memory chips remains robust, driven by the acceleration of 5G infrastructure deployment worldwide, the upgrading of wireless technology to Wi-Fi 5 or Wi-Fi 6, as well as rising demand for wearable devices and true wireless stereo earbuds, but chipmakers are unable to match the demand due to capacity tightness, Winbond said.
    https://www.taipeitimes.com/News/biz/archives/2021/08/06/2003762097
- **Global Semiconductor Sales Increase 29.2% Y/Y in June; Q2 Sales Up 8.3% Over Q1**
  - The Semiconductor Industry Association (SIA) today announced worldwide sales of semiconductors were $44.5 billion in June 2021, an increase of 29.2% from the June 2020 total of $34.5 billion. Sales in June were 2.1% more than the May 2021 total of $43.6 billion. Sales during the second quarter of 2021 were $133.6 billion, an increase of 29.2% over the second quarter of 2020 and 8.3% more than the first quarter of 2021. Monthly sales are compiled by the World Semiconductor Trade Statistics (WSTS) organization and represent a three-month moving average.
    https://www.semiconductors.org/global-semiconductor-sales-increase-29-2-year-to-year-in-june-q2-sales-up-8-3-over-q1/
- **Apple to sharply up components pull-ins for new iPhones in 2H21**
  - Apple is expected to significantly increase its pull-ins of components shipments for new iPhones in the second half of the year, driven by its impressive growth in market share in China for high-end 5G models, according to industry sources.

        - The US vendor's share of China's US$800 and above handset market segment shot up to 72% in first-quarter 2021, compared to Huawei's 24%, the sources cited an IDC report as indicating.
          https://www.digitimes.com/news/a20210803PD209.html
    - **TSMC and Samsung: Semiconductor Chip Shortage**
        - If tensions escalate between the U.S. and China, or much more seriously between China and Taiwan, any disruption in supply at TSMC could cripple some of the most important U.S. tech companies, especially Apple, Nvidia, AMD, and Qualcomm. As a result, TSMC (and to a lesser degree, Samsung) have to explore spreading their capacity decision to more locations around the world, especially to the U.S. and Europe. TSMC and Samsung need to reassure their global customers that tensions with China will not disrupt supply, and they have contingency plans to manage any worst-case scenarios.
          https://thediplomat.com/2021/07/tsmc-and-samsung-semiconductor-chip-shortage/

Silver

- **Silver Price Forecast – Silver Markets Continue to Show Volatility**
    - Silver markets have fallen a bit during the course of the trading session to show signs of weakness, but we have been seeing the uptrend line underneath offer plenty of support, especially near the $25 level. With that being the case, the market is likely to continue to see this area as potential support, and therefore it is not a huge surprise to see that we have turned around to go towards the 200 day EMA yet again. As the candlestick looks now, it appears that we have a shooting star followed by a hammer, which typically means that we are simply going to consolidate. This makes even more sense considering that the jobs report comes out Friday morning, so therefore the fact that the US dollar would stabilize should not be a huge surprise.
      https://finance.yahoo.com/news/silver-price-forecast-silver-markets-152403554.html
- **Metals merged into amalgam nanocrystals in new manufacturing method**
    - Using this method, the team managed to make intermetallic nanocrystals mixing several different pairs of metals. Gallium was popular thanks to its low melting point of 30 °C (86 °F), and in this study it was coupled up with gold, silver, copper, nickel, and palladium. The lattermost also worked well as a base, with the team mixing it with indium and zinc.
      https://newatlas.com/materials/intermetallic-nanocrystals-amalgamation/

Precious Metals Mining:

- **Mining industry's 'green metals' are a fallacy, experts say**
    - The green moniker, which implies the metals and mining methods are environmentally friendly, is generating fierce debate. Some call it appropriate, given the growing end use of minerals such as lithium, cobalt and graphite in alternative energy. Others, factoring in the full life cycle of metals from the ground to the customer, deem the framing deceptive and misleading.
      https://www.theglobeandmail.com/business/article-mining-industrys-green-metals-are-a-fallacy-experts-say/
- **South Africa's Sibanye-Stillwater sees H1 earnings jumping over 138%**
    - South Africa's Sibanye-Stillwater said on Thursday it expected half-year earnings to jump by over 138%, driven by higher production and higher metals prices.
      https://www.nasdaq.com/articles/south-africas-sibanye-stillwater-sees-h1-earnings-jumping-over-138-2021-08-05
- **Panther Metals PLC acquires control of almost all of the Obonga greenstone belt in Ontario**
    - The Obonga greenstone belt consists of a 32 kilometre long by up to nine kilometre wide broadly east-west striking tract of Archean age metamorphosed volcanic, sedimentary and intrusive rocks.

- It is a highly prospective setting for the formation of orogenic shear-hosted gold deposits, volcanogenic massive sulphide copper-lead-zinc-silver deposits, komatiite/ultramafic associated nickel-copper-Platinum group metal (PGM) deposits and porphyry style base metal mineralisation. https://www.proactiveinvestors.co.uk/companies/news/956575/

- **Implats preps market for earnings windfall as revenue rises 58.8% for 2021**
  - IMPALA Platinum (Implats) is set to post blockbuster year-end numbers, according to a statement today in which it said sales increased while revenue per 6E platinum group metal (PGM) ounce was 58.8% higher year on year. The downside, however, was that Eskom power interruptions and changes to scheduled maintenance owing to Covid-19 disruption resulted in lower destocking of in-process metal inventory than planned. https://www.miningmx.com/news/platinum/46957-implats-preps-market-for-earnings-windfall-as-revenue-rises-58-8-for-2021/
- **Sibanye Stillwater Expects to Report Over 162% Rise in 1H Net Profit**
  - The company attributed the rise to higher production from both its platinum group and gold operations when compared to a coronavirus pandemic-hit first half a year before, a higher basket price for platinum group metals, and lower outstanding debt, resulting in lower finance expenses.
  - The increases were partially offset by higher mining and income taxes on the back of increased profit, higher royalty taxes on its South African operations, an increase in fair value losses and a strengthening of the U.S. dollar against the South African rand, Sibanye-Stillwater said. https://www.marketwatch.com/story/sibanye-stillwater-expects-to-report-over-162-rise-in-1h-net-profit-271628169364

E-Waste & Precious Metals Recycle Related:

- **Unique Method Involving Solvents For Recycling Nanowires In Electronics**
  - In a step towards developing more sustainable electronics, researchers at the North Carolina State University have demonstrated a low-cost technique for retrieving nanowires from electronic devices that have reached the end of their utility and then use those nanowires in new devices.
  - "There is a lot of interest in recycling electronic materials because we want to both reduce electronic waste and maximise the use we get out of rare or costly materials," says Yuxuan Liu. "We've demonstrated an approach that allows us to recycle nanowires, and that we think could be extended to other nanomaterials, including nanomaterials containing noble and rare-earth elements." https://www.electronicsforu.com/news/whats-new/unique-method-involving-solvents-recycling-nanowires-in-electronics
- **History of the Catalytic Converter – PGM of Texas**
  - As the demand for environmental regulations increases, the need for efficient purgation of emissions is increasingly valuable. The demand for catalytic converters is expanding more than the automotive industry can keep up with as these regulations tighten. This is why industries that are focused on recycling the metals used in the production of converters are important and have been established all around the world. Recycling protects the environment by producing the necessary materials needed to make catalytic converters without damaging the Earth and rapidly depleting finite resources. https://pgmoftexas.com/news/history-of-the-catalytic-converter/

Platinum

- **WPIC: Decarbonizing the Future**
  - As a zero-carbon fuel, green hydrogen, which can help achieve net zero, has significant growth potential https://platinuminvestment.com/files/sixtysecs/WPIC_60seconds_Decarbonising_the_future_08042021.pdf

Fuel Cells/Hydrogen Economy Related Articles:

- **California looks at fuel cell trucking requirements - electrive.com**
    - The Californian Fuel Cell Partnership (CaFCP), a coalition of government and multinational industry partners, have released a new foundational document for heavy-duty class 8 fuel cell electric trucks. The policy recommendation envisages 70,000 trucks supported by 200 heavy-duty truck stations by 2035.
      https://www.electrive.com/2021/08/05/california-looks-at-fuel-cell-trucking-requiremets/
- **Hydrogen and fuel cell catalyst maker Pajarito Powder receives Series-B investment from Hyundai Motor**
    - Based in Albuquerque, New Mexico, USA, Pajarito Powder, LLC is a world leader in the development and commercialization of advanced electrocatalysts for fuel cells and electrolyzers. Pajarito Powder manufactures a range of catalyst products using its own intellectual property as well as intellectual property licensed from the University of New Mexico, Los Alamos National Laboratory, and Institut National de la Recherche Scientifique. Pajarito Powder manufacturers catalysts for use with proton-exchange membranes (PEM) and alkaline fuel cells and electrolyzers; it also manufactures a proprietary Precious-Metal-Free catalyst for fuel cells. Pajarito Powder materials more effectively use the platinum group metals (PGM) component of catalysts, resulting in higher performance, better stability and improved durability.
      https://www.prnewswire.com/news-releases/hydrogen-and-fuel-cell-catalyst-maker-pajarito-powder-receives-series-b-investment-from-hyundai-motor-301345606.html
- **The weekend read: 'Hydrogen is the flagship of the energy transition'**
    - According to the EU hydrogen strategy, the key to an accelerated transition to renewable energy sources (RES) is energy storage, and especially green hydrogen storage. If hydrogen systems were built next to the systems that use RES, the surplus electricity from RES variability and intermittency could be stored. Future production, according to current projections, is still from solar and wind energy, but the compensation for variability goes to hydrogen. The energy transition to RES is urgently needed on a large scale due to the threat of climate change, and it can be accelerated by reliance on mass green hydrogen production.
      https://www.pv-magazine.com/2021/08/07/the-weekend-read-hydrogen-is-the-flagship-of-the-energy-transition/
- **Renewable hydrogen distribution can use existing gas pipelines, says Snam CEO**
    - The company has been testing various percentages of renewable hydrogen and natural gas blends.
      https://www.hydrogenfuelnews.com/renewable-hydrogen-gas-pipelines/8547763/

Palladium

- **Palladium Price Analysis: XPD/USD stays indecisive around $2,650 inside nearby triangle**
    - Palladium recovers early Asian losses inside a three-week-old symmetrical triangle.
    - Thursday's Doji, MACD conditions keep buyers hopeful, the key DMAs add to the trading filters.
      https://www.fxstreet.com/news/palladium-price-analysis-xpd-usd-stays-indecisive-around-2-650-inside-nearby-triangle-202108060511
- **EPA to Update NOx, Greenhouse Gas Emissions Standards**
    - In a statement, (the U.S. Environmental Protection Agency) EPA said that by December 2022, it will propose and finalize new stringent emissions standards to reduce nitrogen oxide pollution from trucks starting in model year 2027. The existing federal NOx standard has not been changed for two decades. "This action will include an update of current greenhouse gas standards to capture market shifts to zero-emission technologies in certain segments of the heavy-duty vehicle sector," EPA said.

- The agency said a second rule would set "more robust greenhouse gas emission standards" for new heavy-duty vehicles sold as soon as model year 2030 and beyond. The agency's plan, now known as the "Clean Trucks Plan," will result in decreased emissions from new heavy-duty vehicles, including longhaul tractors, buses, commercial delivery trucks and many other types of trucks.
  https://www.ttnews.com/articles/epa-update-nox-greenhouse-gas-emissions-standards

- **Vehicle sales slip 14% in July, trade group estimates**
  - China's new-vehicle market is expected to shrink for the third straight month in July as the semiconductor chip crunchcontinues to constrain vehicle production.
  - New-vehicle sales across the country fell nearly 14% last month to some 1.82 million, the China Association of Automobile Manufacturers estimated this week.
  - Deliveries of new-light vehicles such as sedans, crossovers, SUVs, multipurpose vehicles and minibuses dropped 11%, while sales of new commercial vehicles such as trucks and buses plunged 27%, according to the preliminary tally from the group.
  - Reflecting a 77% first-quarter rebound from the same coronavirus-battered period in 2020, China's new vehicle sales in the first seven months jumped 19% to around 14.71 million, CAAM estimates.
    https://www.autonews.com/china/vehicle-sales-slip-14-july-trade-group-estim
- **EPA proposes new GHG rules for light-duty vehicles; updating emission standards for heavy-duty trucks**

  https://www.greencarcongress.com/2021/08/20210806-epanprm.html

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

- **Iridium and Platinum Catalyst: Air Liquide and Siemens to build world-scale PEM electrolyzer in Oberhausen, Germany**
  - The new Proton-Exchange Membrane (PEM) electrolyzer to be built by Air Liquide will produce renewable hydrogen from water and renewable electricity. The technological solution for the project is being developed in the framework of the previously announced partnership between Air Liquide and Siemens Energy. By 2023, the two partners will implement a 20 MW electrolyzer plant that will produce renewable hydrogen and renewable oxygen. In a second phase, Air Liquide has planned to increase the plant capacity to 30MW.
    https://www.chemengonline.com/air-liquide-and-siemens-to-build-world-scale-green-h2-electrolyzer-in-oberhausen-germany/?printmode=1
- **Iridium and Platinum Catalyst: Converting green power into green hydrogen with proton exchange membrane electrolysers**
  - At Siemens Energy, we have opted to develop PEM technology as we believe that it has several key advantages. This works with a solid electrolyte that physically isolates the anode from the cathode but electrically closes the electric circuit through its selective conductivity for protons. This nearly gas-tight solid electrolyte offers several specific advantages. First, it works as a physical divider between the oxygen on the anode side of the process and the hydrogen on the cathode side, preventing the mixing of the generated gases. This enables operation with a differential pressure that eliminates the safety hazard that could occur if the gasses mix. The membrane also guarantees a high gas purity in dynamic operation or during a more extended part-load operation where the contaminant gas concentration in both electrolysis technologies increases specifically as a function of the gas production rate due to diffusion.
    https://www.h2-view.com/story/converting-green-power-into-green-hydrogen-with-proton-exchange-membrane-electrolysers/
- **New technology will allow important metals to be made more efficiently**
  - Many metals and their compounds must be made into thin films before they can be used in technological products like electronics, displays, fuel cells, or catalytic applications. "Stubborn"

metals, however—which include elements like platinum, iridium, ruthenium, and tungsten, among others—are very difficult to convert into thin films because they require extremely high temperatures (usually more than 2,000 degrees Celsius) to evaporate.

- Typically, scientists synthesize these metal films using techniques like sputtering and electron beam evaporation. The latter consists of melting and evaporating metals at high temperatures and allowing a film to form on top of wafers.
- Now researchers have developed a way to evaporate these metals at significantly lower temperatures, fewer than 200 degrees Celsius instead of several thousands. By designing and adding organic ligands—combinations of carbon, hydrogen, and oxygen atoms—to the metals, the researchers were able to substantially increase the materials' vapor pressures, making them easier to evaporate at lower temperatures. Not only is their new technique simpler, but it also makes higher quality materials that are easily scalable.
  https://phys.org/news/2021-08-technology-important-metals-efficiently.html

- **Iridium Crucibles for SAW/BAW RF Filter Markets: Resonators Fuel High-Performance RF Filters for 5G | Electronic Design**
  - Matt: Technology background papers on why so many MLCC's and SAW/BAW filters are used in the 5G space.
    https://www.electronicdesign.com/industrial-automation/article/21137053/resonators-fuel-highperformance-rf-filters-for-5g

Clean Energy General News (New Section)

- **Itochu's ammonia marine fuel study adds 11 partners**
  - The joint study framework was launched in June 2021 with 23 founding partners, including Vopak Terminal Singapore, Pavilion Energy and Trafigura. Now, Anglo Eastern Ship Management, BHP, Bureau Veritas, CMA CGM, INPEX, JFE Steel, Lloyd's Register, Maersk, Navios Group, Rio Tinto and Vitol Asia have joined the study, taking the total number of participants to 34.
  - The joint study framework will assess a number of common topics related to ammonia, including the safety of ammonia-fuelled ships, the safety of ammonia bunkering, ammonia fuel specifications and the net CO2 emissions of ammonia production. Three major ammonia producers, CF Industries, Nutrien and Yara, have already collaborated with the study, and the framework partners hope to speak to other ammonia producers, related international organisations, port authorities and regulators in potential bunkering countries to share opinions, expertise and experience.
    https://www.tankstoragemag.com/2021/08/05/itochus-ammonia-marine-fuel-study-adds-11-partners/
- **Itochu's 'blue' ammonia from Canada to power Japan's green future**
  - Japanese trading house Itochu is set to begin commercial production of ammonia in Canada in 2026 at what is slated to be one of the world's largest manufacturing facilities for the clean-burning fuel.
  - Itochu has agreed to conduct a joint feasibility study with a Canadian subsidiary of Malaysian state energy company Petronas, as well as a local infrastructure company that builds gas pipelines. The $1.3 billion plant will manufacture ammonia from natural gas extracted from a field owned by the Petronas unit, making up to 1 million tons per year.
    https://asia.nikkei.com/Business/Energy/Itochu-s-blue-ammonia-from-Canada-to-power-Japan-s-green-future
- **Latest Technical Breakthroughs in Wind Energy**
  - This paper will review recent advancements in wind energy over the last two to three years, with specific focuses on improving wind energy harvesting, offshore wind turbine foundation designs, and decreasing turbine fatigue.
    https://www.altenergymag.com/article/2021/07/latest-technical-breakthroughs-in-wind-energy/35522
- **New offshore wind projects poised to contribute to energy transition**

- Global offshore wind capacity is set to surge to over 234 GW by 2030, from 29.1 GW at the end of 2019, according to the Global Wind Energy Council (GWEC). The GWEC forecasts that through 2030, more than 205 GW of new offshore wind capacity will be added globally, including at least 6.2 GW of floating offshore wind. With these projections, it is clear the sector is set to play a leading role in powering both the energy transition and a green recovery following the pandemic. Regions around the world are exploring how they can make the most of the new opportunities created through offshore wind. Global energy consultancy Xodus has led on several recent projects in Europe and the U.S., conducting comprehensive research into how areas can develop and grow local supply chains. https://www.worldoil.com/magazine/2021/august-2021/features/new-offshore-wind-projects-poised-to-contribute-to-energy-transition

- **Column: China's copper appetite wanes just as U.S. grows hungry**
  - The country sucked in a record 4.67 million tonnes of refined copper last year, making it the single most important physical driver of the pandemic recovery rally. This year, the import pulse has slowed, with volumes sliding by 10% over the first half and the monthly total dipping below 300,000 tonnes in both May and June. High prices and Beijing's attempts to fade last year's stimulus have taken some of the heat out of the Chinese market. https://www.reuters.com/article/us-metals-copper-ahome-idUSKBN2F31BH

BEV / LiB Battery Market News

- **Biden pushes for electric vehicles to make up half of U.S. auto sales by 2030**
  - President Joe Biden will announce a new national target for electric vehicles to make up half of all new vehicle sales by 2030. The Biden administration also is expected to announce proposed federal fuel economy standards through the 2026 model-year Thursday that build on California's tougher regulations. "We have got to act, the transportation sector is the biggest part of our economy emitting greenhouse gases, and cars and trucks are one of the biggest parts of that," Transportation Secretary Pete Buttigieg told CNBC. https://www.cnbc.com/2021/08/05/biden-pushes-for-evs-to-make-up-40percent-or-more-of-us-auto-sales-by-2030.html
- **Battery Scarcity Could Dwarf Chip Shortage Impact On Global Auto Sales**
  - Growth in the global market for cars and SUVs will slow in the second half of 2021 after the initial spurt to celebrate recovery from the coronavirus lockdown, but sales in the rest of the decade will suffer initially from chip shortages while the second half will be disrupted by a lack of batteries for electric cars.
  - Some 5.2 million passenger vehicles will be lost from global production in 2021 because of the chip shortage, while in 2026 the ongoing shortage of batteries will slash 4.4 million vehicles from possible global production, and won't reach equilibrium until 2030, according to a report from Duisberg, Germany-based Center for Automotive Research, or CAR. https://www.forbes.com/sites/neilwinton/2021/07/27/battery-scarcity-will-dwarf-chip-shortage-impact-on-global-auto-sales-report/
- **What Tesla's bet on iron-based batteries means for manufacturers**
  - The Tesla CEO mused that the company's batteries may eventually be roughly two-thirds iron-based and one-third nickel-based across its products. "And this is actually good because there's plenty of iron in the world," he added.
  - Musk's comments reflect a change that is already underway within the automotive sector, mainly in China. Battery chemistries outside of China have been predominantly nickel-based — specifically nickel-manganese-cobalt (NMC) and nickel-cobalt-aluminum (NCA). These newer chemistries have become attractive to automakers due to their higher energy density, letting original equipment manufacturers (OEMs) improve the range of their batteries.

- Matt: So this was a shift that I was worried about purely for supply chain mineral availability purposes. Tesla stating a bigger shift towards LFP, accepting the lower energy density, and scaling faster. This chemistry shift as much as any on the horizon can help facilitate faster EV adoption and scaling.
  https://techcrunch.com/2021/07/28/what-teslas-bet-on-iron-based-batteries-means-for-manufacturers/

- **CATL's new sodium ion battery to help ease lithium shortages**
  - The development of a new sodium-ion battery by Chinese battery giant CATL is expected in the coming years to relieve pressure on lithium supplies, which are forecast to see shortages as early as 2022.
    https://www.nasdaq.com/articles/catls-new-sodium-ion-battery-to-help-ease-lithium-shortages-2021-08-03
- **New EV Battery Designs Unlikely to Dampen Metals Demand, Miners Say**
  - Mining companies say they do not fear a plan by China's CATL to make an electric vehicle (EV) battery without lithium or other key metals because the new design will have a limited range and more-powerful rival battery technologies will gobble up minerals supply in coming years.
  - The industry's confidence is born from the rapid rise of the battery to power not only transportation, but myriad other parts of the global economy, an evolution that many industry analysts expect to require a massive expansion of mining.
    https://www.usnews.com/news/technology/articles/2021-08-06/new-ev-battery-designs-unlikely-to-dampen-metals-demand-miners-say
- **Hyundai, LG To Build $1.1 Billion Electric Vehicle Battery Plant In Indonesia To Tap Nickel Supply**
  - The 50-50 joint venture, slated to operate in the Karawang regency, Indonesia's West Java province, will break ground this year and start production in 2024 with annual capacity for 10 gigawatt hours of battery cells, Hyundai said in a statement on Thursday. Hyundai and LG can churn out 150,000 battery-run electric vehicles at that capacity, the statement says.
    https://www.forbes.com/sites/ralphjennings/2021/08/02/hyundai-lg-to-build-11-billion-electric-vehicle-battery-plant-in-indonesia-to-tap-nickel-supply/
- **Samsung SDI to manufacture Volkswagen's EV batteries**
  - South Korean battery maker Samsung SDI has won an order from Germany's Volkswagen to contract manufacture its electric vehicle batteries, TheElec has learned. Samsung SDI to will be handling some portion of the production of Unified Prismatic Cell, Volkswagen's self-designed batteries, people familiar with the matter said.
  - However, it is yet unknown whether the South Korean company is the sole contract producer for the batteries. China's Gotion High-Tech, which Volkswagen is the largest shareholder, and Sweden's Northvolt, which the German car giant also has a stake in, could also take part in contract production.
    http://thelec.net/news/articleView.html?idxno=3174
- **Koreans invest in battery materials**
  - Three South Korean conglomerates have announced major investments into battery materials in the past month, in anticipation of projected market growth from under €30 billion/year in 2021 to nearer €75 billion in 2026. SK Materials is to build a lithium-silicon battery materials, while Posco Chemical will build a cathode materials plant and LG Chem has even bigger, longer-term plans.
    https://www.specchemonline.com/koreans-invest-battery-materials
- **Samsung SDI to manufacture Volkswagen's EV batteries**
  - South Korean battery maker Samsung SDI has won an order from Germany's Volkswagen to contract manufacture its electric vehicle batteries, TheElec has learned.
  - Samsung SDI to will be handling some portion of the production of Unified Prismatic Cell, Volkswagen's self-designed batteries, people familiar with the matter said.

- However, it is yet unknown whether the South Korean company is the sole contract producer for the batteries. China's Gotion High-Tech, which Volkswagen is the largest shareholder, and Sweden's Northvolt, which the German car giant also has a stake in, could also take part in contract production. http://thelec.net/news/articleView.html?idxno=3174

- **Vale Warns Canada Nickel Ramp-up Will Stretch Into Next Quarter**
  - Vale SA may have finally resolved a strike at its Sudbury complex, but don't expect it to resume nickel and copper production anytime soon. After a wage deal with workers ended the two-month stoppage, Vale outlined a return-to-production schedule that won't see the Canadian facility fully up and running again until next quarter.
    https://finance.yahoo.com/news/vale-nickel-strike-ends-canadian-040628023.html
- **Cobalt faces triple threat in southern Africa**
  - Cobalt prices have continued to rise through July 2021. While earlier buying was thought to be driven by institutional investors, concerns about supply have taken over as the main driver. All eyes in the cobalt market are now on southern Africa and the triple threat of civil unrest, COVID-19 and supply curbs.
    https://www.globalminingreview.com/special-reports/03082021/cobalt-faces-triple-threat-in-southern-africa/

Regards –